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The Rational Behavior Theory of Small Businesses in the National Capital Region: A Mixed-Methods Study on Participation in Economic Intervention and Prevention Strategies Under the Cares Act

June 2022

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Department of Defense Management

Naval Postgraduate School

Prepared for the Naval Postgraduate School, Monterey, CA 93943

ACQUISITION RESEARCH PROGRAM
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NAVAL POSTGRADUATE SCHOOL

The research presented in this report was supported by the Acquisition Research Program of the Department of Defense Management at the Naval Postgraduate School.

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ABSTRACT

The Coronavirus Disease (COVID-19) triggered a national health emergency that caused economic uncertainties for National Capital Region (NCR) small businesses. In response, some NCR small businesses benefited from the Coronavirus Aid, Relief, and Economic Security Act (CARES) Act, which Congress passed to enable a strong and equitable recovery, while others did not. This research aims to understand the extent to which the NCR small businesses implemented economic intervention and prevention strategies under the flow of funds from the CARES Act; specifically, the supplemental disaster funding and grant-funded assistances during the 2020 through 2022 COVID-19 national health emergency. This mixed-methods approach explored the extent to which small businesses exercised rational or irrational behaviors in economic decision-making regarding CARES Act resources, relative to interventions, economic relief and prevention, economic preparedness. The findings revealed that NCR small businesses decisions involved less rational approaches for general reasons, resulting in less rational decision-making in prevention decisions compared to intervention decisions. Recommendations for policymakers include implementing contingency policies for future national emergencies and for small businesses to incorporate strategic planning in all business phases.

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ACKNOWLEDGMENTS

First and foremost, through the Creator's divine greatness, mercy, and grace, I am thankful for Your blessings in providing me with drive, desire, determination, and fortitude to walk this journey while carrying me throughout the trials and tribulations along the way. *Through Him, all things are possible.*

This research was made possible with the support of the senior executive leadership of Ms. Megan Dake, Deputy Assistant Secretary of the Army (Procurement). I am genuinely thankful for this opportunity and your counsel bestowed upon me.

Sincerest appreciation and deepest gratitude to my Naval Postgraduate School thesis advisory team: Advisor Professor Kelley Poree and Co-Advisor Professor Mitchell Friedman. Thank you for your guidance, advice, and expertise throughout the research process. Moreover, Professor Poree, I will always carry this "brick" of knowledge and our mentoring sessions. Again, thank you.

Special thankfulness and indebtedness go to you, Andre, for walking this journey with me once again and providing the needed encouragement throughout the highlights and lowlights of this process. To my forever tribe, Lamar, Fanchon, Jada, Indya, Sasha, and family, thanks for the constant love and support—*it is a wonderful life*. Miles away, Ma, you are my rock, hero, and eastern star. Also, my cherished friendships and newfound friends, thank you for your reassurances, listening sessions, and providing laughable moments along the way (merry-go-arounds and type-oholics do exist, Nicole, LOL.)

Finally, and sincerely, conveying my many appreciations to all those who supported me along the way, let us celebrate this accomplishment together; thank you all!

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LIST OF ACRONYMS AND ABBREVIATIONS

ANC	Alaska Native Corporations
ASA(ALT)	Assistant Secretary of the Army for Acquisition, Logistics, and Technology
CARES Act	Coronavirus Aid, Relief, and Economic Security Act
CDC	Centers for Disease Control and Prevention
CED	Community Economic Development
COVID-19	Coronavirus Disease
DASA	Deputy Assistant Secretary of the Army
DASA(P)	Deputy Assistant Secretary of the Army (Procurement)
DFARS	Defense Federal Acquisition Regulations
DOD	United States Department of Defense
DODIG	Department of Defense Inspector General
EDWOSB	Economically Disadvantaged Women-owned Small Business
EIDL	Economic Injury Disaster Loan
FAR	Federal Acquisition Regulations
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Agency
FY	Fiscal Year
GS	General Schedule
HUBZone	Historically Underutilized Business Zone
NCR	National Capital Region
NDAA	National Defense Authorization Act
NHO	Native Hawaiian Organizations
ODASA(P)	Office of the Deputy Assistant Secretary of the Army (Procurement)
OED	Office of Entrepreneurial Development
OGC&BD	Office of Government Contracting & Business Development
OPM	Office of Personal Management
OSBP	Department of Defense, Office of Small Business Programs
PEO	Program Executive Officer
PPP	Paycheck Protection Program

SBA	Small Business Administration
SBDC	Small Business Development Center
SBPS	Small Business Pulse Survey
SCORE	Service Corps of Retired Executives
SDB	Small Disadvantaged Business
SDVOSB	Service-disabled Veteran-owned
SECDEF	Secretary of Defense
USCB	United States Census Bureau
USGI	United States Government Information
VBOC	Veterans Business Outreach Center
VOC	Variants of Concern
WBC	Women's Business Center
WHO	World Health Organization
WOSB	Women-Owned Small Business

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I. INTRODUCTION

A. INTRODUCTION

Over the past two years, the Coronavirus Disease (COVID-19) pandemic resulted in an economic crisis for businesses, particularly small businesses, from 2020 through 2022. The research necessitated the need to understand small businesses' current decision-making condition for future economic resolve in the wake of a national emergency. This chapter provides an understanding of the quandary faced by those who pursue the American Dream of entrepreneurship while examining the background that conveys the context and justifies the need for the research. Thus, Chapter I focuses on the background and research composition data on the 2019 pandemic, small business economic and financial challenges, and the involvement of policymakers, federal agencies, and bureaucratic leadership while also reviewing historical significance and legislative enactments affecting small businesses. Moreover, this chapter presents the problem statement, research methodology, project purpose, research questions, scope and limitations, and report organization.

B. BACKGROUND

A new infectious global phenomenon emerged worldwide in recent years, surging as one of the deadliest health threats thus far in the twenty-first century, the Coronavirus Disease. The infectious spread of the disease steamrolled the world as a global pandemic. The virus necessitated a public health and economic crisis constituting a national emergency in the wake of the disease. As a result, the government responded to the crisis through policy initiatives to reduce the systemic effects. Nonetheless, the disease continued to wreak havoc on society at large, causing micro-economic downturns through increased levels of poverty, homelessness, unemployment, business closures, and the health effects of the disease in death and dying mortality rates. An extraordinary occurrence, the effects of the disease threatened and continued to threaten the lives and livelihoods of U.S. citizens. Although the novel Coronavirus Disease has lessened its grip on societal pandemic norms, the resurgent and new variant strains of the virus continue to emerge.

1. Coronavirus Disease 2019

The Centers for Disease Control and Prevention (CDC) defined *Coronavirus Disease* (Figure 1) as: "a respiratory disease caused by SARS-CoV-2, a coronavirus discovered in 2019" (Centers for Disease Control [CDC], 2021a). As of May 7, 2022, there were confirmed 515.6 million viral cases, including 6.2 million viral deaths and 11.6 billon people vaccinated globally. On the other hand, the U.S. reported 81.6 million confirmed virial cases, 995 thousand virial deaths, and 578.2 million people vaccinated to prevent COVID-19 (Figure 2).

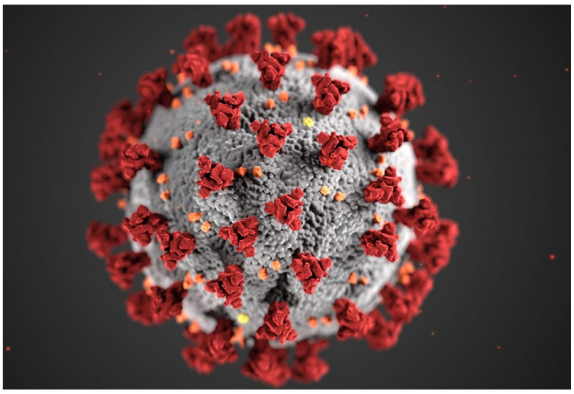
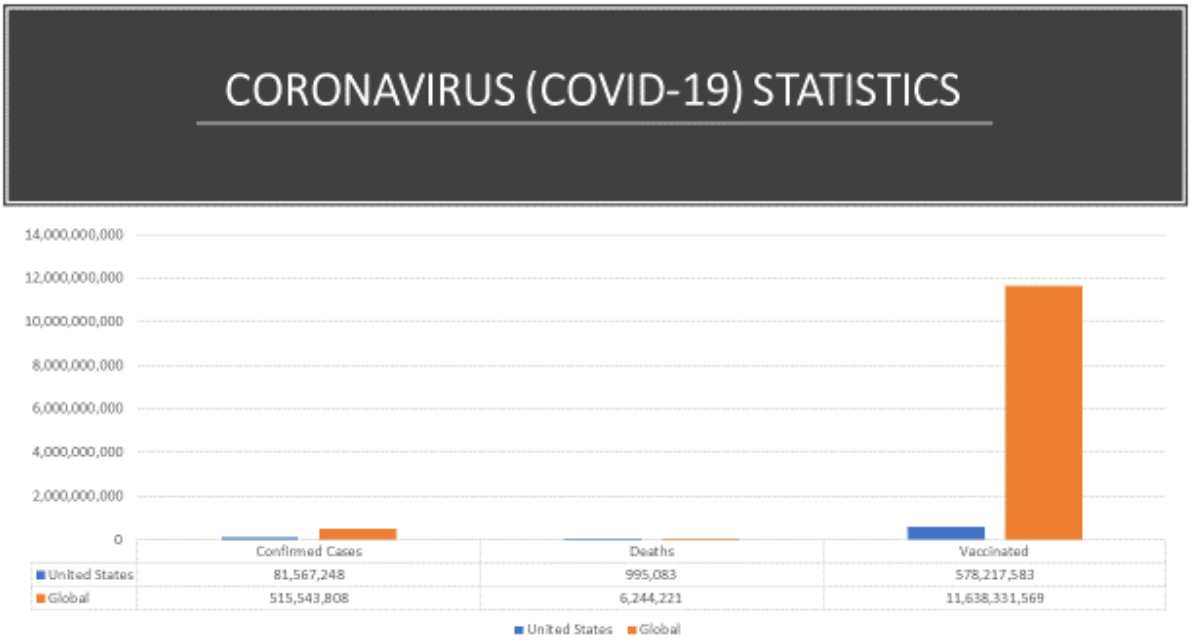


Figure 1. COVID-19, a Coronavirus. Source: CDC (2021b).



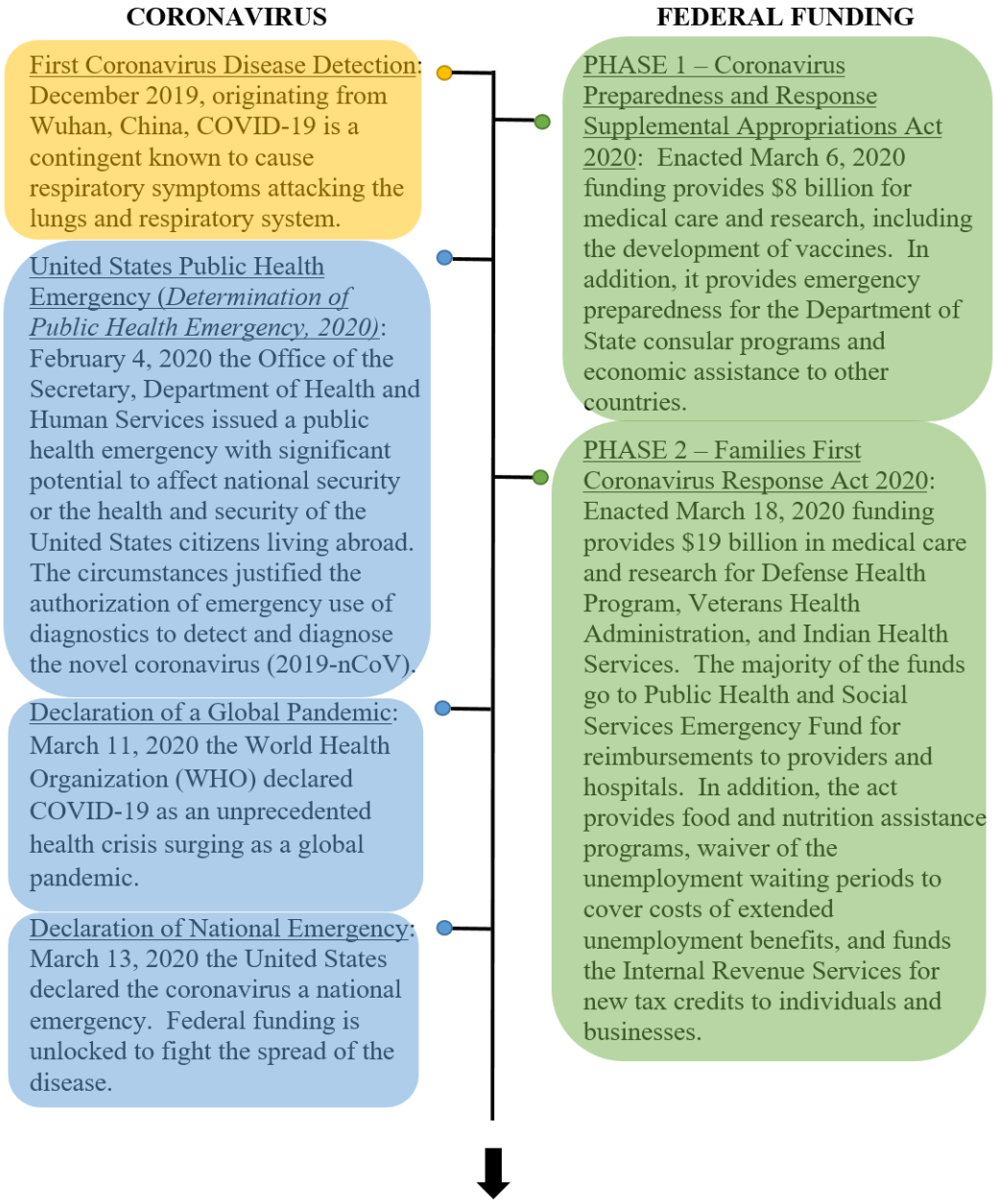
Statistics based on the number of confirmed COVID-19 disease disclosures, deaths, and vaccinated per individual compared to populations globally and in the United States.

Figure 2. Coronavirus (COVID-19) Statistics as of May 7, 2022. Adapted from BING (n.d.).

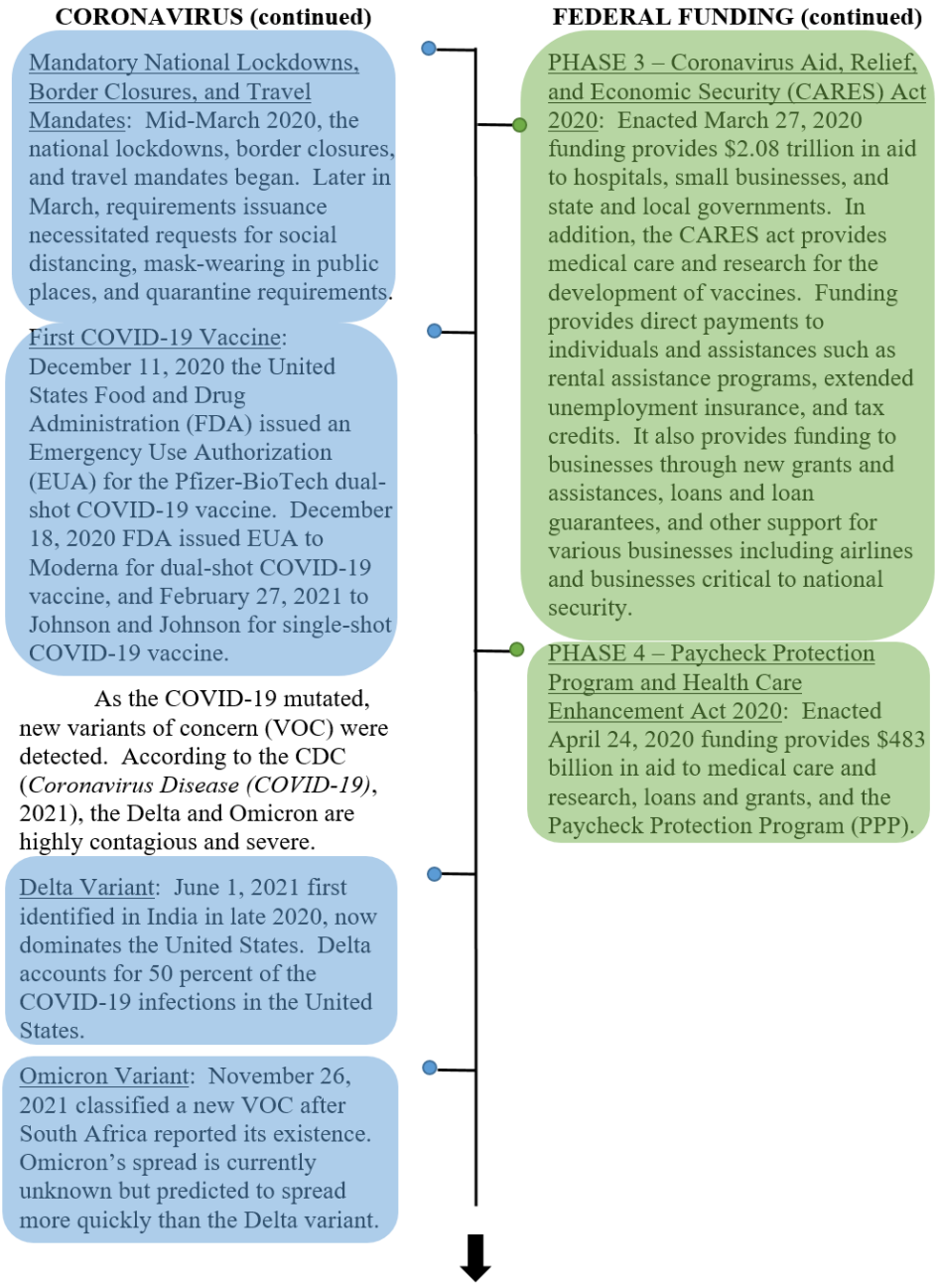
2. Timeline of Coronavirus Disease 2019 and Federal Acts Enacted

For this research, Table 1 outlines the selected notable events of the coronavirus disease and federal acts enacted to combat economic developments (CDC, 2022).

Table 1. Timelines of Selected Notable Events. Adapted from CDC (2022).



(Table 1, continued)



The rapid progression of COVID-19 triggered a health and safety crisis and economic uncertainties around the globe, particularly for small businesses. The previously depicted timeline outlines the origins of the coronavirus. Furthermore, the timelines

identify four subsequent federal response phases in response to the coronavirus economic. Starting in Wuhan, China, the virus quickly progressed into a pandemic resulting in economic uncertainties for many nations. After the United States, Determination of Public Health Emergency (National Archives, 2020) authorized a national public health emergency affecting national security or health, phase one enacted the Coronavirus Preparedness and Response Supplemental Appropriations Act, which funded $8.3 billion for emergency funding in response to the coronavirus outbreak (116th Congress, 2020a). Later phase two followed enacting the Families First Coronavirus Response Act, which provided $104 billion for "paid sick leave, tax credits, and free COVID-19 testing [while] expanding food assistances and unemployment benefits, and Medicaid funding" (116th Congress, 2020b). After the trigger of the Declaration of National Emergency and Mandatory National Lockdowns, Border Closures, and Travel Mandates in mid-March 2020, phase three enacted the Coronavirus Aid, Relief and Economic Security (CARES) Act providing $2.2 trillion to respond to the outbreak and impact of COVID-19 "on the economy, public health, state and local governments, individuals, and businesses" (116th Congress, 2020c). Ultimately, phase four of the Paycheck Protection Program (PPP), and Health Care Enhancement Act provided $484 billion in funding for small business loans, health care providers, and COVID-19 testing" (116th Congress, 2020d). With Pfizer-Bio Tech, Moderna, and Johnson and Johnson's pharmaceutical companies receiving U.S. federal vaccine release authorizations, new variants of the coronavirus continued to emerge, such as the Delta and Omicron Variants (CDC, 2020). Unfortunately, as coronavirus variants continue to emerge, the viruses' mutation continued to evolve while gradually changing the economic construct for small businesses.

3. Economic and Financial Plight of Small Businesses

As the COVID-19 crisis progressed, the effects triggered economic uncertainties around the globe. Against this backdrop, the global pandemic created a health and safety emergency and an economic predicament for small businesses due to various uncertainties. The pandemic affected various industry sectors such as beauty salons, restaurants, meatpacking plants, and defense contractors. Consequently, the pandemic affected other established industries like manufacturing, entertainment, healthcare, construction, and food

and beverage, to name a few. Arora et al. (2020) provided a collection of surveys on business types (large, medium, and small) that indicated that businesses experienced less economic and supply chain confidence and anticipated a reduction in spending across several categories compared to the usually expected trends. Thus, not only did businesses experience the negative economic impacts due to COVID-19 varying degrees of labor shortages, supply chain delays, and reduced consumer activity, but a change in consumer behavior spanned far-reaching impacts beyond the U.S. borders.

Areas in education, government, insurance, information and communication, and finance, amongst others, continued to maintain continuity of operations while pivoting and adopting non-traditional solutions like telework and remote work to ensure work safety practices. Nevertheless, most small businesses remain ill-equipped to transition to non-traditional solutions and face difficulties while enduring harder-hitting impacts on financial, economic, and serviceability or operational sustainment. Engidaw (2022) argued that some businesses could shift employees to remote work while others could scarcely do the same. In the same study he (or she) further argues that larger businesses stand a more likely chance of having the resources to address social distancing regulations for operating and re-opening during the pandemic than small businesses (Engidaw, 2022). Similarly, Bartik et al. (2020a) surveyed small businesses' responses, and results suggested that small businesses had little cash on hand. Bartik et al. (2020b) also suggests that many businesses most likely failed without assistance and stressed the importance of sustainable policies regarding economics and public health. Building on Bartik et al.'s (2020a) responses, Adams and Alarifi's (2021) survey concluded that adopting small business innovation practices positively impacted the performance and likelihood of business survival. Adams and Alarifi (2021) defined *business innovation practices* as an "effective implementation of new solutions to challenges . . . which includes effective implementation of new ideas" (Literature Review section, para. 1). Likewise, Adams and Alarifi (2021) also concluded that the survey's external support strengthened the positive impacts of innovation practices on business survival rather than performance compared to Engidaw's (2022) argument.

Therefore, due to the challenges of combating the systemic effects of COVID-19, small businesses would disproportionately experience an increased economic and financial

plight compared to non-small business counterparts. Federal policy initiatives needed to address the economic challenges facing small businesses. Subsequently, implementing a policy that provided small businesses economic relief and preparedness assistance was also needed to weather the next national health emergency.

4. The United States 117th Congress

In the wake of the crisis, Congress needed to address the virus' adverse small business economic impacts. The policy agenda-making process started to reverse the negative economic impacts that adversely affected small businesses. The beginning of this policymaking process consisted of collaborative efforts of small business interest group pushing for an agenda and multiple federal agencies collecting information and assessments. Based on the House and Senate Committee review and debate on economic policy, the federal disaster assistance policy response was forwarded to the Full Committee as a recommendation. Fast forwarding the policy agenda-making process, legislation was introduced to Congress and proceeded through the House and Senate. The CARES Act enacted a policy to provided disaster assistance to affected small businesses from coronavirus financial hardships. This disaster assistance included various intervention provisions such as loans, grants, acquisition programs to contract, and preventive technical assistances (United States Government Information [USGI], Sections 1103 and 1108, 2020b). Seemingly, Congress viewed small businesses as a necessary means to an end to stimulate the economy and create employment due to the adverse economic effects of the coronavirus.

House Small Business Committee Honorable Chairwoman Nydia M. Velazquez (D-NY) introduced legislation to create new programing under the Small Business Administration (SBA) to assist small businesses impacted due to the coronavirus outbreak. She stated: "As the severity of coronavirus pandemic continues to affect day-to-day lives, Congress must take steps to promote the health, safety, and financial wellbeing of hardworking Americans" (Committee on Small Business, 2020). Furthermore, Chairwoman Velazquez proclaimed, "the stakes are too high for the federal government to

get this wrong . . . [we must provide] a swift, bold government response to protect . . . small businesses" (Committee on Small Business, 2020).

5. Department of Defense, Office of Small Business Programs

The United States Department of Defense (DOD), Office of Small Business Programs (OSBP) (Department of Defense, Office of Small Business Programs, n.d., as cited in Biden Harris, 2022) mirrored the same response addressed by Honorable Joseph R. Biden, 46th president of the United States. Biden stated that "the federal government must act swiftly and aggressively to help protect and support our families, small businesses, first responders, and caregivers essential to help us face [COVID-19], those who are most vulnerable to health and economic impacts" (Biden Harris, 2022).

In addition, per the Honorable Lloyd Austin, Secretary of Defense, a U.S. Department of Defense, *DOD Small Business Contracting*, October 27, 2021 memorandum urged "all DOD personal involved in the acquisition process to identify opportunities for increased contracting with small business" (Department of Defense [DOD], Secretary of Defense [SECDEF], 2021). Austin further tasked the DOD OSBP to: "refresh the DOD Small Business Strategy to maximize small business capability through a Department-wide approach and better align the Department's efforts with the President's focus on increasing the share of dollars going to small disadvantaged businesses and traditionally underserved entrepreneurs" (DOD, SECDEF, 2021). Leading the charge to increase federal spending, the DOD utilized government contracting to foster economic growth while narrowing the disparities of acquisition opportunities for small businesses.

6. Office of the Deputy Assistant Secretary of the Army (Procurement)

Headquartered at the Pentagon in Arlington, Virginia, the Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASA(ALT)) oversees eight principal Deputy Assistant Secretaries of the Army (DASA). The DASA collectives align the individual offices to strategically implement an overarching Army mission to "continuously modernize the U.S. Army through the timely development and delivery of overmatch capability to Soldiers to deter adversaries and win our Nation's wars" (Assistant Secretary of the Army for Acquisition, Logistics, and Technology [ASA(ALT)], 2021).

Under the ASA(ALT) umbrella, the Principal DASA of the Office of the Deputy Assistant Secretary of the Army (Procurement) (ODASA(P)) provides Army services acquisition leadership of a $200 billion portfolio in existing and planned contracts (Dake, n.d.). The ODASA(P) operates to provide "world class leaders that develop and oversee policies, programs, and people enabling the acquisition of goods and services for the Soldier" (ASA(ALT), 2021). Further, the ODASA(P) provides the top goals and objectives for Army Contracting Commands to (1) develop people, (2) integrate relationships, and (3) revolutionize contracting (The Office of the Deputy Assistant Secretary of the Army (Procurement) [ODASA(P)], n.d.).

7. Small Business Administration

As a result of shuddered unknown economic uncertainties, the SBA took the lead in assisting small businesses in accessing and applying for funding provisions and revamp corporate strategies that improves businesses' flexibility to endure future aftershocks resulting from national emergencies. SBA Administrator, Jovita Carranza, issued the following statement at the onset of the disease:

> Small businesses are vital economic engines in every community and state, and they have helped make our economy the strongest in the world. Our Agency will work directly with state Governors to provide targeted, low-interest disaster recovery loans to small businesses that have been severely impacted by the situation. Additionally, the SBA continues to assist small businesses with counseling and navigating their own preparedness plans through our network of 68 District Offices and numerous Resource Partners located around the country. The SBA will continue to provide every small business with the most effective and customer-focused response possible during these times of uncertainty. (SBA, 2020)

In the long run, SBA has the evolving potential to provide the driving force needed to strengthen economic and financial positions, strengthen small businesses' resilience, and alleviate circumstances particular to a renewal strategy approach.

8. National Capital Region

Enriched in history, culture, arts, education, and religion, the National Capital Region (NCR) represents a sample composition of the Nation's social, economic, financial,

and demographic diversities and disparities. Commonly referred to as the NCR, Capitol Hill serves as the original point of reference and the foundation of the Nation's democratic institutions, leadership, and governance. The NCR encompasses the metropolitan area of Washington, the District of Columbia, and surrounding states of Maryland, Commonwealth of Virginia, and West Virginia (as a note, the research omitted West Virginia as a part of the NCR). According to the Office of Personnel Management (OPM) General Schedule (GS) locality pay, southern portions of the Commonwealth of Pennsylvania as Adams, Franklin, and York counties are part of the NCR (Office of Personnel Management, 2022). While the NCR serves as the hub of American politics, decision-making, and governance, the importance of the NCR to this research provides a broad socio-economic, and diverse demographic collective sampling that reflects the pulse of the Nation.

9. The American Dream of Business Ownership

Besides homeownership, another American Dream echoes the entrepreneurs' compassion to sell, bargain, and share goods and services for profit among a collective of interested buyers. The spirit of business ownership forges new owners to envision freedoms and opportunities for prosperity while building and leaving a legacy. A passion that resonates with building or creating something new out of nothing or combines lesser value objects into something more refined, entrepreneurship provides this flame. Ownership, a journey of demonstrated sacrifices and perseverance that cultivates ingenuity and creativity to pursue value and profit or the engagement of societal social impacts, non-profiting resulting in little to no financial gains. An American culture emulates the need to succeed and realize economic and financial independence and self-liberties. Entrepreneurship devises the interwoven patchwork of societal networks and exchanges, creating economic strength through perseverance while promoting the betterment of the Nation. Business ownership is virtually an American Dream for most but far and distant for many. Even if obtained, the reality of entrepreneurship carries more significant difficulties and complexities than the perceived misconceptions.

Due to COVID-19, the economic plight affecting the small businesses compared to medium or large businesses highlighted those small businesses along "Main Street" needed economic relief just as much as businesses on "Wall Street." All business types may have required some form of economic relief, from the mom-and-pop stores and pop-up shops to the small manufacturers and the doggie groomer around the corner from Saks Fifth Avenue. Unfortunately, COVID restrictions resulted in small businesses requiring more relief due to higher susceptibility to hardships, including the harsh realities of operational disruptions and high-risk economic and financial challenges. Seemingly, there was optimism that small businesses would continue to make the necessary decisions to stay in the fight or reduce to flight. Arora et al. (2020) conducted surveys that demonstrated that businesses dealt with and continue to still experience economic and financial vulnerabilities due to labor shortages, supply chain interruptions, and other operational constraints. These vulnerabilities would lead to small businesses needing enacted legislation for economic relief.

In the meantime, small businesses continued to struggle with the advent of COVID lockdowns and safe-distancing restrictions. Keeping the American Dream of business ownership, a reality will require Congress to authorize and appropriate additional supplemental relief funding. Implementing this type of policy would provide small businesses with increased funding opportunities, reduce barriers to access funding, and furthered the promotion and expansion of informational outreach and services to further assist current situations and future planning. Regardless of the amount of federal funding made available to those in need, there resulted and continue to result in funding restrictions such as small businesses funding eligibility based on funding requirements. In hindsight, most small businesses appear to display decision-making fortitude based on rational or irrational reasoning as it seeks or pause to seek publicly available resources and assistances.

10. Historical: The 1978 Amendments, the Small Business Act of 1958

After the inception of the Small Business Act of 1958, the 1978 Amendment to it gave the SBA express statutory authority to include minority-owned businesses in the 8(a) Program. The current 8(a) Program merged two federal programs "[for] those seeking to

assist small businesses . . . and those seeking to assist racial and ethnic minorities" (Dilger & Manuel, 2018, p. 3). Under the 1978 Amendments, the SBA under Section 8(a) could only subcontract with "'socially and economically disadvantaged small business concerns,' or businesses that are least 51 percent owned by one or more socially and economically disadvantaged individuals and whose management and daily operations are controlled by such individual(s)" (Dilger & Manuel, 2018, p. 5). The 1978 Amendments established the definition of socially disadvantaged individuals to include those 'subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities' (Dilger & Manuel, 2018, p. 5). Socially disadvantaged individuals consist of the following: 'Black Americans, Hispanic Americans, Native Americans, and other minorities' (Dilger & Manuel, 2018, p. 5). In addition, the 1978 Amendments established the definition of economically disadvantaged individuals that includes 'those socially disadvantaged individuals whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as comparted to others in the same business area who are not socially disadvantaged' (Dilger & Manuel, 2018, p. 6). Later in the 1980s, Congress added four other socially and or economically disadvantaged groups of individuals. Other groups to participate included: (1) the Community Economic Development (CED) enacted through the Community Economic Development Act of 1981, (2) Indian tribes, (3) Alaska Native Corporations (ANCs), and (4) Native Hawaiian Organizations (NHO) (Dilger & Manuel, 2018, p. 15).

11. National Defense Authorization Act for Fiscal Year 2022

Officially titled as amended by the U.S. House of Representatives (House), the National Defense Authorization Act (NDAA) entitled "to authorize appropriations for the fiscal year 2022 for military activities of the Department of Defense, for military construction, and for defense activities of the Department of Energy, to prescribe military personnel strengths for such fiscal year, and for other purposes" (117th Congress, 2021c). Titled H.Con.Res.18—Expressing the sense of Congress regarding the importance of including small business concerns, especially minority-owned small business concerns, in any efforts to leverage the Defense Production Act in response to the COVID-19 pandemic, (H.Con.Res.18–117th Congress, 2021a) introduced in the House. The induction read "the

current resolution urges the President to give preference to small businesses—especially those that are minority owned—and ensure their participation in specified efforts to response [d] to COVID-19" (i.e., coronavirus disease 2019) (H.Con.Res.18–117th Congress, 2021a). H.R.4350–National Defense Authorization Act for Fiscal Year 2022, Title VIII–Acquisition Policy, Acquisition Management, and Related Matters, identified sections under Subtitle E–Other Matters modified or amended the Small Business Act to read as:

- Section 861–Modification to government-wide goals for small business concerns of Section 15(g)(1)(A) of the Small Business Act (15 U.S.C. 644(g)(1)) (H.Con.Res.18–117th Congress, 2021a).
- Section 873–Amendment to contracting authority for particular small business concerns of Section 8(a)(1)(D)(i)(II) of the Small Business Act (15 U.S.C. 637 (a)(1)(D)(i)(II)) (H.Con.Res.18–117th Congress, 2021a).

Regarding the FY22 NDAA, this act would increase thresholds for (1) government-wide participation goals for small businesses and (2) anticipated award price of contracts, including options, as applicable. H.R.4350–117 Congress (2021-2022) passed the House on September 23, 2021 (117th Congress, 2021d) to move to the Senate and became law as S.1605 on December 27, 2021 (117th Congress, 2021e). On December 27, 2021, President Biden signed into law S. 1605, the NDAA FY2022 (White House, 2021). A release update for United States Government Information, Federal Register (2020a) regarding the public comments period was unavailable for this research.

C. STATEMENT OF THE PROBLEM

Mandated pandemic postures to reduce the COVID-19 outbreak, such as mask wearing, social distancing, sanitizing, quarantining, and vaccinations, exacerbated small businesses' challenges in the face of exasperating economic conditions. The typical U.S. small businesses susceptible to operational and financial disruptions included industries of food and hospitality, retail, and other personal services like beauty and fitness, to name a few (Arora et al., 2020). For example, Arora et al. (2020) highlighted U.S. COVID's negative consumer spending areas included food and hospitality, apparel, entertainment, services, travel, and transportation, while increase consumer spending involved groceries,

household supplies, and home entertainment (Arora et al., 2020, p. 11). Before the pandemic, the small business groups experienced financial and economic fatigue, distress, or risk. In addition to pre-pandemic conditions, now these experiences also include increased operational fragility in supply (consumables and employees), demand (consumers), distressed retained earnings (profit), and at-risk business closures.

Initially, the U.S. 117th Congress enacted legislation that authorized and appropriated $2.59 trillion in supplemental funding (USASPENDING, 2022a). Later a total of five legislative acts would further authorize and appropriate a combined total of $4.6 trillion as a flow of funds to the American people and businesses (USASPENDING, 2022a). The largest funded relief of these acts at approximately $2.08 trillion (USASPENDING, 2022a) included the Coronavirus Aid, Relief, and Economic Security (CARES) Act. The CARES Act would lay the foundation to enable a strong and equitable recovery among several groups impacted from the coronavirus pandemic. Of these impacted groups, small businesses would receive $377 billion in necessary emergency relief funds (USASPENDING, 2022a). By enacting the CARES Act, supplemental disaster relief funding would result in the needed governmental solution to small businesses' challenges, burdens, and losses due to COVID. The iconic embodiment of the big fish (large businesses) and little fish (small businesses) in a large pond (government), the NCR is where the pond or sovereign power resides over the people and businesses. Compared to other regions in the United States, the NCR drives the societal platform of American policy and laws affecting trade, finance, and commerce. Unfortunately, the extent to which NCR small businesses benefited under the CARES Act elements is unclear.

Therefore, this research aims to understand the extent to which the NCR small businesses implemented economic intervention and prevention strategies under the flow of funds from the CARES Act supplemental disaster funding and grant-funded assistance during the national health emergency, COVID-19, 2020 through 2022.

D. METHODOLOGY

This research established the need for a mixed methodology using quantitative and qualitative approaches. Utilizing a mixed methodology would expand the exploration of

understanding involving small businesses and theory in answering one's research questions. Using both quantitative and qualitative approaches would provide a clearer picture of the research while integrating another level of understanding involving the research's key focus elements. These critical areas of focus include:

- Intervention, economic relief through PPP, Economic Injury Disaster Loan (EIDL), and Army service contract awards; and
- Prevention, economic preparedness through emergency preparedness, crisis management, and risk mitigation.

E. PURPOSE OF THE STUDY

According to Hayes (2020), the classical definition of Rational Behavior Theory pertains to a decision-making process involving choices for optimal results (benefits) or satisfactions (utility). Vriend (1996) argued that economic approach to human behavior allows for economic analyses even when the problem produces ill-defined and uncertain outcomes. Thus, the assumption implies rational behavior occurs when taking actions for benefits instead of harmful actions. For example, on the one hand, when small businesses remain open or terminate operations voluntarily, these decisions drive rational behaviors. While on the other hand, when small businesses take no actions, this results in decisions driving irrational behaviors. Based on the nature of the decision, rational or irrational, the decision determines the behavior. Therefore, this mixed methods research explores how small businesses displayed rational or irrational behaviors in decision-making resulting from the attainment of CARES Act public-funded relief and grant-funded program assistances, and U.S. Department of the Army COVID-19 services contract awards, in the NCR, 2020 through 2022.

F. RESEARCH QUESTIONS

This research explores the following two primary research questions:

1. How, and to what extent, did NCR small businesses apply rational or irrational behaviors in CARES Act decision-making involving

intervention strategies on economic relief under the PPP, EIDL, and Army service contract awards, 2020 through 2022?

2. How, and to what extent, did NCR small businesses apply rational or irrational behaviors in CARES Act decision-making involving prevention strategies on economic preparedness under the emergency preparedness, crisis management, and risk mitigation, 2020 through 2022?

G. SCOPE OF THE STUDY

The scope of this research builds on two research studies from a practical and an academic perspective. It also reviewed the CARES Act flow of funds to agencies such as the DOD and SBA that provided supplemental funding of loans, grants, and contracting opportunities, and other technical assistances, education, training, and mentorships for small businesses. One research study, the federal report of the Congressional Research Service, examined congressional actions to "assist small businesses during and immediately following the Great Recession (2007-2009)" (Dilger et al., 2021, October, p. 1) and discussed recent legislation "to assist small businesses adversely affected [due to the] COVID-19 pandemic" (Dilger et al., 2021, October, p. 1). This research added to the discussion based on the Congressional Research Service's recommendations to provide thorough investigations and audits to promote transparency while assisting Congress in performing oversight responsibilities (Dilger et al., 2021, October). Likewise, this research builds on the existing body of research involving small businesses during national health emergencies.

The second study, the peer-reviewed research, aimed to explore the impacts of the COVID-19 pandemic on small businesses, specifically through a case study of Greece. The research employed qualitative and qualitative approaches to study the impacts on small businesses in Greece based on operational and financial problems and the mitigation and lessening of effects of the pandemic (Mylonas, 2021, June, p. 33). Questionnaires collected information from three small businesses based on the findings that showed the challenges faced from November 2019 through November 2020 as they experienced widespread reductions in consumer spending and subsequent revenues, the absence of government

financial support, and the lack of resources for crisis management. Recommendations for future researchers involved conducting a quantitative approach using a more extensive survey sample over a larger population and the consideration of exploring the impacts of the pandemic on small businesses in developing countries.

H. LIMITATIONS OF THE STUDY

The limitations of this research analyzed secondary reported data from data collection sources of USASPENDING and the United States Census Bureau, Small Business Pulse Survey (SBPS) databases, and federal reports SBA Forgiveness Reports and SBA Disaster Assistance Update Report on Nationwide COVID EIDL. The first dataset, a web-based application USASPENDING, serves as the official open data source of federal spending information and is updated per the scheduled data updating parameters. It tracks federal money spending across the United States and abroad. The database uses interactive tools that explore elements of the federal budget, and these data elements range from federal loans, grants, and contracts. This research extracted data from the USASPENDING reporting database regarding the CARES Act flow of funds to DOD and SBA during fiscal years (FY) 2019, 2020, and 2021.

The second dataset, a web-based application the United States Census Bureau SBPS, measures the effect of changing business conditions during COVID and is updated per the SBPS scheduled data updating perimeters. SBPS, an experimental data product, provides innovative statistics benefiting data users without other relevant information. The survey collects data weekly based on the overall effects of COVID-19 on "businesses, operations metrics, vaccine and testing requirements in the workplace, business challenges, changes to business finances, and future expectations" (Small Business Pulse Survey [SBPS], 2022a, What data are collected in the Small Business Pulse Survey? section). It tracked the high-frequency, detailed information on the challenges small businesses face. These data elements range from local, state, and federal offices in real-time data to aid policy and decision-making. According to the United States Census Bureau (USCB), the SPBS provides a "legitimate survey conducted solely via email as a continuous gauge of the economic effect of the COVID on small businesses" (SBPS, 2022b, Is the survey

legitimate? section). The Census Bureau's Frequently Asked Questions stated, "the survey contains the OMB number, 0607–1014, authorizing the collection of the data and is signed by the U.S. Census Bureau Associate Director of Economic Programs" (SBPS, 2022b, Is the survey legitimate? section). This research extracted data from the SBPS reporting database regarding small business challenges during FY 2019, 2020, 2021, and 2022.

Lastly, federal reports of the SBA Forgiveness Reports and SBA Disaster Assistance Update Report on Nationwide COVID EIDL issuance resulted in periodical releases on PPP and EIDL per the reports' scheduled updating parameters. Both track national and state total loan counts and total loan value; however, after August 8, 2020, SBA stopped providing state counts and values. Both reports provided detailed cumulative data. This research extracted data from the two issued federal reports regarding PPP and EIDL baseline and current cumulative totals on loan counts and value at the federal and state levels (or the NCR) during FY 2020, 2021, and 2022.

Microsoft Excel, Word, and PowerPoint software provided the tools to complete data analysis, organize the research, and create graphic presentations to message and package the work. Using USASPENDING and SBPS databases, Microsoft applications provided the primary means to interpret, think, and write about this research critically using

1. Excel to collect, filter, and analyze the data
2. Word to create, process, and edit the report
3. PowerPoint to present and show the findings

I. ASSUMPTIONS

Several assumptions underlie this research. First, the research assumes that NCR small businesses will apply rational behaviors than less rational or irrational behaviors in CARES Act decision-making involving intervention strategies on economic reliefs, and prevention strategies on economic preparedness. Second, the research assumes small businesses participating in the surveys of USASPENDING and SBPS represent the population of the NCR. Third, the research assumes secondary data from USASPENDING and SBPS provides a sufficiently generic relationship and enough to support or contradict

the analysis of the two research questions. Fourth, the research assumes the self-reported surveys of small businesses in USASPENDING and SBPS datasets represent sufficiently error-free data. Fifth, the research assumes that any errors or variances in the secondary data at a minimum or disbursement reduced any bias. Sixth, the research assumes federal reports SBA Forgiveness Reports and SBA Disaster Assistance Update Report on Nationwide COVID EIDL represent accurate and current reporting for analysis. Lastly, the research assumes that the readers are generally familiar with the legislation of

- the CARES Act,
- DOD contracting under the Federal Acquisition Regulations (FAR) and Defense Federal Acquisition Regulations (DFARS), and
- SBA small business programs.

J. RESEARCH ORGANIZATION

This study has been organized into five chapters:

- Chapter I, Introduction, introduces how small businesses were perplexed when confronted by COVID-19, small economic and financial circumstances, Congressional and agency involvements or positions, and the historical significance of legislation affecting small businesses, including the CARES Act.
- Chapter II, Literature Review, reviews various peer-reviewed research, federal governmental reports, and other publications relevant to the scope of this study.
- Chapter III, Methodology, discusses how the research was conducted.
- Chapter IV, Analysis, presents the data and discusses the significance of the data collected.
- Lastly, Chapter V, Conclusion and Recommendations, offers critical conclusions based on the research presentation as mentioned earlier and

data analysis conclusion to include recommendations and areas for future research.

K. CONCLUSION

Over the past two years, the COVID-19 pandemic resulted in an economic crisis for businesses, particularly small businesses, from 2020 through 2022. This chapter provided the introduction and research background looking at the American Dream of entrepreneurship and the harsh realities of small business ownership during the pandemic. As small businesses sought profits, burdens of running a business and effectively making decisions for the business's survival or demise existed and continue to exist. The Small Business Act became the legislative backbone that supported the entrepreneurial spirit regardless of business size or disadvantage (socially or economically). Notably, COVID was and continues as a moment in time that redefines the American entrepreneurial dream. In this chapter, the Coronavirus Disease timeline and federal enactments relating to small businesses discussions also involved associated awareness of historical enactments on the Small Business Act of 1958, NDAA FY2022, and the CARES Act. The plight of small businesses and the American Dream of business ownership continued the discussion. Adding to the conversation, congressional policymaking, federal agencies, and bureaucracies implementing policy such as the DOD, ODASA(P), and SBA provided an increased layer of dialogue. Finally, the research construct discussion included the statement of the problem, methodology, purpose of the study, two primary research questions, and scope and limitations of the study in selecting the theoretical correlations to prove or disprove rational or irrational behaviors in NCR small businesses intervention and prevention strategies. This research explores the economic plight of NCR small businesses and the type of decision-making implemented during national emergencies involving intervention and prevention strategies.

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II. LITERATURE REVIEW

A. INTRODUCTION

The previous chapter explained the NCR small businesses' background based on COVID-19, economic and financial plights, and the involvement of policymakers, federal agencies, and bureaucratic leadership while looking at historical significance and legislative enactments affecting small businesses. The chapter also presented the problem statement, research methodology, project purpose, research questions, scope and limitations, and report organization. The Literature Review chapter provides a summary of published peer-reviewed research, Federal governmental reports, and scholarly journals. The literature review aims to convey relationships, strengths, and weaknesses from other research compared to this research. This literature review considered studies on national emergencies as public heath emergencies as determined under the National Emergencies Act. The public health emergency, characterized as a pandemic under Proclamation 9994, declared a Declaration of National Emergency Concerning the Novel Coronavirus Disease (COVID-19). In doing so, the Federal government took "preventive and proactive measures to slow the spread of the virus and treat the infected, including instituting Federal quarantines . . . and releasing policies to accelerate the acquisition of [medical] equipment and . . . diagnostic. . . laboratories" (United States Government Information, 2020a). Subject to the availability of appropriations, the CARES Act enactment provides supplemental funding to small businesses defined under the Small Business Act of 1958, the 1978 Amendment. The phenomenon of the CARES Act, incorporated into this research, ascertains if the legislation as fiscal policy proportionally benefited or disproportionally harmed small businesses' decision-making during 2019 through 2022. The affected variables involved (1) the degree to which small businesses participated in the CARES Act programs and (2) the extent to which the NCR small businesses prepared for national emergencies. These variables discuss the impacts on small businesses through others' scholarly research regarding intervention and prevention, such as economic relief and preparedness. Thus, Chapter II focuses on the literature review regarding economic theory and the research elements.

B. NEOCLASSICAL ECONOMIC THEORY, RATIONAL BEHAVIOR THEORY

From a macroeconomic perspective, the foundational theory of Keynesian Economics sets the framework of the comprehensive CARES Act legislation. For this literature review, the microeconomics level theory of Neoclassical Economics provided the guiding principles (along with Rational Behavior Theory) to explain the phenomena of the CARES Act from the small business perspective. The Theory of Neoclassical Economics states that supply and demand lead to the efficient allocation of resources. Likewise, in theory, the takeaway of this research's two main variables of intervention and prevention, could correlate to Neoclassical Economics. Neoclassical Economic Theory considered intervention as economic relief. The theory states: that (1) "competition leads to an efficient allocation of resources within the economy" (Kenton, 2021) and (2) that "[market equilibrium and full employment growth are] primary economic [government] priorities" (Kenton, 2021). In addition, the supply and demand sides of economics brings market equilibrium and savings together to equal investments (Kenton, 2021). Secondly, Neoclassical Economic Theory considered prevention as economic preparedness. The theory states: that (1) consumers want maximum personal satisfaction, and (2) products and services have value above and beyond production costs (Kenton, 2021). In summary, when making decisions, one tends to optimize the level of the benefit or satisfaction (utility) evaluated.

Considering Neoclassical Economics, the theory of Rational Behavior proposes that people act rationally when making economic decisions (Kenton, 2021). Schettkat (2018) stated that "optimizing individual utility is equated with rationality and only rational individuals inhabit the neoclassical world" (Schettkat, 2018, p. 5). At the same time, Zafirovski (2003) approached the conception of rational behavior as both instrumental reflecting economic and individual perspectives and non-instrumental reflecting extra-economic and social perspectives. Strictly speaking, rational behavior involves economically rational and irrational behaviors or non-economically rational and irrational behaviors. On the one hand, behaviors are considered rational when small businesses are fully aware of available programs and utilize programs under the CARES Act. While on

the other hand, behaviors are considered irrational when small businesses lack awareness of the available CARES Act resources and programs or are aware of the funds and choose to ignore the resources. Further, Schettkat (2018) explained that if the world consisted of perfectly competitive markets, then efficient and rational behaviors would subsist, and utility would appear undefined as an ordinarily assumed abstract (Schettkat, 2018, p. 5). The utility is an undefined and ordinary abstract decision provided and continues to provide a judgment or choice lacking commitment (Schettkat, 2018, p. 5). For this literature review, the decision offers the utility as the undefined and ordinary abstract, lacking commitment. Schettkat (2018) also distinguished that people make errors when predicting the future of a utility and people also fail to maximize that experienced utility fully, unlikely due to error or misunderstanding of the situation; instead, they overrule the actual values in the utility (Schettkat, 2018, p. 20). In other words, people make mistakes in their future decisions and fail to maximize learned lessons, unlikely due to error or misunderstanding of a situation, but from overlooking the actual value of the decision. Thus, Rational Behavior Theory consisted of rational or irrational behavior as economically or non-economically founded in decision-making.

C. INTERVENTION, ECONOMIC RELIEF

Senate Minority Leader Mitch McConnell stated on the Senate floor, "no economic policy can fully end the hardship so long as the public health requires that we put so much of our commerce on ice" (Snell, 2020). Furthermore, McConnell continued, "It is emergency relief. Emergency relief, that's what this is" (Snell, 2020). The overall purpose of the CARES Act provides "emergency assistance and health care response for individuals, families and businesses affected by the 2020 coronavirus pandemic" (116th Congress, 2020b). In providing small businesses emergency relief intervention, the CARES Act does "[establish and provide] funding for, forgivable bridge loans, and provides additional funding for grants and technical assistance" (116th Congress, 2020a). Under the CARES Act, economic relief was made available to small businesses in COVID-19 relief legislation through loans, grants, and financial assistance. While the Small Business Administration (SBA) provided other economic relief programs funded under

other legislations, the CARES Act primarily funded the PPP, EIDL, and funding agencies for federal contracting opportunities.

1. Paycheck Protection Program

The PPP, an SBA-backed loan, kept "[businesses'] workforce employed during COVID-19 crisis" (SBA, n.d.c). As for this research's time frame, SBA provided the Forgiveness Reports based on forgiveness loan count and dollars approved. As of March 13, 2022, for the period of 2020 through 2021, PPP forgiveness loans totaled 11,418,361 and dollar amount approved of $789,284,948,483 (SBA, 2022c).

Notably, the U.S. Department of the Treasury summarized loans that qualified as fully forgiven when used for "payroll costs, and most mortgage interest, rent, and utility costs," (United States Department of Treasury, n.d.) and "at least 75% of the forgiven amount must have been used for payroll" (United States Department of Treasury, n.d.). The PPP, categorized under First and Second Draws, helped fund "[payroll costs, including benefits], mortgage interest, rent, utilities, worker protection costs related to COVID-19, uninsured property damage costs caused by looting or vandalism during 2020, and certain supplier costs and expenses for operations" (SBA, n.d.c). The PPP retention criteria stipulated that small businesses are to

- maintain employee and compensation documentation,
- ensure sixty percent of loan proceeds spent on payroll costs, and
- ensure loan proceeds spent on other expenses are eligible (SBA, n.d.c).

PPP eligible entities included any small business meeting the size standard as "nonprofit, veterans' organizations, tribal business concerns, self-employed individuals, [sole proprietorships], and independent contractor" (United States Department of Treasury, n.d.). Eligibility included employing at least 500 or fewer employees (SBA, n.d.c). The PPP First and Second Draws ended May 31, 2021 (SBA, n.d.c).

2. Economic Injury Disaster Loan

The EIDL, another SBA-backed loan, has helped "[businesses'] workforce employed during COVID-19 crisis" (SBA, n.d.a) while providing recovery funds for small businesses (SBA, n.d.a). As of March 3, 2022, SBA provided the Disaster Assistance Update Report on Nationwide COVID EIDL based on EIDLs approved and EIDL dollars approved. To date, for the period of 2020 through 2021, the EIDL count totaled 3,909,713 and dollar amount approved of $348,818,338,835 (SBA, 2022b). The EIDL purpose helped and helps small businesses "overcome the effects of the pandemic by providing working capital to meet operating expenses" (SBA, n.d.a) that included "payroll, mortgage/rent, utilities, and other ordinary business expenses" (SBA, n.d.a). The EIDL ended on January 1, 2022 (SBA, n.d.a).

3. Federal Contracting Opportunities

Federal agencies are required to facilitate competition for goods, services, and equipment by including and maximizing the number of small businesses' participation. The SBA's role in government contracting consists of two parts. First, the Office of Government Contracting & Business Development works in partnership with federal agencies "to award at least 23 percent of all prime government contracts dollars to small business and help federal agencies meet specific statutory goals involving agency set-asides for small business concerns" (Office of Government Contracting & Business Development [OGC&BD], n.d.). Second, the Office provides socially and economically disadvantaged small businesses assistances in meeting requirements to obtain Federal contracts as prime or subcontractors (OGC&BD, n.d.).

Qualified minority-owned small businesses and entrepreneurs represent underserved communities eligible to compete for governmental sole-source contracts, a contract without competition, and competitive set-aside, a contract with a particular socially disadvantaged group. Socially disadvantaged groups consist of individuals of a particular race or ethnicity. Set-asides reserved for acquisitions targets small business concerns such as historically underutilized business zones (HUBZone), service-disabled veteran-owned (SDVOSB), economically disadvantaged women-owned (EDWOSB) and

women-owned small business (WOSB), and small disadvantaged business (SDB) concerns (FAR Subpart 19.5, 2011).

4. Intervention, Economic Relief

Under the CARES Act, the purpose of the enactment related to SBA economic relief was to inject liquidity into the small business ecosystem. Bartik et al. (2020b) provided surveys, analyses, and findings on the aspect of the CARES Act impacting small businesses concentrating on economic relief as a challenge. Bartik et al.'s (2020b) survey found that the respondents' burdens depicted determents in applying for small business relief due to difficulty accessing the inflexible online application, bureaucracy distrust of Federal government loan forgiveness, and complicated eligibility requirements (Bartik et al., 2020b, p. 18). In reasoning, it seems to appear that the difficulty in accessing the online application should by-no-means be considered a determent of rational decision-making, and scarcely considered a deterrent for making a rational or irrational decision due to the inabilities of technology beyond behavioral action. Likewise, Humphries et al. (2020) survey analysis concluded COVID-19 respondents already severely impacted experienced disruptions, employee layoffs, and viewed a worsening of their future (Humphries et al., 2020, p. 9). Humphries et al. (2020) continues that the smallest of small businesses experienced the least amount of assistance and the slowest growth in awareness of small business relief (Humphries et al., 2020, p. 9) compared to Bartik et al., (2020b). While Dua et al. (2020) concluded that respondents of minority-owned small businesses presented more at-risk occurrences in industries susceptible to disruptions, experienced structural challenges underscoring economic fragility of underrepresented groups, and lacked clarity or posed guidance changes similar to the survey results of Bartik et al., (2020b) and Humphries et al. (2020).

The CARES Act resulted in negative small business intervention challenges, confirming a similar theme throughout the literature review. Summarizing, based on survey results of Bartik et al. (2020b), Humphries et al. (2020), and Dua et al. (2020), an evidential relationship appeared among the surveys that economic relief provided disproportions,

unlikely due to the proportion of available CARES Act appropriations, but for following related reasons:

- A deteriorating business outlook from COVID-19 disruptions,
- Difficulty accessing assistance due to the lack of awareness and clarity in changing guidance and eligibility requirements, and
- That the most economically fragile ecosystem of at-risk small businesses had short-term to zero liquidity.

Based on the literature, the intervention induced portion of the COVID crises for small businesses resulted from disruptions, difficulty accessing assistances, and previous financial status of the small businesses before the emergency.

D. PREVENTION, ECONOMIC PREPAREDNESS

The CARES Act offered economic relief funding to small businesses; it also provided additional funding to SBA's Resource Partners, defined in the statute as small business development centers. Under the statute, the provision of Entrepreneurial Development allowed small business development centers to provide education, training, and advice to help small businesses respond to the challenges resulting from the 2020 coronavirus pandemic (USGI, 2020b). The Resource Partners or small business development centers are identified as the local Small Business Development Center (SBDC), Women's Business Center (WBC), Service Corps of Retired Executives (SCORE) mentorship, the Minority Business Development Agency (MBDA), or the Veterans Business Outreach Center (VBOC) (*CARES Act Counseling and Training Resources for Your Small Business*, 2022). Through the CARES Act grant funding of these centers, small businesses receive counseling, mentoring, and training services for free or low cost (*CARES Act Counseling and Training Resources for Your Small Business*, 2022). Available information and services from the Resource Partners primarily included promoting innovation, productivity, revenue, start-up, financial management, technical assistance, business development, and guidance related to growth and remaining

competitive (*CARES Act Counseling and Training Resources for Your Small Business*, 2022).

While SBA Resource Partners provided CARES Act grant-funded educational, training, and advisory services to the small business, this financial assistance primarily helped small businesses in "relevant business practices necessary to mitigate the economic effects of COVID-19 or similar occurrences" (USGI, 2020b). In reasoning, it seems to appear that prevention "awareness" of small businesses during a national emergency requires proactive than reactive planning. Fischer et al. (2019) identified three major elements of a contingency planning program (1) emergency response, (2) crisis management, and (3) business continuity. Furthermore, Fischer et al. (2019) argued the need for more consciousness to have contingency planning at the forefront in lite of changing times. Small businesses usually lack proactive planning, resulting in emergency unpreparedness, crisis management, and risk mitigation deficiencies. The concern provided and continues to focus on the effectiveness of small businesses' actions but on the relevancy of the grant-funded resources to foster decision-making. Focusing on current small businesses' effectiveness and decision-making draws insight into small businesses' future planning to progressively pivot out of the next national emergency pandemic or crisis.

1. Small Business Administration, Office of Entrepreneurial Development and Resource Partners as Small Business Development Centers

Initially, the SBA provided technical assistance and training to small businesses, but over time, the SBA now relies on third parties to provide these services. The Office of Entrepreneurial Development (OED), SBA's technical assistance arm, collaborates with third parties or resource partners. OED oversees "a network of programs and services that support the training and counseling needs of small business [es]" (SBA, n.d.b). Through OED's partnerships with resource partners, these programs provide the needed assistance to small business owners. As mentioned in the CARES Act, FY2020 appropriated approximately "$265 million for SBA's entrepreneurial development programs" (SBA, 2020), for adversely affected small businesses due to COVID-19 impacts. The

authorization appropriated "$192 million for SBDC, $48 million for WBC, and $25 million for the new SBA Resource Partner Association grant program" (SBA, 2020).

Regarding Resource Partners' performance goals, statutory restrictions prevented SBA from collecting data on training and mentoring small businesses received (SBA, 2020a); however, the number of small businesses served or assisted in FY2020 resulted in 1,523,359, or a 54.81 percent increase over the targeted baseline of 835,000 (SBA, 2020b, Table 2, p. 81).

Table 2. U.S. Small Business Administration Fiscal Year 2022. Adapted from Small Business Administration (2022a, p. 81).

ENTREPRENEURIAL ECOSYSTEMS PERFORMANCE GOALS				
Number of Unique Clients Served through Partnerships, Virtual Resources, and Targeted Outreach	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**
Target	Baseline	835,000	989,000	1,060,700
Actual	1,059,752	1,523,359		
Variance		82%		

Note: Additional table information notes; "the number of unique clients has decreased as resource partners focus on repeat consultations to better meet the evolving business needs of the clients. 'Unique' clients can be identified by the programmatic resource partner, but clients using services between different resource partners (e.g., SBDC and WBC) cannot be identified. Authority to collect this information, the SBA will more efficiently manage entrepreneurial development programs" (SBA, 2020b).

2. Emergency Preparedness

The SBA (2022) promoted the need for small businesses to prepare for emergencies and stated, "Disasters can take any form and the financial cost of rebuilding after a disaster can be overwhelming" (SBA, n.d.d, para. 1). The SBA further stated, "If you're prepared

for emergencies, you'll be in a better position to recover and continue operations should disaster strike" (SBA, n.d.d, para. 1). According to the SBA (2022), every small business has unique vulnerabilities and weaknesses, and early self-assessments could reduce hazardous risks such as hurricanes, flooding, cyberattacks, and pandemics (SBA, n.d.d, paras. 2–3). Seemingly, emergency preparedness allows small businesses to anticipate operational and financial hazards and threats through retained corporate knowledge and the foresight to access and build targeted capacities based on identified vulnerabilities and weaknesses. In summary, small businesses should pre-plan to operate during a national emergency, for example, a pandemic. Small businesses should have assessed vulnerabilities and weaknesses prior to an emergency and continuously develop emergency preparedness planning or amend existing standard operating procedures, particularly in anticipated risk areas.

3. Crisis Management

By definition, crisis management "[deals] with extreme situations and crisis situations of various extents up to catastrophes in all the phases of [management]" (Tomastik et al., 2015, p. 3965). Tomastik et al. (2015) emphasized the view of past crises as negative events; nowadays, damaging crises test businesses' readiness and proactive application of creative crisis management approaches (p. 3969). Hebert and Humphreys (1994) suggested that small businesses identify crisis types and crisis management models, and use insurance and non-insurance preventative measures that minimizes crises potentials (Hebert & Humphreys, 1994, p. 12). While insurance providers have identified associated costs and limitations for risk protection, small businesses should exercise preventative approaches and plan to minimize future crises (Hebert & Humphreys, 1994, p. 7). Crisis management draws on the whole-of-small businesses' responses and ability to deploy actions in a coordinated manner when dealing with a crisis through clear communication and decision-making transparency. In summary, small businesses should prepare to execute emergency strategies to safeguard business continuity during a national emergency. Small businesses should implement adequate mechanisms in response to a various crisis types based on the appropriate crisis management approach.

4. Risk Mitigation

The SBA (2022) promotes strengthening the small business against future vulnerabilities and weaknesses. According to Weltman (2018), "risks and threats to [small businesses] can come from innumerable sources, including economic conditions, lawsuits, competitors, and the weather" (*5 Best Risk Management Strategies*, para. 1). Likewise, Weltman (2018) noted that small businesses need to practice holistic approaches and exercise proactive vigilance to minimize risk. According to the SBA (2022), every small business has unique vulnerabilities and weaknesses, and early self-assessments could reduce hazardous risks such as hurricanes, flooding, cyberattacks, and now pandemics (SBA, n.d.d, paras. 2–3). Myskova and Doupalova (2015) noted that potential risk is never eliminated, but small businesses could choose proactive approaches to reducing adverse consequences of risk (Myskova & Doupalova, 2015, p. 335). Seemingly, as small businesses develop risk mitigation assessments and approaches to vulnerabilities and weaknesses, small businesses could lessen the impact of the crisis while avoiding or reducing losses. In summary, reasonably, small businesses should prepare to mitigate the effects of economic and financial risks during a national emergency like a pandemic. Small businesses should have the efficacy to obtain needed resources and assistances for business continuity.

5. Prevention, Economic Preparedness

This literature review contributed to a foundational understanding of small business prevention through economic preparedness. Small business concerns focus on keeping the business open and growing, regardless of the emergency; however, contingency planning usually evolves as an afterthought. According to Federal Emergency Management Agency (FEMA)(Federal Emergency Management Agency, 2011), regardless of the emergency, threat, or hazard, the challenges of facilitating partnerships and leveraging resources to develop holistic planning during a crisis includes activities of prevention, protection, mitigation, response, and recovery. Moore and Lakha (2006) argued that "humans revert to [preprogramed] responses rather than [adapt] to the situation," which should include mitigation planning to avoid potential loses. This finding parallels Fabeil et al.'s (2020)

argument that entrepreneurs act more rationally and engage in planning during decision-making (Fabeil et al., 2020, as cited in McCarthy, B., Strategy is Personality-Driven, Strategy is Crisis-Driven: Insights from Entrepreneurial Firms, 2003). At the same time, Watkins et al. (2008) indicated that pandemic preparation and planning among small business lacked awareness or resources, urgency as a perceived low level of risk, and inability to identify effective responses for implementation.

The CARES Act resulted in negative small business prevention challenges, confirming a similar theme throughout the literature review. In summarizing, based on the above arguments of Moore and Lakha (2006), Fabeil et al. (2020), and Watkins et al. (2008), economic preparedness could cause disproportionate harm to the small business ecosystem as:

- Economic preparedness for small businesses requires awareness, planning, and resources to implement strategy, and
- Small businesses need to enhance further or develop proactive forecasting and protocols involving emergency preparedness, crisis management, and risk mitigation.

Based on the literature, the preparedness-induced portion of the COVID crises for small businesses resulted from the lack of planning and the lack of proactive forecasting before the emergency. The CARES Act was a lifeline thrown to small business; however, as significant as this lifeline was, the reach and flow of funds to those small businesses hardest impacted remains unseen as new data emerge.

E. CONCLUSION

This chapter presented a review of the CARES Act from the small business perspective. The review identified two CARES Act strategies as impacting the small business owners in the areas of intervention and prevention. The literature review explored the theory of Neoclassical Economic Theory in relationship to Rational Behavior Theory, describing small businesses as having rational or irrational behavior as economically or non-economically founded in their decision-making. First, the intervention strategy

focused on the economic relief instruments appropriated under the CARES Act as PPP, EIDL, and federal contracting opportunities. The evidence described the CARES Act and economic relief relationship as disproportionate. The imbalance was and is hardly due to the proportion of available CARES Act appropriations but rather the small business owners' rational or irrational decision-making. Nonetheless, small businesses experienced losses from COVID-19 disruptions, difficulty accessing federal assistances such as the PPP, EIDL, and contracting opportunities, and in the short-term zero liquidity.

Second, the prevention strategy concentrated grant-funded assistance on aiding small businesses in economic preparedness approaches under the CARES Act. Resources made available through SBA OED Resource Partners, SBDC provided emergency preparedness, crisis management, and risk mitigation programing services to small businesses. The evidence suggests that the CARES Act and economic prevention relationship are also disproportionate to the population served under the SBDC. Again, this state of affairs is unlikely due to the availability of grant-funded assistances under the statute but due to the need for awareness, planning, and resources to implement strategies and proactively forecast protocols involving emergency preparedness, crisis management, and risk mitigation. While numerous research studies are available on the CARES Act, little is known about the impacts of Rational Behavior Theory on small businesses' decision-making regarding relief and preparedness, particularly in NCR Army locations. Overall, this chapter collected key sources of scholarly journals and federal government reports to discuss, argue, or complement existing bodies of knowledge in supporting Rational Behavioral Theory related to intervention and prevention.

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III. METHODOLOGY

A. INTRODUCTION

The previous Literature Review Chapter II explored economic theory of Neoclassical Economic Theory through Rational Behavior Theory and the research elements of the intervention, economic relief, and prevention, economic preparedness. The purpose of this methodology chapter justifies the reasoning of the research design and methods used to answer the research questions.

B. METHODOLOGY AND DESIGN

The research methodology analyzed the implications of the CARES Act from the NCR small business perspective while using qualitative and quantitative approaches. Answering the first research question involved quantitative methodology that considered the relationship between the CARES Act and NCR small businesses related to rational or irrational behaviors that involved intervention strategies for economic relief, 2020 through 2022. The intent was to confirm or deny the presence or lack thereof of rational or irrational behavior resulting from small businesses receiving CARES Act supplemental disaster relief funding due to the economic burdens and hardships from COVID-19. For second research question, qualitative methodology considered the relationship between the CARES Act and NCR small businesses related to rational or irrational behaviors involving prevention strategies on economic preparedness, 2020 through 2022. The intent was to confirm or deny the presence of or lack thereof of rational or irrational behavior due to small businesses receiving CARES Act funding through SBDC grant assistances due to the COVID-19 economic burdens and hardships.

1. Intervention, Economic Relief

This study used quantitative research methods to gather data to answer the first research question that allowed flexibility in gaining in-depth knowledge on NCR small businesses' decision-making behaviors during COVID-19 (McCombes, 2021, Step 1: Consider Your Aims and Approach section, paras. 1–4). More specifically, this type of

research design considered correlational relationships testing and whether the variables presented relationships allowing for a clearer picture of connections in behavior existing in the NCR (McCombes, 2021, Step 2: Choose a Type of Research Design: Types of Quantitative Research Designs section, paras. 1–2). Secondary data from USASPENDING government datasets provided the raw data used for the data collection, thus providing the opportunity to focus on controlled variables to measure and limit the research data collection (McCombes, 2021, Step 4: Choose Your Data Collection Methods: Secondary Data section, paras. 1–4). The approach allowed an in-depth analysis of spending data primarily reviewed via USASPENDING that focused on the area of intervention, economic relief. The analysis consisted of probability sampling based on random methods to provide the inferences in the NCR small business population (McCombes, 2021, Step 3: Identify Your Population and Sampling Method: Defining the Populations and Sampling Methods sections, paras. 1–9).

The data collection process involved operationalization of the dataset's variables into measurable indicators that provided reliability and validity in consistent reproduction of the captured data (McCombes, 2021, Step 5: Plan Your Data Collection Procedures: Operationalization and Reliability and Validity sections, paras. 3–8). Based on the data during this research, USASPENDING identified that the DOD received $13.48 billion and issued 31,878 new contract awards in FY2022 (Data through January 31, 2022) (USASPENDING, 2022b). Of that total, the Army received $9.95 billion and issued 8,764 new contract awards in FY2022 (data through January 31, 2022) (USASPENDING, 2022b). The intent was to extract data on PPP, EIDL, and Army service contract awards, 2020 through 2022, in the NCR. Measured data analysis followed the processes of

1. Obtaining the total number of small businesses that applied for PPP, EIDL, or awarded Army service contracts and the total number of small businesses in each NCR state or the overall NCR,
2. Dividing the total number of small businesses per NCR state or overall NCR by the total number of small businesses dollars in value or award obligation,

3. Calculating the percentage of the baseline of pre-COVID and 2020 through 2022 to determine if those who applied for PPP or EIDL or awarded Army service contracts resulted in greater than or less than fifty percent to determine small business decision-making per area.

The resulting data supported the percentage of decision-making promoting rational or irrational behaviors per individual state in the NCR or overall NCR. The data management plan consisted of creating the Microsoft Excel spreadsheet for organizing, calculating, and storing the data (McCombes, 2021, Step 5: Plan Your Data Collection Procedures: Data Management section, paras. 1–3). The data analysis strategy used parametric testing of regression and correlation tests that looked for the association of

1. The first set of dependent variables of the CARES Act and NCR small businesses and independent variables rational or irrational behaviors, and
2. The second set of dependent variables, total number of small businesses that applied for PPP or EIDL or awarded Army service contracts and the independent variables, the total number of small businesses in each NCR state or the overall NCR (McCombes, 2021, Step 6: Decide on Your Data Analysis Strategies: Quantitative Data Analysis section, paras. 1, 5).

Using parametric testing of regression allowed the measurement of the cause-and-effect of relationships. Indicative of this research, multiple linear regression estimated the relationships between the

1. The first set of dependent variables of the CARES Act and NCR small businesses and independent variables rational or irrational behaviors, and
2. The second set of dependent variables, total number of small businesses that applied for PPP or EIDL or awarded Army service contracts and independent variables, the total number of small businesses in each NCR state or the overall NCR (Bevans, 2021, Choosing a Parametric Test: Regression, Comparison, or Correlation section, paras. 1–3).

Then, the correlation testing checked to find if the variables presented a relationship without hypothesizing a cause-and-effect relationship (Bevans, 2021, Choosing a Parametric Test: Regression, Comparison, or Correlation section, paras. 5–7).

2. Prevention, Economic Preparedness

A qualitative research approach collected the data to answer the second research question, as this fixed on the variables of measure describing the frequencies, averages, and correlations to NCR small businesses' decision-making behaviors during COVID-19 (McCombes, 2021, Step 1: Consider Your Aims and Approach section, paras. 1–3, 5). Qualitative research design analyzed qualitative data (McCombes, 2021, Step 2: Choose a Type of Research Design: Types of Qualitative Research Designs section, paras. 1–2). Secondary data from SBPS government datasets provided the raw data used for the data collection, thus resulting in controlled variables to measure and limit the research data collection (McCombes, 2021, Step 4: Choose Your Data Collection Methods: Secondary Data section, paras. 1–4). The approach allowed a qualitative analysis of past, current, and future challenges of small businesses primarily reviewed via SBPS that focused on the area of prevention, economic preparedness. Using non-probability sampling would allow sampling selection using non-random methods for ease of sampling regarding the NCR small business population, but the ease of sampling could present risk and bias in the process (McCombes, 2021, Step 3: Identify Your Population and Sampling Method: Defining the Populations and Sampling Methods sections, paras. 1–9).

The data collection process involved operationalizing the dataset variables into measurable indicators that provided reliability and validity in consistent reproduction of the captured data (McCombes, 2021, Step 5: Plan Your Data Collection Procedures: Operationalization and Reliability and Validity sections, paras. 3–8). Based on the data regarding Resource Partners' performance goals, statutory restrictions prevented SBA from collecting data on training and mentoring small businesses received (SBA, 2020a). When considering the data, a 54.81 percent trend from FY2020, and in FY2021 and FY2022 the estimated actuals could expect the number clients served as 1,531,103 and 1,642,102 above the baseline amounts of 989,000 and 1,060,700 existed, respectively

(SBA, 2020b, Table 2, p. 81). The intent of this data analysis was to extract data based on the proactive strategy involving emergency preparedness, crisis management, and risk mitigation. Analyzing the data was based on the following calculation process to determine the data results to determine decision-making as:

1. Obtaining the average survey response count involving eleven Emergency Preparedness, eight Crisis Management, and eight Risk Mitigation pre-determined questions and the total number of small businesses in each NCR state,
2. Multiplying the average survey response count by the total number of small businesses per NCR state and the national level,
3. Dividing the national level result into data from each NCR state or the overall NCR total to obtain a percentage,
4. Comparing if the percentage applied to each variable area was more significant than or less than fifty percent to determine small business decision-making for each NCR state or the overall NCR total.

The resulting data supported the percentage of decision-making promoting rational or irrational behaviors for each NCR state or the overall NCR. The data management plan consisted of creating the Microsoft Excel spreadsheet for organizing, calculating, and storing the data (McCombes, 2021, Step 5: Plan Your Data Collection Procedures: Data Management section, paras. 1–3). The data analysis strategy used central tendency of the data and thematic tests. Central tendency, more common in quantitative data analysis, used the mean to describe the average score, as well as the thematic that focuses on the data content of the survey questions that involved coding and organizing the data to identify the variables (McCombes, 2021, Step 6: Decide on Your Data Analysis Strategies: Qualitative Data Analysis section, paras. 1–3). Using mean as a measurement of central tendency, the middle or average of the dataset calculation was based on the SBPS percentage of businesses that responded. As the most commonly used measure of central tendency, mean provides the sum of all the survey questions' values divided by the total number of value-determined dates (Bhandari, 2022, Mean section). Then, the thematic analysis used a

deductive approach instead of an inductive approach that supported the preconceived themes expected to find based on Rational Behavior Theory as existing knowledge (Caulfield, 2022, Different Approaches to Thematic Analysis, paras. 1–3). Familiarization with survey questions required a breakdown of the questions applicable to the research question for coding (Caulfield, 2022, Step 1–Step 2 sections). For instance, the survey category of future needs asked the question regarding whether small businesses will need an item from a list of eleven survey indicators for the period of August 2020 through March 2022. The coding of this category and the question closely identified the theme of the emergency preparedness variable (Caulfield, 2022, Step 3–Step 5 sections). Subsequently, the survey category of business practices (now) asked what small businesses immediate reactions were based on a list of eight survey indicators for the period of November 2021 through January 2022. The coding of this category and question closely identified the theme of the crisis management variable (Caulfield, 2022, Step 3—Step 5 sections). Lastly, the survey category of future business practices asked if the respondents thought this small business would do any of the projected or forthcoming reactions from a list of eight survey indicators for the period of February 2022 through March 2022. The coding of this category and question closely identified the theme of the risk management variable (Caulfield, 2022, Step 3–Step 5 sections).

C. CONCLUSION

This chapter discussed the mixed methods approach used in this study, which consisted of quantitative data analysis and qualitative survey results as they support or contradict the Theory of Rational Behavior. The discussion pertained to the two areas of intervention, economic relief and prevention, economic preparedness as impacting small businesses. The quantitative analysis allowed for in-depth knowledge fixated on measuring the variables while describing the frequencies, averages, and correlations, further developing the discussion. Both approaches used secondary government databases. Sampling methods discussed the involvement of a mix of probability and non-probability, as applicable to quantitative and qualitative approaches, respectively. The data collection process discussed operationalization of the dataset's variables into collection results per variable for each approach. The quantitative approach extracted data included PPP, EIDL,

and Army service contract awards, while qualitative data related to emergency preparedness, crisis management, and risk mitigation. The resulting data attempted to support the percentage of decision-making promoting rational or irrational behaviors per state in the NCR or overall NCR. Each approach addressed a data analysis strategy as quantitative used parametric testing of regression and correlation tests that looked for the association while qualitative used central tendency of the data and thematic tests in the discussion. Overall, this chapter described the methodology and design as mixed approaches of quantitative and qualitative as suitable approaches to objectively research and investigate the collected data.

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IV. ANALYSIS

A. INTRODUCTION

The previous chapter discussed the research approach, research design, data collection method, sampling method, data collection process, data management, and data analysis strategy pertaining to the research elements of the intervention, economic relief, and prevention, economic preparedness. The Analysis Chapter focuses on how the data was analyzed, and the purpose of the analysis conveys how the results answered the research questions. Thus, Chapter IV outlines the chosen methods that gathered the data to support or contradict the research.

B. ANALYSIS

1. Intervention, Economic Relief

Examining the data did relate to the research's focus area of intervention, economic relief. Data included SBA PPP Forgiveness Reports and SBA Disaster Assistance Update Report on Nationwide COVID EIDL, and the United States Census Bureau's SBPS, Annual Business Survey: Statistics for Employer Firms by Industry, Sex, Ethnicity, Race, and Veteran Status for the U.S., States, and Metro Areas: 2019 (obtained total small business establishments based on location areas or study (NCR and national) (USCB, 2021), and USASPENDING datasets for data collection. Extracted PPP, EIDL, and Army service contracts awarded data provided starting baseline and final or most current figures to calculate an average. For instance, the calculations applied data summaries available in SBPS and USASPENDING datasets to support the presence or lack thereof of Rational Behavior Theory decision-making. The dataset summaries provided information on SBA reported small business counts and values that applied for PPP and EIDL, counts and values as awarded Army service contracts and obligation amounts. To illustrate, only 114,570 out of 203,467 SBA reported small businesses in Virginia applied for PPP during 2020. Dividing 114,570 into 203,467 resulted in a 56.31 percent of Virginia's small business population that applied for PPP during 2020.

a. Paycheck Protection Program

Pulling SBA PPP Forgiveness Reports data provided the forgiveness loan counts and dollars approved from April 16, 2020 through March 13, 2022. The report provided the overall national and NCR starting baseline and final or current counts and values of those businesses that applied for PPP. The total counts of small businesses that applied for PPP represented the numerator in the calculations. For instance, the overall national accounting of small businesses applying for PPP equaled 1,661,367 (baseline), 5,212,128 (2020), and 11,493,003 (2021), while the combined total counts of small businesses that applied for PPP from Maryland, Pennsylvania, Virginia, and the District of Columbia representing the NCR of 139,259 (baseline), 388,639 (2020), and 2021 resulted in no counts available.

The United States Census Bureau's SBPS, Annual Business Survey: Statistics for Employer Firms by Industry, Sex, Ethnicity, Race, and Veteran Status for the U.S., States, and Metro Areas: 2019 determined the total number of small businesses establishments based on national and NCR data captured in 2019 and reported in 2020. The total number of reported SBA small businesses represented the denominator in the calculations. For instance, the overall national accounted for 7,959,103 SBA reported small businesses creating the baseline year through 2021. The combined total of SBA reported 670,133 small businesses from Maryland, Pennsylvania, Virginia, and the District of Columbia representing the NCR for the baseline year through 2021.

The baseline at the beginning of COVID showed that the national and NCR percentages of small businesses applying for PPP resulted in 20.87 and 20.78 percent (Table 21), respectively. In 2020, during COVID, the national and NCR percentages of small businesses applying for PPP resulted 65.49 and 57.99 percent (Table 21), respectively. Then in 2021, the national and NCR percentages of small businesses applying for PPP equated to 144.40 and 0 percent (Table 21), respectively. Thus, the data showed that NCR small businesses applied for more PPP in 2020 compared to the baseline or start of the program. From the perspective of Rational Behavior Theory, this implies that in 2020 small businesses made more rational decisions in this area compared to the beginning of the pandemic. The decision promoted the need for help in "[payroll costs, including

benefits], mortgage interest, rent, utilities, worker protection costs related to COVID-19, uninsured property damage costs caused by looting or vandalism during 2020, and certain supplier costs and expenses for operations" (SBA, n.d.c). Also, as a note, PPP First and Second Draws ended May 31, 2021 (SBA, n.d.c).

Finding: Due to the program's end date, NCR small businesses represented likelihood of applying for the 2021 PPP.

b. Economic Injury Disaster Loans

The data construct drew data from the SBA Disaster Assistance Update Report on Nationwide COVID EIDL based on EIDLs approved and EIDL dollars approved from April 20, 2020 through March 3, 2022. The report provided the overall national and NCR EIDL starting baseline and final or current counts and values, and the total counts represented the numerator in the calculations. The total counts of small businesses that applied for EIDL represented the numerator in the calculations. For instance, the overall national of small businesses that applied for EIDL resulted in 755,476 (baseline), 3,589,667 (2020), 3,832,238 (2021), and no counts available for 2022, while the combined total counts of small businesses that applied for EIDL from the states of Maryland, Pennsylvania, Virginia, and the District of Columbia, representing the NCR totaled 57,695 (baseline), 241,319 (2020), 259,858 (2021), and 266,143 (2022).

The United States Census Bureau's SBPS, Annual Business Survey: Statistics for Employer Firms by Industry, Sex, Ethnicity, Race, and Veteran Status for the U.S., States, and Metro Areas: 2019 determined the total number of small businesses establishments based on national and NCR data captured in 2019 and reported in 2020. The total number of reported SBA small businesses represented the denominator in the calculations. For instance, the overall national count of SBA reported small businesses contributed to 7,959,103 for the baseline year through 2022, while the combined total of SBA reported small businesses from the states of Maryland, Pennsylvania, Virginia, and the District of Columbia representing the NCR comprised of 670,133 for the baseline year through 2022.

The formula calculated the total count and divided the number by the total small business establishments, equating to a percentage. A baseline at the beginning of COVID

showed that the national and NCR percentages of small businesses applying for EIDL consisted of 9.49 and 8.61 percent (Table 22), respectively. During COVID of 2020, the national and NCR percentages of small businesses applying for EIDL contributed to 45.10 and 36.01 percent (Table 22) respectively. Then in 2021, the national and NCR percentages of small businesses applying for EIDL constituted 48.15 and 38.78 percent (Table 22). The trend in 2022 presented the national and NCR percentages of small businesses applying for EIDL as 49.12 and 39.71 percent (Table 22), respectively. Thus, the data showed that the NCR small businesses resulted a 1 to 3 percentage increase each year, 2020 through 2022, that applied for EIDL over the baseline or start of the program. From the perspective of Rational Behavior Theory, small businesses made more rational decisions each year in this area compared to the beginning of the pandemic. The decision promoted the need for help in providing working capital to meet operating expenses, payroll, mortgage or rent, utilities, and other ordinary business expenses (SBA, n.d.a). Also, as a note, EIDL ended on January 1, 2022 (SBA, n.d.a).

Finding: Small businesses in the NCR are more likely to apply for EIDL from 2020 through 2022 resulting in slight yearly increases.

c. Federal Contracting Awards

The data construct represented dataset metadata from the USASPENDING using fiscal year, awarding sub agency, location, program description, and obligated funding from COVID-19 supplemental as variables for the query. The data provided national and NCR contract award counts and obligations, and the total counts represented the numerator in the calculations. The total counts of small businesses awarded Army service contracts represented the numerator in the calculations. For instance, the overall national of small businesses awarded Army service contracts consisted of 395 (baseline) and 840 (2021), while the combined total counts of small businesses that applied for EIDL from the states of Maryland, Pennsylvania, Virginia, and the District of Columbia representing the NCR provided 34 (baseline), and 107 (2021) contracts awarded.

The United States Census Bureau's SBPS, Annual Business Survey: Statistics for Employer Firms by Industry, Sex, Ethnicity, Race, and Veteran Status for the U.S., States,

and Metro Areas: 2019 determined the total number of small businesses establishments based on national and NCR data captured in 2019 and reported in 2020. The total number of reported SBA small businesses represented the denominator in the calculations. For instance, the overall national account of SBA reported small businesses consisted of 7,959,103 for the baseline year through 2021, while the combined total of SBA reported small businesses from the states of Maryland, Pennsylvania, Virginia, and the District of Columbia representing the NCR contained 670,133 for the baseline year through 2021.

The formula calculated the total count and divided the number by the total small business establishments, equating to a percentage. A baseline at the beginning of COVID showed that the national and NCR percentages of small businesses DOD Army services contracts were minimally awarded compared to the aggregate totals and .01 percent (Table 23), respectively. In 2021, during COVID, the national and NCR percentages of small businesses awarded DOD Army services contracts received .01 and .02 percent (Table 23) awards, respectively. Thus, the data showed NCR small businesses represented minimally awarded DOD Army services contracts in 2021 compared to the baseline or start of the CARES Act. From the perspective of Rational Behavior Theory, this implies that in 2020 small businesses made less rational decisions in response to solicitations in this area than when the pandemic initially began.

Finding: Small businesses in the NCR did apply for more DOD Army services solicitations under CARES Act funding in the aggregate; however, compared to the larger picture, during 2021, award contract numbers in the NCR presented low or roughly 13 percent of awards compared to the overall Army perspective.

d. Overall

In theory, if the small businesses received all three initiatives (PPP, EIDL, and contract awards), a high degree of rational behavior was present, two of the initiatives (PPP and EIDL) reflected an average or moderate degree of rational behavior, one initiative (PPP) as less rational behavior, and none of the initiatives as irrational behavior. The order of preponderance of the initiatives PPP, EIDL, and contract awards consisted of the initiative's pandemic inception. Percentages more significant than 50 indicated moderate

to a higher degree of rational decision-making than to lower percentages less than 50, which indicated less rational decision-making. In 2020, NCR small businesses reflected higher percentage averages of 62.17 percent than the national average of 110.29 percent (Table 24). Analyzing 2020, the preponderance of NCR and national percentage resulted in higher percentages than 2021 and 2022 percentage averages calculations, equating to decreases of roughly 36 to 38 percentage points (Table 23). In 2021 and 2022, NCR small businesses would realign to pre-pandemic levels of 25.65 percent and 26.26 percent compared to the national levels of 192.56 and 192.59 percent (Table 24). The findings implied that small businesses in 2020 made more rational decisions regarding economic relief due to COVID while seeking CARES Act supplemental funding assistances.

Finding: While small businesses in the NCR made more rational decisions during 2020 in applying for economic relief across the three platforms of PPP, EIDL, and service contract awards as resources of intervention, NCR small businesses made more rational decisions regarding EIDL 31 percent compared to PPP 26 percent and Army service contracts zero percent (due to rounding) (Table 3). Percentages more significant than 50 indicated moderate to a higher degree of rational decision-making than lower percentages less than 50 indicated less rational decision-making. Overall findings showed that small NCR businesses had a 19 percent preponderance compared to the national average of 34 percent in making rational decisions regarding intervention, economic relief (Table 3). Therefore, the NCR small businesses made 19 percent fewer rational decisions regarding intervention, economic relief since the finding was less than the 50 percent scale (Table 3).

Table 3. Quantitative Analysis: Overall Summary NCR Small Businesses Intervention Summary

OVERALL INTERVENTION SUMMARY		
INTERVENTION, ECONOMIC RELIEF	**NATIONAL**	**NATIONAL CAPITAL REGION**
Paycheck Protection Plan	77%	26%
Economic Injury Disaster Loan	26%	31%
Army Service Contract Award	0%	0%
Rational Behavior % Average	**34%**	**19%**

Note: Scale: > 50 moderate to higher degree of rational decision-making; < 50 lower degree of rational decision-making

2. Prevention, Economic Preparedness

Data included the United States Census Bureau's SBPS and Annual Business Survey: Statistics for Employer Firms by Industry, Sex, Ethnicity, Race, and Veteran Status for the U.S., States, and Metro Areas: 2019. Extracted data to support emergency preparedness, crisis management, and risk mitigation provided starting baseline and final figures to calculate an average. The calculated delta responded to the questions determining the presence or lack thereof of Rational Behavior Theory. For instance, the set of questions applicable to measuring risk mitigation in the survey asked whether the small business would obtain financial assistance or additional capital from those Maryland-only respondents. In Maryland, only small business respondents had two data points applicable 26.2 (August 2020) and 10.8 (March 2022) collection dates. Adding these two data points together and dividing by the number two represented the total number of data points from the collection dates, which equaled a calculated average delta of 20.3 as the total response count for the question.

a. Emergency Preparedness

The data construct pulled small business survey responses from the SBPS regarding a twenty-one-question survey. The SBPS topic of future needs aligns with a research area on emergency preparedness. The SBPS survey question requested responses on "do you think this business will need to do any of the following" (United States Census Bureau [USCB], n.d.). Based on this question, eleven indicators collected responses from August 9, 2020 through March 13, 2022. Questions ranged from financial assistance and capital expenditure to hiring new employees and supply chain options. The measured indicators acted to:

- Obtain financial assistance or additional capital
- Identify new supply chain options
- Develop online sales or websites
- Increase marketing or sales
- Learn how to better provide for the safety of customers and employees
- Identify and hire new employees
- Permanently close this business
- Make a capital expenditure
- Cancel or postpone a planned capital expenditure
- Identify potential markets for exporting products or services
- None of the above. (USCB, n.d.)

In addition, the survey provided an overall national and NCR starting baseline and final or current counts in percentages of small businesses' responses. The total counts of small businesses that responded to the emergency preparedness set of survey questions represented the numerator in the calculations. For instance, the overall national of small businesses percentage average responded to the eleven emergency preparedness set of survey questions from the small business perspective represented 20.3 percent (question one: "future needs to obtain financial assistance or additional capital" (USCB, n.d.)), 19.4 percent (question two: "future needs to identify new supply chain options" (USCB, n.d.)), 11.8 percent (question three: "future needs to develop online sales or websites" (USCB, n.d.)), 29.9 percent (question four: "future needs to increase marketing or sales" (USCB, n.d.)), 9.7 percent (question five: "future needs to learn how to better provide for the safety of customers and employees" (USCB, n.d.), 31.7 percent (question six: "future needs to identify and hire new employees" (USCB, n.d.)), 4.4 percent (question seven: "future needs

to permanently close this business" (USCB, n.d.)), 7.8 percent (question eight: "future needs to make a capital expenditure" (USCB, n.d.)), 4.0 percent (question nine: "future needs to cancel or postpone a planned capital expenditure" (USCB, n.d.)), 1.7 percent (question ten: "future needs to identify potential markets for exporting products or services" (USCB, n.d.)), and 33.6 percent (question eleven: "future needs none of the above" (USCB, n.d.)), while the combined total counts of small businesses responded to the same survey questions from Maryland, Pennsylvania, Virginia, and the District of Columbia representing the NCR percentages of 41.4, 120.2, 44.5, 138.8, 13.2, 25.1, 11.4, 4.0, 123.4, 170.5, and 99.4, respectively (Table 25).

The United States Census Bureau's SBPS, Annual Business Survey: Statistics for Employer Firms by Industry, Sex, Ethnicity, Race, and Veteran Status for the U.S., States, and Metro Areas: 2019 determined the total number of small business establishments based on national and NCR data captured in 2019 and reported in 2020. The total number of reported SBA small businesses represented the denominator in the calculations. For instance, based on the same eleven questions from above, the overall small businesses national counting equated to 7,959,103. In contrast, the combined total number of small businesses from Maryland, Pennsylvania, Virginia, and the District of Columbia represent the NCR as 670,133 (Table 25).

The formula calculated each indicator's percentages multiplied by the total small business establishments, which equated to a total number of small businesses per indicator. Measuring the dataset provided a mean, median, and mode as the average value of the dataset, center value of the dataset, and value of the dataset that occurs most frequently, respectively. On emergency preparedness, the national and NCR value of small businesses resulted in a mean of 29.95, a median of 30.92, mode of 19.81, 24.00, 25.26, 27.09, 29.54, 30.92, 31.03, 32.48, 33.85, 36.87, and 38.63 consisting of a minimum of 19.81 and a maximum of 38.63 (Table 26) (Calculator Soup, n.d.). Thus, in analyzing the results, NCR small businesses compared to the national level equated to a 29.95 percent mean average to apply rational decision-making related to emergency preparedness.

Finding: Small businesses in the NCR appeared 30 percent more likely to make rational decisions to improve emergency preparedness due to a national emergency.

b. Crisis Management

The data construct pulled small business survey responses from the SBPS regarding a twenty-one-question survey. The SBPS topic of future needs aligns with a research focus area on crisis management. The SBPS survey question requested responses compared the now to what was normal for small businesses before March 13, 2020, and if small businesses reacted to an identified lists of actions (USCB, n.d.). Based on this question, eight indicators collected responses from November 15, 2021 through January 16, 2022. Questions ranged from digital technology and management practices to business strategies and improving methods of producing goods or services. The measured indicators consisted of

- Adoption or expansion of digital technology
- Changed management practices
- Changed business strategies
- Introduction of new goods or services
- Improvement in existing goods or services
- Improvement in methods of producing goods or services
- Improvement in methods of logistics, delivery, or distribution
- The business has not made any of these changes (USCB, n.d.).

Furthermore, the survey provided an overall national and NCR starting baseline and final or current counts in percentages of small businesses' responses. The total counts of small businesses that responded to the crisis management set of survey questions represented the numerator in the calculations. For instance, the overall national small businesses percentage average to the eight crisis management set of survey questions from the small business perspective responded 26.6 percent (question one: business practices adopt or expanded digital technology) (USCB, n.d.), 21.9 percent (question two: business practices changed management practices) (USCB, n.d.), 28.9 percent (question three: business practices changed business strategies) (USCB, n.d.), 14.6 percent (question four: business practices introduced new goods or services) (USCB, n.d.), 16.9 percent (question five: business practices improved existing goods or services) (USCB, n.d.), 10.9 percent (question six: business practices improved methods of producing goods or services) (USCB, n.d.), 10.9 percent (question seven: business practices improved methods of logistics, delivery, or distribution) (USCB, n.d.), and 10.9 percent (question eight: business

practice has not made any of these changes) (USCB, n.d.), while the combined total counts of small businesses that responded to the same survey questions from the states of Maryland, Pennsylvania, Virginia, and the District of Columbia representing the NCR percentages consisted of 170.5, 99.4, 123.1, 57.7, 69.9, 38.2, 43.6, and 43.6, respectively (Table 27).

The United States Census Bureau's SBPS, Annual Business Survey: Statistics for Employer Firms by Industry, Sex, Ethnicity, Race, and Veteran Status for the U.S., States, and Metro Areas: 2019 determined the total number of small businesses establishments based on national and NCR data captured in 2019 and reported in 2020. The total number of reported SBA small businesses represented the denominator in the calculations. For instance, based on the same eight questions mentioned above, the overall national small businesses accounted for 7,959,103 respondents. In contrast, the combined total number of small businesses from the states of Maryland, Pennsylvania, Virginia, and the District of Columbia representing the NCR included 670,133 (Table 27) respondents.

The formula calculated each indicator's percentages multiplied by total small business establishments, equating to a total number of small businesses per indicator. Measuring the dataset provided a mean, median, and mode as the average value of the dataset, center value of the dataset, and value of the dataset that occurs most frequently, respectively. On crisis management, the national and NCR value of small businesses resulted in a mean of 41.58, a median of 34, mode of 29.51, 33.28, 33.68, 33.68, 34,82, 35.86, 38.22, and 53.97, and minimum of 29.51 and a maximum of 82 (Table 28) (Calculator Soup, n.d.). Thus, in analyzing the results, NCR small businesses compared to the national level equated to a 41.58 percent mean average to apply rational decision-making related to crisis management.

Finding: Small businesses in the NCR seemed 42 percent likely to make rational decisions to avoid crisis management interruptions due to a national emergency.

c. Risk Mitigation

The data construct pulled small business survey responses from the SBPS regarding a twenty-one-question survey. The SBPS topic of future business practices aligns with a

research area on risk mitigations. The SBPS survey question requested responses on "in the next six months, do you think this business will do any of the following" (USCB, n.d.). Based on this question, eleven indicators collected responses from February 14, 2022 through March 7, 2022. Questions ranged from digital technology and management practices to business strategies and improving methods of producing goods or services. The measured indicators pertained to

- Adoption or expansion of digital technology
- Changed management practices
- Changed business strategies
- Introduction new goods or services
- Improvement in existing goods or services
- Improvement methods of producing goods or services
- Improvement methods of logistics, delivery, or distribution
- The business has not made any of these changes (USCB, n.d.).

The survey provided an overall national and NCR starting baseline and final or current counts in percentages of small businesses' responses. The total counts of small businesses that responded to the risk mitigation set of survey questions represented the numerator in the calculations. For instance, the overall national small businesses percentage average that responded to the eight risk mitigation set of survey questions from the small business perspective resulted in 14.0 percent (question one: future business practices adopt or expanded digital technology) (USCB, n.d.), 10.4 percent (question two: future business practices changed management practices) (USCB, n.d.), 18.7 percent (question three: future business practices changed business strategies) (USCB, n.d.), 12.3 percent (question four: future business practices introduced new goods or services) (USCB, n.d.), 19.6 percent (question five: future business practices improved existing goods or services), 12.2 percent (question six: future business practices improved methods of producing goods or services) (USCB, n.d.), 10.5 percent (question seven: future business practices improved methods of logistics, delivery or distribution) (USCB, n.d.), and 55.7 percent (question eight: future business practices has not made any of these changes) (USCB, n.d.), while the combined total counts of small businesses responded to the same survey questions from the states of Maryland, Pennsylvania, Virginia, and the District of

Columbia representing the NCR comprised percentages of 63.8, 41.0, 70.0, 42.8, 72.9, 37.0, 31.5, and 217.5, respectively (Table 29).

The United States Census Bureau's SBPS, Annual Business Survey: Statistics for Employer Firms by Industry, Sex, Ethnicity, Race, and Veteran Status for the U.S., States, and Metro Areas: 2019 determined the total number of small business establishments based on national and NCR data captured in 2019 and reported in 2020. The total number of reported SBA small businesses represented the denominator in the calculations. For instance, based on the same eight questions mentioned earlier, the overall national of small businesses included 7,959,103 respondents. In contrast, the combined total number of small businesses from the states of Maryland, Pennsylvania, Virginia, and the District of Columbia represented the NCR of 670,133 (Table 29) respondents.

The formula calculated each indicators' percentages multiplied by the total small business establishments, which equated to a total number of small businesses per indicator. Measuring the dataset provided a mean, median, and mode as the average value of the dataset, center value of the dataset, and value of the dataset that occurs most frequently, respectively. On risk mitigation, the national and NCR value of small businesses resulted in a mean of 30.94, a median of 31.42, mode of 25.26, 25.54, 29.30, 31.32, 31.52, 32.88, 33.35, and 38.37 consisting of a minimum of 25.26 and a maximum of 38.37 (Table 30) (Calculator Soup, n.d.). Thus, in analyzing the results, NCR small businesses compared to the national level equated to a 30.94 percent mean average to apply rational decision-making related to risk mitigation.

Finding: Small businesses in the NCR were 31 percent likely to make rational decisions to improve risk mitigation due to a national emergency.

d. Overall

Regarding theory, when the small businesses surveyed all three preventions (emergency preparedness, crisis management, and risk mitigation), this reflected a high degree of rational behavior; two of the preventions (emergency preparedness and crisis management) reflected an average or moderate degree of rational behavior; one prevention (emergency preparedness) as less rational behavior; and none of the preventions as

irrational behavior. The order of preponderance of the preventions of emergency preparedness, crisis management, and risk mitigation basis included the prevention's starting survey data collection date. Percentages more significant than 50 indicated moderate to a higher degree of rational decision-making than lower percentages less than 50, which indicated less rational decision-making.

Finding: Small businesses in the NCR made less rational decisions in applying for economic preparedness across the three platforms of emergency preparedness, crisis management, and risk mitigation as assistances needed in prevention (Table 27). The national average was insignificant due to the meniscal amount of those responding based on the SBA reported number of small businesses that applied for intervention, economic relief. Small businesses made more rational decisions regarding crisis management, 37 percent, compared to emergency preparedness, 30 percent, and risk mitigation 31 percent (Table 4). Percentages more significant than 50 indicated moderate to a higher degree of rational decision-making than lower percentages less than 50, which indicated less rational decision-making. Overall findings showed that NCR small businesses had a 33 percent preponderance of making rational decisions regarding prevention, economic preparedness (Table 4). Therefore, the small NCR businesses made 33 percent less rational decisions regarding prevention, economic preparedness since NCR small businesses represented less than the 50 percent based on the scale (Table 4).

Table 4. Quantitative Analysis: Overall Summary NCR Small Businesses Prevention Summary

OVERALL PREVENTION SUMMARY		
PREVENTION, ECONOMIC PREPAREDNESS	**NATIONAL**	**NATIONAL CAPITAL REGION**
Emergency Preparedness		30%
Crisis Management		37%
Risk Mitigation		31%
Rational Behavior % Average		**33%**

Scale: > 50 moderate to a higher degree of rational decision-making; < 50 lower degree of rational decision-making

Note: National count was meniscal compared to the aggregate total small business population responding to surveys.

C. CONCLUSION

This chapter discussed the analysis of data collected by quantitative and qualitative approaches as supporting or contradicting the Theory of Rational Behavior. Again, the focus discussion pertained to the two areas of intervention, economic relief, and prevention, economic preparedness as impacting NCR small businesses. The analysis discussion inspected and examined the secondary databases for total counts and values extracted meaningful data correlations to the variables of intervention and prevention. Then, the calculated formulas provided the results to answer and understand the degree of rational or less rational (irrational) behavior as evidence. The findings concluded that NCR small businesses practice used less than rational strategies in both intervention and prevention; however, evidence of more rational behaviors appeared in prevention than intervention decision-making. Overall, this chapter discussed the analysis based on collected and interpreted data to generalize the results into research findings answering the two primary research questions.

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V. CONCLUSIONS AND RECOMMENDATIONS

A. INTRODUCTION

The previous Analysis in Chapter IV provided the data analysis, calculations, and findings involving the research elements of the intervention, economic relief, and prevention, economic preparedness. The data analysis also involved the CARES Act resources based on decision-making as rational or irrational behavior from the NCR small business perspective. The purpose of the conclusion and recommendations section conveys the overall answer to the two research questions and reflects on possibilities for future research. Thus, Chapter V focuses on the research's conclusions related to the research questions, recommendations, and areas for future research.

This research explored small businesses to the extent of rational or irrational behaviors in decision-making resulting from the attainment of public-funded relief, U.S. Department of the Army COVID-19 services contract awards, and grant-funded program assistances in the NCR, 2020 through 2022. Two primary research questions focused on intervention, economic relief, and prevention, economic preparedness. Intervention, economic relief analysis provided research results involving PPP, EIDL, and contract awards, while prevention, economic emergency provided research results involving emergency preparedness, crisis management, and risk mitigation. All research questions involved analyses in comparison to Rational Behavior Theory. The results determined if NCR small businesses supported more or less likely to make rationally predetermined or irrationally unknown decisions during a national health emergency such as a pandemic.

B. RESEARCH QUESTION RESPONSES

1. Research Question Number One

- How, and to what extent, did NCR small businesses apply rational or irrational behaviors in CARES Act decision-making involving intervention strategies on economic relief under the PPP, EIDL, and Army service contract awards, 2020 through 2022?

The findings showed that from an intervention, economic relief perspective, NCR small businesses made 19 percent decision-making or less rational decisions than the national average of 34 percent in applying for resources across all three platforms of PPP, EIDL, and contract awards (Table 6). Based on the literature review arguments of Bartik et al. (2020b), Humphries et al. (2020), and Dua et al. (2020), the CARES Act resulted in negative intervention challenges that economic relief was disproportionate, unlikely due to the proportion of available CARES Act resources, but due to (1) deteriorating business outlook from COVID-19 disruptions, (2) difficulty accessing assistance due to the lack of awareness and clarity in the guidance and eligibility requirements, and (3) that most at-risk businesses had short-term to zero liquidity. Due to these reasons identified while completing the literature review and analyzing the survey findings, the NCR small businesses supported less rational or "*were less rational*" in making intervention and economic relief decisions regarding supplemental disaster relief funding under the CARES Act during a national health emergency or pandemic. Seemingly, NCR small businesses supported more likelihood of receiving two or three economic forms of funding relief than one form of funding relief based on rational decision-making (Table 5). Thus, in theory, the NCR small businesses supported less rationale in making intervention and economic relief decisions regardless of loan or grant funded resources under the CARES Act during a national health emergency or pandemic.

Table 5. Overall Intervention Behavior

OVERALL INTERVENTION BEHAVIOR Area of Focus: Paycheck Protection Program, Economic Injury Disaster Loan, and Army Services Award Contracts		
AREA OF FOCUS	NATIONAL	NATIONAL CAPITAL REGION
% Receiving All Three Economic Preparedness Assistances	192.59%	**26.26%**
% Receiving Only Two Economic Preparedness Assistances (except Army Service Award Contracts)	192.59%	26.26%
% Receiving Only One Economic Preparedness Assistance (except Economic Injury Disaster Loan and Army Services Award Contracts)	143.46%	0%
% Receiving No Economic Relief Assistance	0%	0%
Rational Behavior		**All Three or Two**

Table 6. Overall Research Summary CARES Act Supplemental Disaster Relief Funding and SBDC Assistances:

RESEARCH SUMMARY CARES Act Supplemental Disaster Relief Funding and SBDC Assistances			
AREA OF FOCUS	NATIONAL	NATIONAL CAPITAL REGION	MORE OR LESS RATIONAL BEHAVIOR
Intervention, Economic Relief	**34%**	**19%**	**Less Rational Behavior**

Scoring based on mean score.

2. Research Question Number Two

- How, and to what extent, did NCR small businesses apply rational or irrational behaviors in CARES Act decision-making involving prevention

strategies on economic preparedness under the emergency preparedness, crisis management, and risk mitigation, 2020 through 2022?

The subsequent findings from the prevention, economic preparedness perspective supported that the NCR small businesses made 33 percent decision-making or less rational decisions in obtaining assistances across all three platforms of emergency preparedness, crisis management, and risk mitigation (Table 8). Based on the literature review arguments of Moore and Lakha (2006), Fabeil et al. (2020), and Watkins et al. (2008), the CARES Act resulted in negative prevention challenges that economic preparedness was disproportionate, unlikely due to the proportion of available CARES Act resources, but due to (1) lack of awareness, planning, and resources to implement strategies, and (2) lack of enhancing the development of proactive forecasting and protocols involving emergency preparedness, crisis management, and risk mitigation. Due to these reasons and based on the SBA reporting and USASPENDING database findings, the NCR small businesses supported less rationality in making prevention and economic preparedness decisions regarding supplemental disaster relief funding under the CARES Act during a national health emergency or pandemic. NCR small businesses also seemingly supported more likelihood of receiving two or three forms of economic preparedness assistances than one form of preparedness based on rational decision-making (Table 7). Thus, in theory, the NCR small businesses supported less rationality in making prevention and economic preparedness decisions due to SBDC assistances funded under the CARES Act during a national health emergency or pandemic.

Table 7. Overall Prevention Behavior

OVERALL PREVENTION BEHAVIOR Area of Focus: Emergency Preparedness, Crisis Management, and Risk Mitigation		
AREA OF FOCUS	**NATIONAL**	**NATIONAL CAPITAL REGION**
% Responding Receiving All Three Economic Preparedness Assistances	.01%	**.28%**
% Responding Receiving Only Two Economic Preparedness Assistances (except Risk Management)	.01%	.20%
% Responding Receiving Only One Economic Preparedness Assistance (except Crisis Management and Risk Management)	.00%	.10%
% Responding Receiving No Economic Preparedness Assistance	.00%	.00%
Rational Behavior		**Highest, All Three**

Table 8. Overall Research Summary CARES Act Supplemental Disaster Relief Funding and SBDC Assistances:

RESEARCH SUMMARY CARES Act Supplemental Disaster Relief Funding and SBDC Assistances			
AREA OF FOCUS	**NATIONAL**	**NATIONAL CAPITAL REGION**	**MORE OR LESS RATIONAL BEHAVIOR**
Prevention, Economic Preparedness		**33%**	**Less Rational Behavior**

Scoring based on mean score.

3. Overall Research Summary

This research aimed to understand the extent of the problem of NCR small businesses receiving proportional benefits or subjectivity to disproportional harm due to the flow of funds under the supplemental funding of the CARES Act from 2020 through 2022. DURING A NATIONAL HEALTH EMERGENCY, the NCR small businesses

made less rational decision-making behaviors in obtaining funding and business assistance resources. In the findings, NCR small businesses made less rational decisions regarding intervention and prevention challenges; however, the findings suggested a greater likelihood of making rational decisions regarding prevention, economic preparedness of 33 percent compared to intervention, economic relief of 19 percent challenges (Table 9). Due to these reasons and based on the SBPS survey findings, the NCR small businesses supported less rationality in making prevention and economic preparedness decisions than intervention and economic relief decisions regarding supplemental disaster relief funding and assistance resources available under the CARES Act during a national health emergency or pandemic.

Table 9. Overall Research Summary CARES Act Supplemental Disaster Relief Funding and SBDC Assistances: Concluding Findings

OVERALL RESEARCH SUMMARY CARES Act Supplemental Disaster Relief Funding and SBDC Assistances			
AREA OF FOCUS	**NATIONAL**	**NATIONAL CAPITAL REGION**	**MORE OR LESS RATIONAL BEHAVIOR**
Intervention, Economic Relief	**34%**	**19%**	**Less Rational Behavior**
Prevention, Economic Preparedness		**33%**	**Less Rational Behavior**

Scoring based on mean score.

C. RECOMMENDATIONS

Based on the responses to the research questions, the following recommendations are proposed in the areas of intervention, economic relief and prevention, economic preparedness. After Congress passes legislation, policy implementation becomes the

responsibility of an agency or agencies, in this instance, SBA and the DOD, Army, to develop the rulemaking on how programs, the CARES Act, will operate in the Federal Registry (Carey, 2021), the following are proposed:

(1) From an intervention, economic relief perspective:

- Interested or affected parties should comment on or challenge the rules by attending hearings or submitting rebuttals to the agency or agencies during the comments period. This exercise would provide interested or affected parties the communication and transparency of the process to reduce deteriorating business outlooks, particularly during a national emergency or pandemic.

- Policymakers should exercise more contingency planning regarding small business policymaking for more proactive policy implementation regarding national emergencies or pandemics to reduce the hastiness of short-term funding policies. This exercise would provide small businesses with needed resources to reduce business closures, particularly during a national emergency or pandemic.

- Policymakers should exercise Congressional oversight or actions on bureaucratic processes involving the current CARES Act regulation policy implementation. Policymakers should reregulate how agency or agencies rulemaking includes procedures that provide clarity of guidance and eligibility requirements, and appropriate funds to develop public marketing strategies to reach small businesses. Doing so would promote public awareness through non-technical or laymen's terms for ease of understanding. This exercise would clarify small business policies and promote resource awareness for small businesses to apply for needed economic relief.

- Policymakers should exercise Congressional review to implement small business policy or reforms that enable small businesses during start-up,

growth, or recovery phases to the most at-risk small businesses before exposure to a national crisis. This exercise would provide small businesses with needed resources to reduce business closures before, during, and after a national emergency or pandemic.

- All small businesses, including the most at-risk small businesses, should exercise small business savings to build up resources, seek other resources through federal or commercial small business loans or contracts, or seek grant funding opportunities. This exercise would provide small businesses with capital reserves to offset pre, during, and post emergencies.

(2) From the prevention, economic preparedness perspective:

- All small businesses, including the most at-risk small businesses, should exercise strategic planning. This exercise would provide small businesses with the strategies necessary to make decisions concerning resources such as capital, labor, and supply while also promoting economic growth and value.

- All small businesses, including the most at-risk small businesses, should confront the uncertainties and estimate future outcomes. This exercise would provide small businesses with the necessary information to make decisions concerning short-term and long-term goals and risks in meeting overall objectives when navigating crises.

(3) From an overall perspective:

- Policymakers should implement contingency policies for future national emergencies, and

- Small businesses should implement strategic planning for all business phases.

D. AREAS FOR FUTURE RESEARCH

Limited time and access or specific resources on small business behavioral and decision-making data proved challenging in the process of completing this research project. Future researchers could further this research involving Rational Behavior Theory by including investigations and discussions into another comparative theory, other DOD agencies in the NCR or other comparative metropolitan areas or considering the minority-owned small business perspective that would also contribute invaluable insight. Future researchers may find interest in exploring Army or other DOD agencies impacting rational decision-making under the CARES Act in other locations. Future researchers may want to investigate non-CARES Act funded relief and assistances offered through the SBA and other federal, state, or local agencies from the small business or minority-owned small business perspective in the NCR or other locations. More so, actively engaged policymakers should develop long-term recommendations that create better small business ecosystems in intervention and preparedness before the next emergency.

E. CONCLUSION

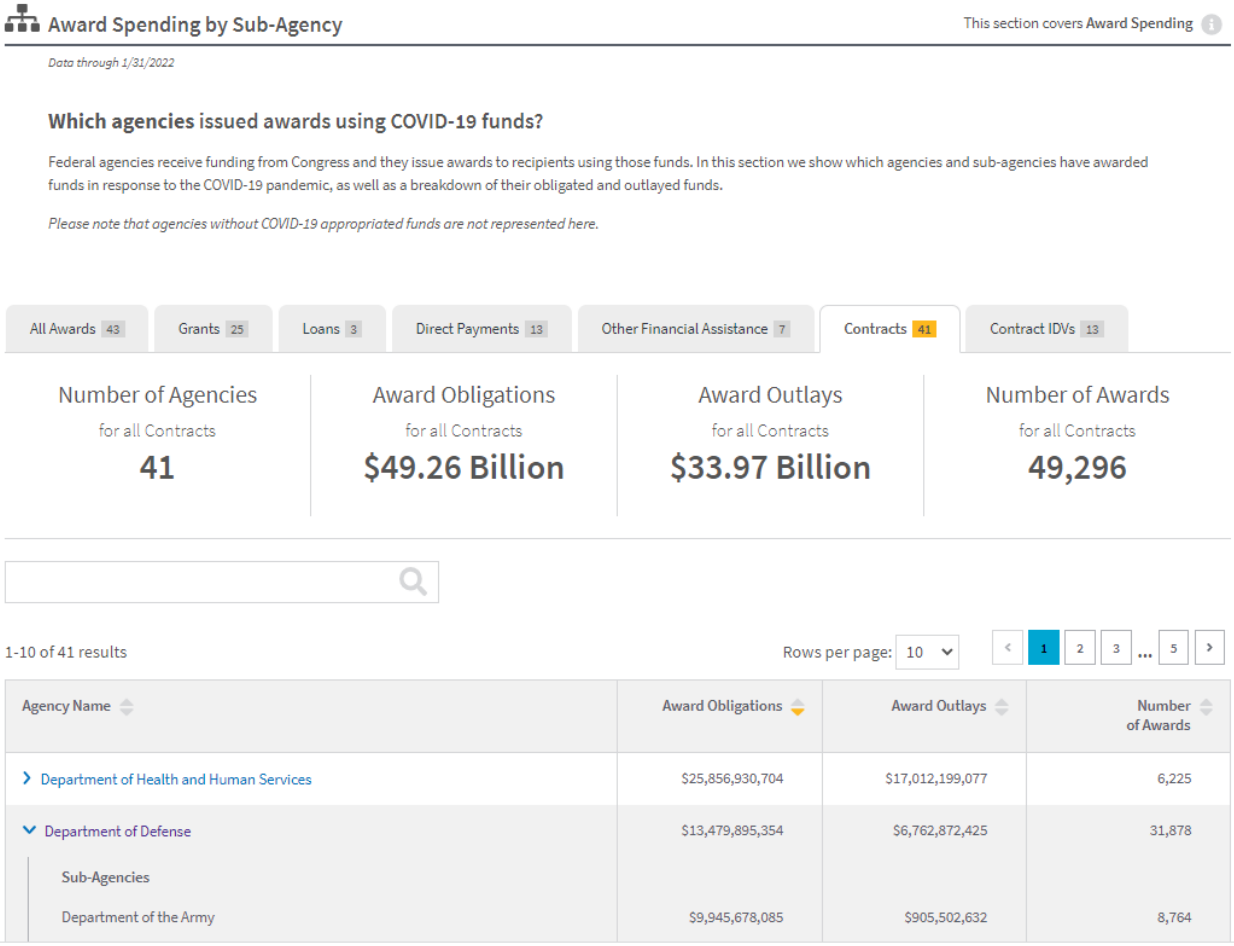
This chapter discussed the research questions conclusions, recommendations, and areas for future research. The research aimed to use mixed methods approach that explored the understanding of NCR small businesses to the extent of intervention and prevention strategies, 2020 through 2021. Two primary research questions focused on intervention, economic relief and prevention, economic preparedness related to the CARES Act supplemental funding, and SBDC granted assistances while addressing the degree of rational or less rational (irrational) decision-making under the Theory of Rational Behavior. Based on the research questions, the discussion on NCR small businesses tended to lean more conservative in seeking monetary relief and non-monetary assistances during national emergencies. Nonetheless, NCR small businesses suggested more apt to make more rational non-monetary decisions regarding prevention than monetary decisions regarding intervention.

Perhaps other small business factors such as core competency and competitive advantage or small business drivers such as forces of competition and strategic approach

are involved in producing other hypotheses for consideration. Future researchers could take this research and expand the investigation into other locales, agencies, policies, and theories. This research advanced the discussion on small business participation in economic intervention and prevention strategies afforded by the CARES Act during the COVID-19 pandemic. Throughout this research, one's perspective evolved through ebbs and flows as to the rationalized or irrational behaviors of small businesses decision-making regarding the acquiring or null needs of CARES Act supplemental funding for business survival. Nevertheless, as a final note, small businesses remain their best advocate regardless of the businesses' locale, structure, or size. Doing so requires small businesses to perform critical and sound decision-making regarding intervention and prevention strategies before the next national emergency.

APPENDIX

Table 10. Award Spending by Sub-Agency, Contracts. Source: USASPENDING.gov (2022a)



Award Spending by Sub-Agency

This section covers Award Spending

Data through 1/31/2022

Which agencies issued awards using COVID-19 funds?

Federal agencies receive funding from Congress and they issue awards to recipients using those funds. In this section we show which agencies and sub-agencies have awarded funds in response to the COVID-19 pandemic, as well as a breakdown of their obligated and outlayed funds.

Please note that agencies without COVID-19 appropriated funds are not represented here.

All Awards 43 | Grants 25 | Loans 3 | Direct Payments 13 | Other Financial Assistance 7 | Contracts 41 | Contract IDVs 13

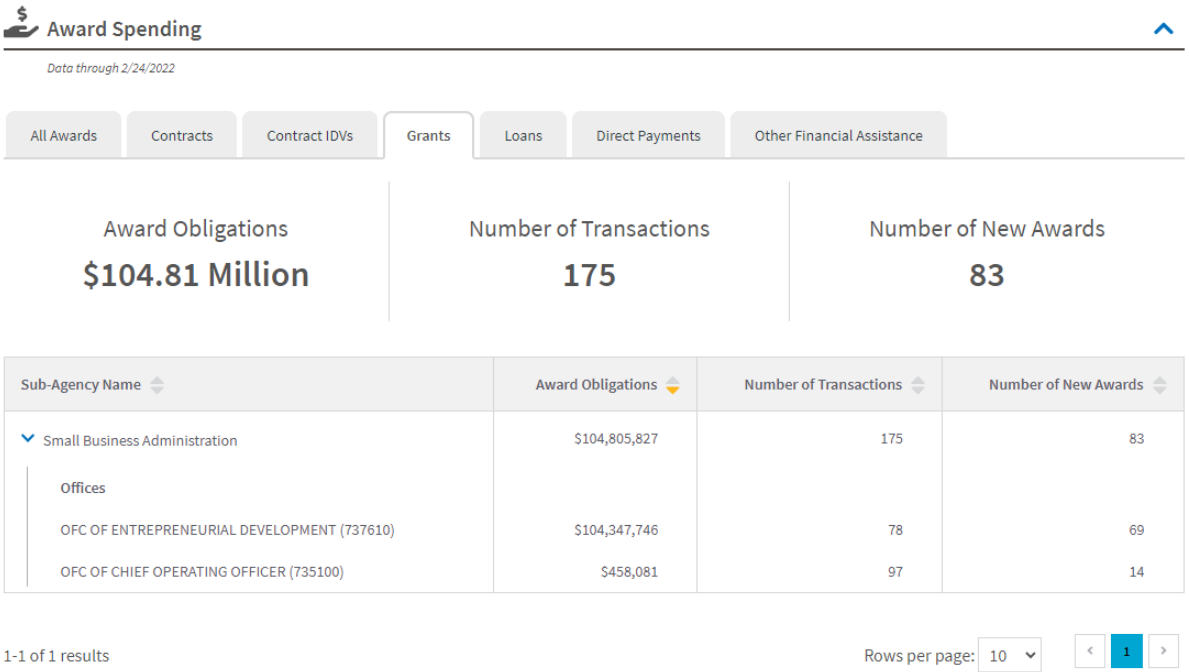
Number of Agencies	Award Obligations	Award Outlays	Number of Awards
for all Contracts	for all Contracts	for all Contracts	for all Contracts
41	$49.26 Billion	$33.97 Billion	49,296

1-10 of 41 results

Rows per page: 10

Agency Name	Award Obligations	Award Outlays	Number of Awards
Department of Health and Human Services	$25,856,930,704	$17,012,199,077	6,225
Department of Defense	$13,479,895,354	$6,762,872,425	31,878
Sub-Agencies			
Department of the Army	$9,945,678,085	$905,502,632	8,764

Table 11. Award Spending by Sub-Agency, Grants. Source: USASPENDING.gov (2022b)



Award Spending

Data through 2/24/2022

All Awards | Contracts | Contract IDVs | Grants | Loans | Direct Payments | Other Financial Assistance

Award Obligations	Number of Transactions	Number of New Awards
$104.81 Million	175	83

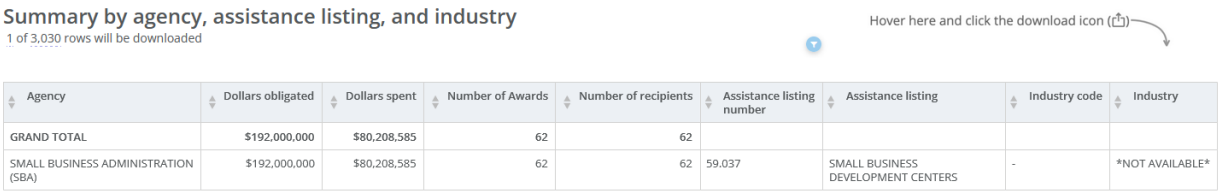
Sub-Agency Name	Award Obligations	Number of Transactions	Number of New Awards
Small Business Administration	$104,805,827	175	83
Offices			
OFC OF ENTREPRENEURIAL DEVELOPMENT (737610)	$104,347,746	78	69
OFC OF CHIEF OPERATING OFFICER (735100)	$458,081	97	14

1-1 of 1 results

Rows per page: 10

NOTE: The sub-agencies presented in this section represent awarding organizations and were sourced from the General Services Administration (GSA) Federal Hierarchy (available at https://sam.gov/content/hierarchy). This award hierarchy establishes the relationship between a department or independent agency's sub-tiers and its offices and is used by federal agencies as the authoritative source for managing federal funding and awarding organizations.

Table 12. Summary by Agency, Assistance Listing, and Industry: SBA. Source: Pandemic Oversight (n.d.a)



Summary by agency, assistance listing, and industry

1 of 3,030 rows will be downloaded

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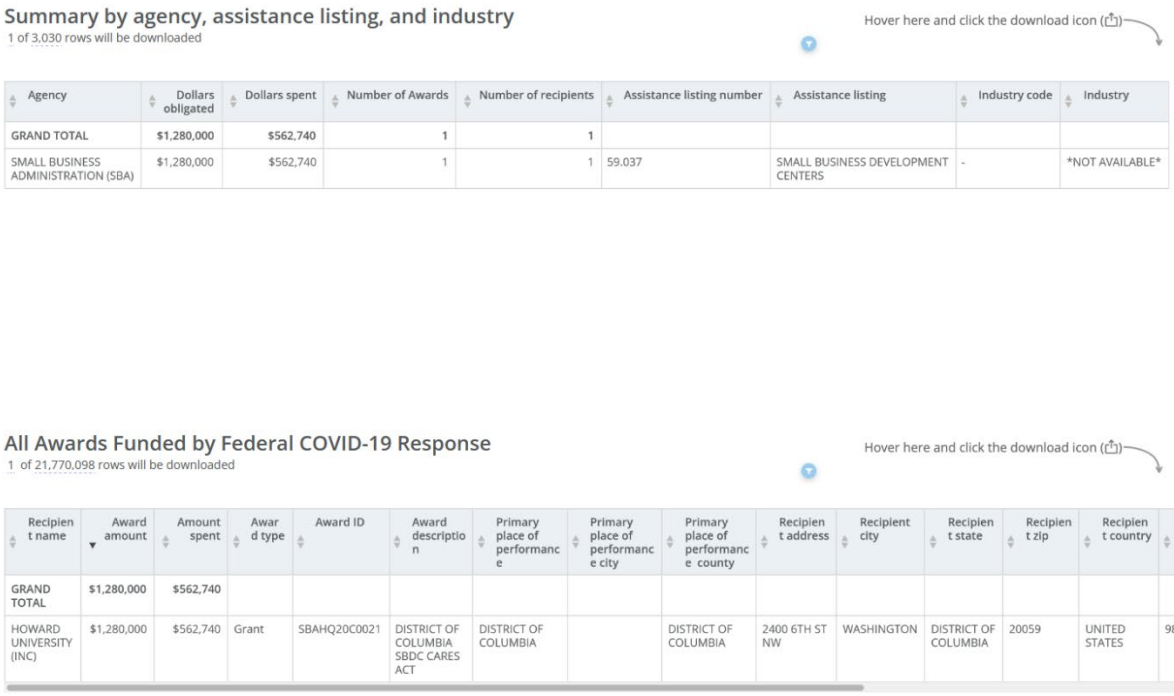
Agency	Dollars obligated	Dollars spent	Number of Awards	Number of recipients	Assistance listing number	Assistance listing	Industry code	Industry
GRAND TOTAL	$192,000,000	$80,208,585	62	62				
SMALL BUSINESS ADMINISTRATION (SBA)	$192,000,000	$80,208,585	62	62	59.037	SMALL BUSINESS DEVELOPMENT CENTERS	-	*NOT AVAILABLE*

Table 13. Summary by Agency, Assistance Listing, and Industry: SBA, and All Awards Funded by Federal COVID-19 Responses, District of Columbia. Source: Pandemic Oversight (n.d.b)



Summary by agency, assistance listing, and industry

1 of 3,030 rows will be downloaded

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Agency	Dollars obligated	Dollars spent	Number of Awards	Number of recipients	Assistance listing number	Assistance listing	Industry code	Industry
GRAND TOTAL	$1,280,000	$562,740	1	1				
SMALL BUSINESS ADMINISTRATION (SBA)	$1,280,000	$562,740	1	1	59.037	SMALL BUSINESS DEVELOPMENT CENTERS	-	*NOT AVAILABLE*

All Awards Funded by Federal COVID-19 Response

1 of 21,770,098 rows will be downloaded

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Recipient name	Award amount	Amount spent	Award type	Award ID	Award description	Primary place of performance	Primary place of performance city	Primary place of performance county	Recipient address	Recipient city	Recipient state	Recipient zip	Recipient country	Recipient congl dist
GRAND TOTAL	$1,280,000	$562,740												
HOWARD UNIVERSITY (INC)	$1,280,000	$562,740	Grant	SBAHQ20C0021	DISTRICT OF COLUMBIA SBDC CARES ACT	DISTRICT OF COLUMBIA		DISTRICT OF COLUMBIA	2400 6TH ST NW	WASHINGTON	DISTRICT OF COLUMBIA	20059	UNITED STATES	98

Table 14. Summary by Agency, Assistance Listing, and Industry: SBA, and All Awards Funded by Federal COVID-19 Responses, Maryland. Source: Pandemic Oversight (n.d.c)

Summary by agency, assistance listing, and industry

1 of 3,030 rows will be downloaded

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Agency	Dollars obligated	Dollars spent	Number of Awards	Number of recipients	Assistance listing number	Assistance listing	Industry code	Industry
GRAND TOTAL	$3,288,541	$853,243	1	1				
SMALL BUSINESS ADMINISTRATION (SBA)	$3,288,541	$853,243	1	1	59.037	SMALL BUSINESS DEVELOPMENT CENTERS	-	*NOT AVAILABLE*

All Awards Funded by Federal COVID-19 Response

1 of 21,770,098 rows will be downloaded

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Recipient name	Award amount	Amount spent	Award type	Award ID	Award description	Primary place of performance	Primary place of performance city	Primary place of performance county	Recipient address	Recipient city	Recipient state	Recipient zip	Recipient country	
GRAND TOTAL	$3,288,541	$853,243												
UNIVERSITY OF MARYLAND	$3,288,541	$853,243	Grant	SBAHQ20C0034	MARYLAND SBDC CARES ACT	MARYLAND		PRINCE GEORGE'S	3112 LEE BUILDING7809 REGENTS DRIVE	COLLEGE PARK	MARYLAND	20742	UNITED STATES	05

Table 15. Summary by Agency, Assistance Listing, and Industry: SBA, and All Awards Funded by Federal COVID-19 Responses, Pennsylvania. Source: Pandemic Oversight (n.d.d)

Summary by agency, assistance listing, and industry

1 of 3,030 rows will be downloaded

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Agency	Dollars obligated	Dollars spent	Number of Awards	Number of recipients	Assistance listing number	Assistance listing	Industry code	Industry
GRAND TOTAL	$7,640,262	$3,153,456	1	1				
SMALL BUSINESS ADMINISTRATION (SBA)	$7,640,262	$3,153,456	1	1	59.037	SMALL BUSINESS DEVELOPMENT CENTERS	-	*NOT AVAILABLE*

All Awards Funded by Federal COVID-19 Response

1 of 21,770,098 rows will be downloaded

Hover here and click the download icon

Recipient name	Award amount	Amount spent	Award type	Award ID	Award description	Primary place of performance	Primary place of performance city	Primary place of performance county	Recipient address	Recipient city	Recipient state	Recipient zip	Recipien country
GRAND TOTAL	$7,640,262	$3,153,456											
KUTZTOWN UNIVERSITY OF PENNSYLVANIA	$7,640,262	$3,153,456	Grant	SBAHQ20C0042	PENNSYLVANIA SBDC CARES ACT	PENNSYLVANIA	KUTZTOWN	BERKS	OFFICE OF GRANTS AND SPONSORED PROJECTS15200 KUTZTOWN RD	KUTZTOWN	PENNSYLVANIA	19530	UNITED STATES

Table 16. Summary by Agency, Assistance Listing, and Industry: SBA, and All Awards Funded by Federal COVID-19 Responses, Virginia. Source: Pandemic Oversight (n.d.e)

Summary by agency, assistance listing, and industry

1 of 3,030 rows will be downloaded

Agency	Dollars obligated	Dollars spent	Number of Awards	Number of recipients	Assistance listing number	Ass
GRAND TOTAL	$4,557,280	$1,648,250	1	1		
SMALL BUSINESS ADMINISTRATION (SBA)	$4,557,280	$1,648,250	1	1	59.037	SMALL DEVEL

All Awards Funded by Federal COVID-19 Response

1 of 21,770,098 rows will be downloaded

Recipient name	Award amount	Amount spent	Award type	Award ID	Award description	Primary place of performance	Primary place of performance city	Primary place of performance county	Recipient address
GRAND TOTAL	$4,557,280	$1,648,250							
GEORGE MASON	$4,557,280	$1,648,250	Grant	SBAHQ20C0051	VIRGINIA SBDC CARES	VIRGINIA		FAIRFAX (CITY)	4400 UNIVERSITY

Table 17. Business Applications (February 2022). Business Formation Statistics. Source: U.S. Census Bureau (2022a).

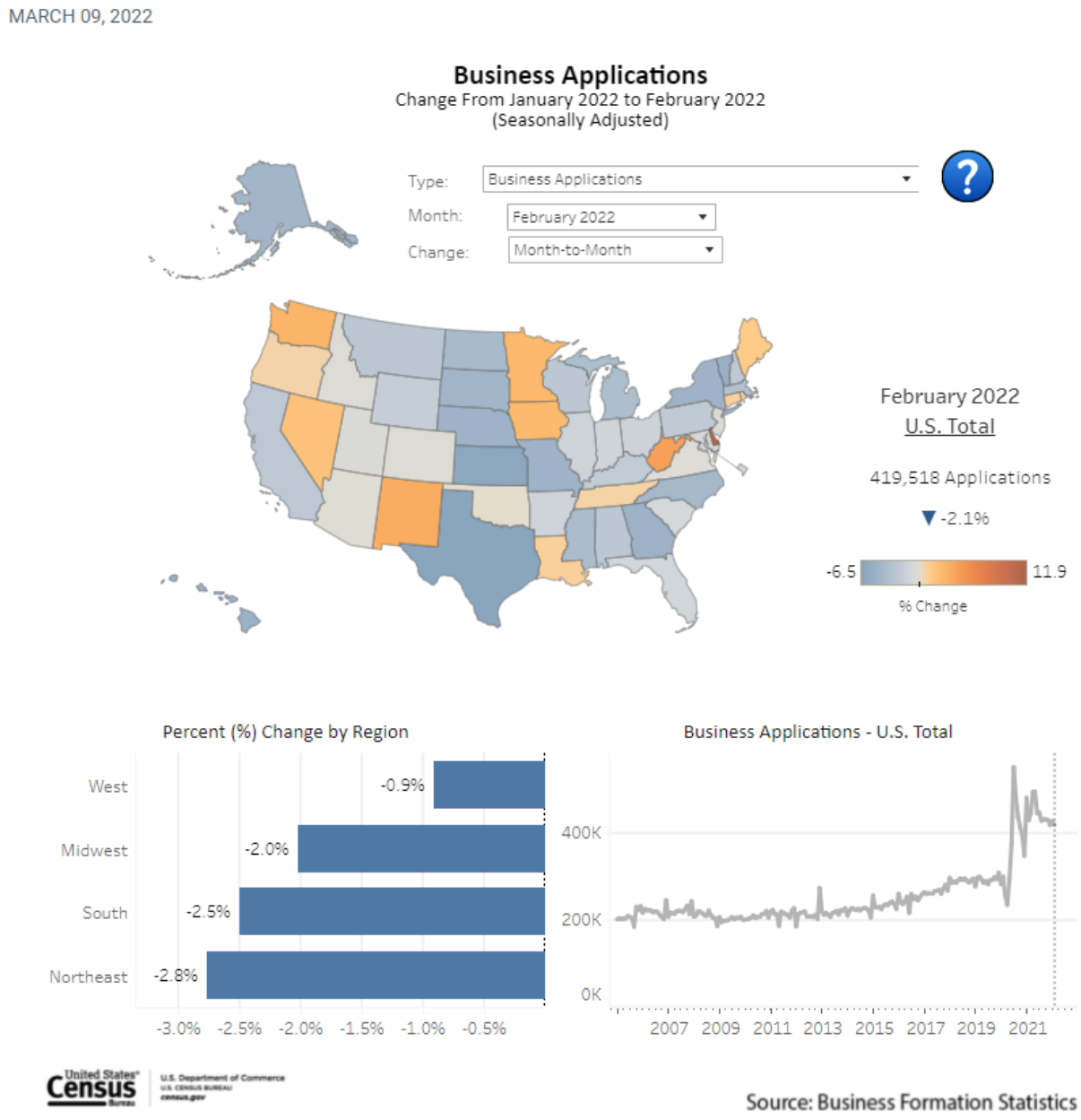


Table 18. Business Applications (February 2021). Business Formation Statistics. Source: U.S. Census Bureau (2022b).

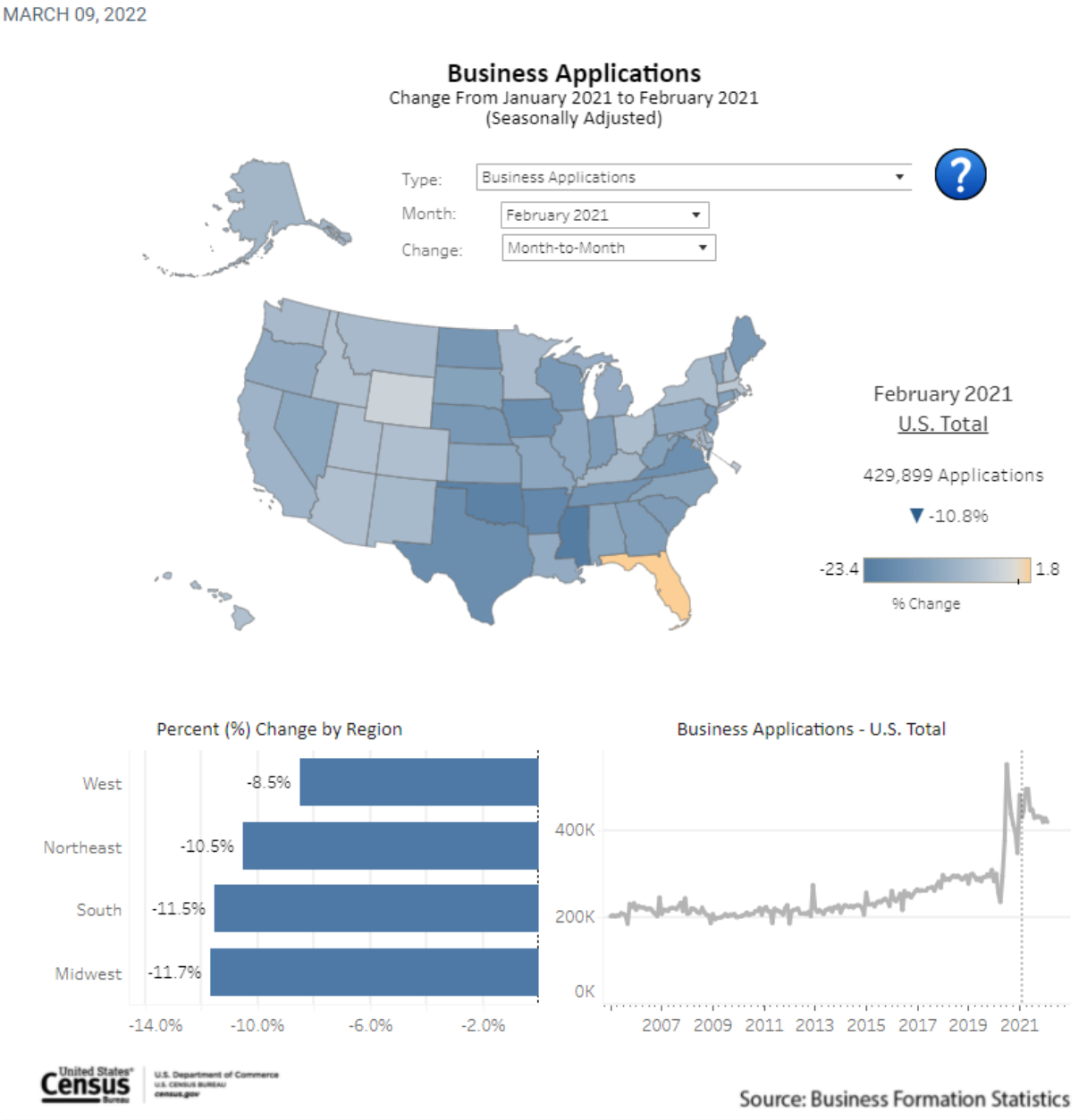


Table 19. Business Applications (February 2020). Business Formation Statistics. Source: U.S. Census Bureau (2022c).

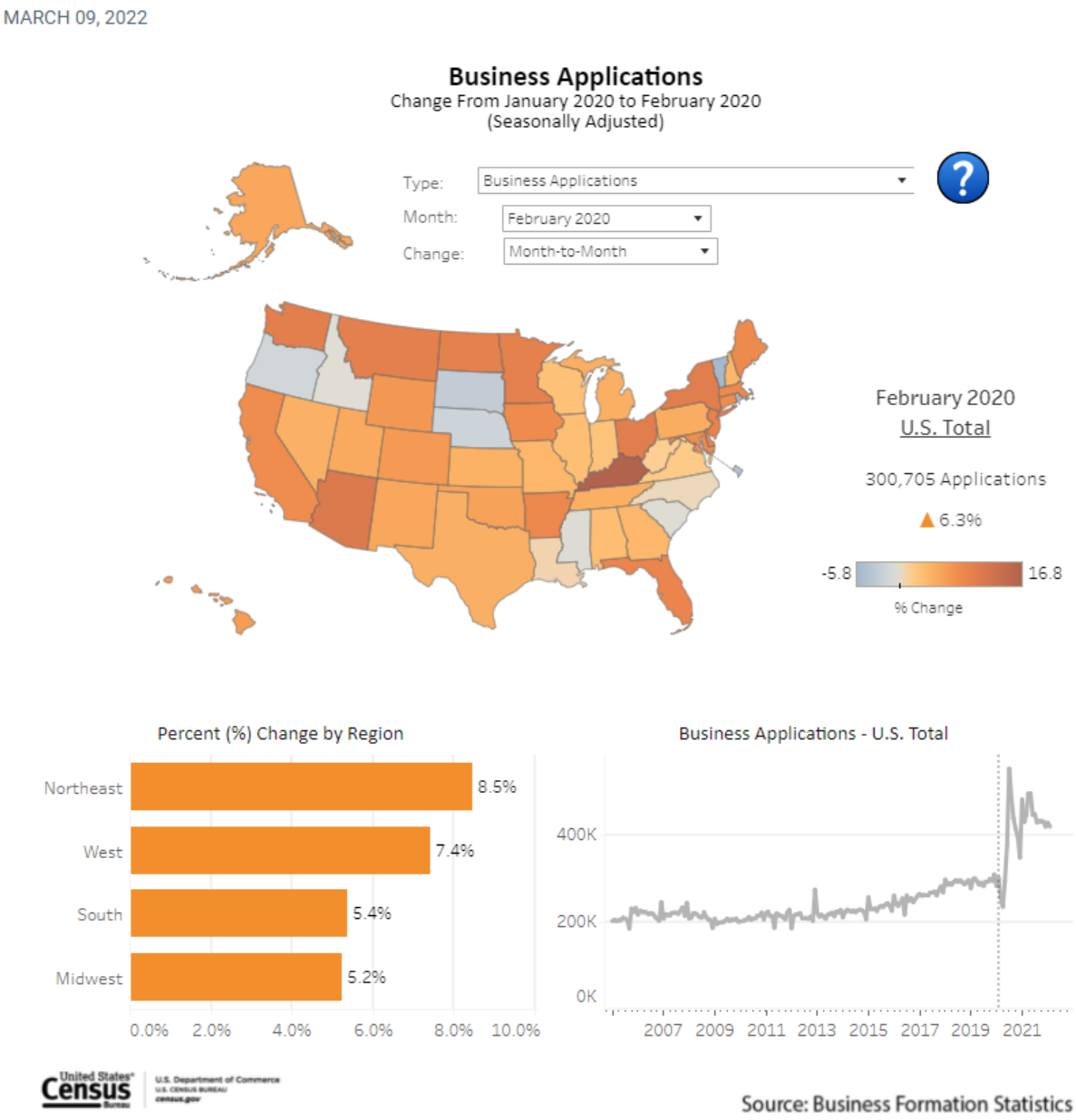


Table 20. Business Applications (February 2019). Business Formation Statistics. Source: U.S. Census Bureau (2022d).

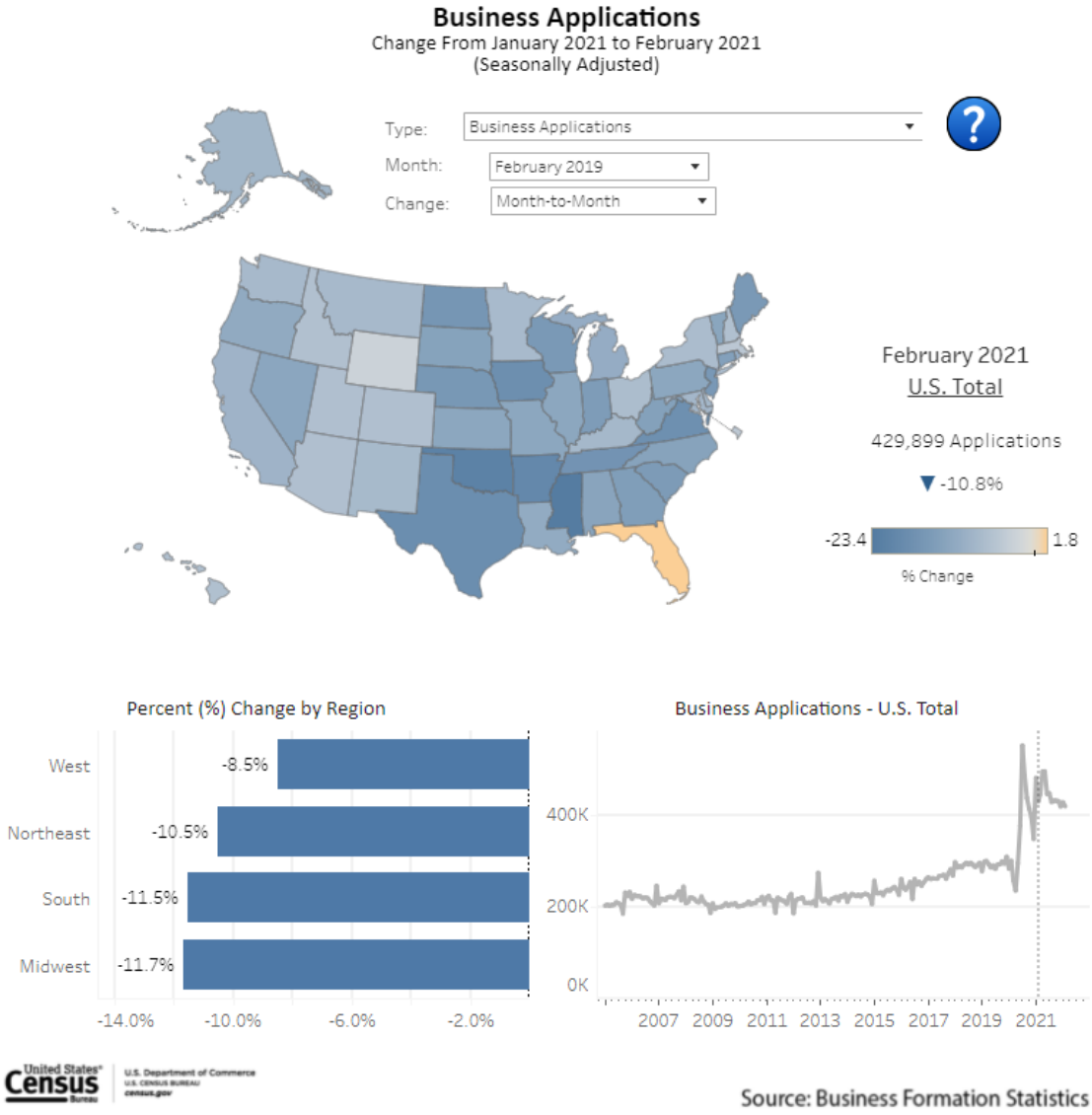


Table 21. PPP Loan Forgiveness. Adapted from Small Business Administration (2022c)

PPP BASELINE						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
Total Count/	1,661,367	139,259	3,253	26,068	69,567	40,371
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
% of SB Applying PPP	**20.87%**	**20.78%**	13.56%	18.69%	22.94%	19.84%
PPP 2020						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
Total Count/	5,212,128	388,639	13,510	87,007	173,552	114,570
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
% of SB Applying PPP	**65.49%**	**57.99%**	56.31%	62.39%	57.24%	56.31%
PPP 2021						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
Total Count/	11,493,003	-	N/A	N/A	N/A	N/A
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
% of SB Applying PPP	**144.40%**	**0.00%**	0.00%	0.00%	0.00%	0.00%

Note: Quantitative Analysis: PPP, Baseline—2021

Table 22. EIDL. Adapted from Small Business Administration (2022b)

EIDL BASELINE						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
Total Count/	755,476	57,695	1,997	12,462	24,731	18,505
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
% of SB Applying EIDL	**9.49%**	**8.61%**	8.32%	8.94%	8.16%	9.09%
EIDL 2020						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
Total Count/	3,589,667	241,319	9,636	64,386	95,860	71,437
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
% of SB Applying EIDL	**45.10%**	**36.01%**	40.16%	46.17%	31.61%	35.11%
EIDL 2021						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
Total Count/	3,832,238	259,858	10,573	70,045	102,271	76,969
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
% of SB Applying EIDL	**48.15%**	**38.78%**	0.00%	0.00%	0.00%	0.00%
EIDL 2022						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
Total Count/	-	266,143	10,919	71,976	104,351	78,897
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
% of SB Applying EIDL	**0.00%**	**39.71%**	0.00%	0.00%	0.00%	0.00%

Note: Quantitative Analysis: EIDL, Baseline—2022

Table 23. Army Service Contract Awards. Adapted from USASPENDING (2022a)

CONTRACT AWARDS BASELINE						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
Total Count/	395	34	-	17	1	16
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
% of SB Awarded Contracts	**0.00%**	**0.01%**	0.00%	0.01%	0.00%	0.01%
CONTRACT AWARDS 2021						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
Total Count/	840	107	4	40	2	61
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
% of SB Awarded Contracts	**0.01%**	**0.02%**	0.02%	0.03%	0.00%	0.03%

Quantitative Analysis: Contract Awards Calculations, Baseline—2021

Table 24. Army Service Contract Awards. Adapted from USASPENDING (2022a)

OVERALL BASELINE						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
PPP Total Count/	1,661,367	139,259	3,253	26,068	69,567	40,371
EIDL Total Count/	755,476	69,964	1,997	24,731	24,731	18,505
Awarded Total Count/	-	-	-	-	-	-
Total Small Businesses	7,959,103	1,013,382	303,224	203,467	303,224	203,467
% Receiving All Three	**30.37%**	**20.65%**	1.73%	24.97%	31.10%	28.94%
% Receiving Only Two	**30.37%**	**20.65%**	1.73%	24.97%	31.10%	28.94%
% Receiving Only One	**20.87%**	**13.74%**	1.07%	12.81%	22.94%	19.84%
% Receiving None	**0.00%**	**0.00%**	0.00%	0.00%	0.00%	0.00%

OVERALL 2020						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
PPP Total Count/	5,212,128	388,639	13,510	87,007	173,552	114,570
EIDL Total Count/	3,589,667	241,319	9,636	64,386	95,860	71,437
Awarded Total Count/	395	34	-	17	1	16
Total Small Businesses	7,959,103	1,013,382	303,224	203,467	303,224	203,467
% Receiving All Three	**110.59%**	**62.17%**	7.63%	74.42%	88.85%	91.43%
% Receiving Only Two	**110.59%**	**62.16%**	7.63%	74.41%	88.85%	91.42%
% Receiving Only One	**65.49%**	**38.35%**	4.46%	42.76%	57.24%	56.31%
% Receiving None	**0.00%**	**0.00%**	0.00%	0.00%	0.00%	0.00%

OVERALL 2021						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
PPP Total Count/	11,493,003	-	-	-	-	-
EIDL Total Count/	3,832,238	259,858	10,573	70,045	102,271	76,969
Awarded Total Count/	840	107	4	40	2	61
Total Small Businesses	7,959,103	1,013,382	303,224	203,467	303,224	203,467
% Receiving All Three	**192.56%**	**25.65%**	3.49%	34.45%	33.73%	37.86%
% Receiving Only Two	**192.56%**	**25.64%**	3.49%	34.43%	33.73%	37.83%
% Receiving Only One	**144.40%**	**0.00%**	0.00%	0.00%	0.00%	0.00%
% Receiving None	**0.00%**	**0.00%**	0.00%	0.00%	0.00%	0.00%

Table 24, continued

OVERALL 2022						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
PPP Total Count/	11,418,361	-	-	-	-	-
EIDL Total Count/	3,909,713	266,143	10,919	71,976	104,351	78,897
Awarded Total Count/	-	-	-	-	-	-
Total Small Businesses	7,959,103	1,013,382	303,224	203,467	303,224	203,467
% Receiving All Three	**192.59%**	**26.26%**	3.60%	35.37%	34.41%	38.78%
% Receiving Only Two	**192.59%**	**26.26%**	3.60%	35.37%	34.41%	38.78%
% Receiving Only One	**143.46%**	**0.00%**	0.00%	0.00%	0.00%	0.00%
% Receiving None	**0.00%**	**0.00%**	0.00%	0.00%	0.00%	0.00%

Quantitative Analysis: Overall Calculations, Baseline—2022

Table 25. Emergency Preparedness Survey Responses. Adapted from United States Census Bureau (n.d.)

Emergency Preparedness: Small Businesses Future Needs to obtain financial assistance or additional capital.						
	National	NCR	DC	MD	PA	VA
Total Count x	20.3	78.3	18.0	18.5	21.6	20.2
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	1,615,697.91	524,714.14	4,319	25,798	65,496	41,100
Rational Behavior %		32.48%				

Emergency Preparedness: Small Businesses Future Needs to identify new supply chain options.						
	National	NCR	DC	MD	PA	VA
Total Count x	19.4	71.5	10.8	20.5	21.7	18.6
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	1,544,065.98	479,145.10	2,591	28,587	65,800	37,845
Rational Behavior %		31.03%				

Emergency Preparedness: Small Businesses Future Needs to develop online sales or websites.						
	National	NCR	DC	MD	PA	VA
Total Count x	11.8	41.4	8.1	10.5	11.6	11.2
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	939,174.15	277,435.06	1,943	14,642	35,174	22,788
Rational Behavior %		29.54%				

Emergency Preparedness: Small Businesses Future Needs to increase marketing or sales.						
	National	NCR	DC	MD	PA	VA
Total Count x	29.9	120.2	32.2	28.2	30.1	29.7
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	2,379,771.80	805,499.87	7,726	39,325	91,270	60,430
Rational Behavior %		33.85%				

Emergency Preparedness: Small Businesses Future Needs to learn how to better provide for the safety of customers and employees.						
	National	NCR	DC	MD	PA	VA
Total Count x	9.7	44.5	13.2	12.3	7.9	11.2
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	772,032.99	298,209.19	3,167	17,152	23,955	22,788
Rational Behavior %		38.63%				

Emergency Preparedness: Small Businesses Future Needs to identify and hire new employees.						
	National	NCR	DC	MD	PA	VA
Total Count x	31.7	138.8	31.6	33.9	36.9	36.4
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	2,523,035.65	930,144.60	7,582	47,273	111,890	74,062
Rational Behavior %		36.87%				

Emergency Preparedness: Small Businesses Future Needs to permanently close this business.						
	National	NCR	DC	MD	PA	VA
Total Count x	4.4	13.2	-	4.4	4.4	4.4
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	350,200.53	88,457.56	-	6,136	13,342	8,953
Rational Behavior %		25.26%				

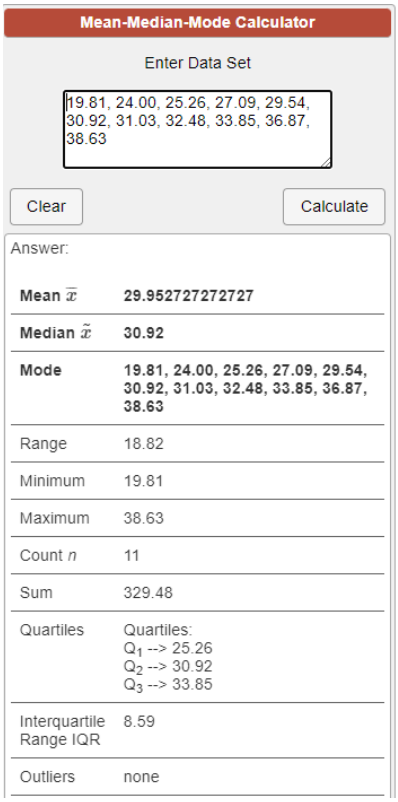
Emergency Preparedness: Small Businesses Future Needs to make a capital expenditure.						
	National	NCR	DC	MD	PA	VA
Total Count x	7.8	25.1		8.5	9.4	7.2
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	620,810.03	168,203.38	-	11,853	28,503	14,650
Rational Behavior %		27.09%				

Table 25, continued

Emergency Preparedness: Small Businesses Future Needs to cancel or postpone a planned capital expenditure.						
	National	NCR	DC	MD	PA	VA
Total Count x	4.0	11.4		4.2	3.4	3.8
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	318,364.12	76,395.16	-	5,857	10,310	7,732
Rational Behavior %		24.00%				
Emergency Preparedness: Small Businesses Future Needs to identify potential markets for exporting products or services.						
	National	NCR	DC	MD	PA	VA
Total Count x	1.7	4.0			2.6	1.4
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	135,304.75	26,805.32	-	-	7,884	2,849
Rational Behavior %		19.81%				
Emergency Preparedness: Small Businesses Future Needs none of the above						
	National	NCR	DC	MD	PA	VA
Total Count x	33.6	123.4	30.9	30.4	31.4	30.8
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	2,674,258.61	826,944.12	7,414	42,392	95,212	62,668
Rational Behavior %		30.92%				

Quantitative Analysis: Emergency Preparedness Survey Responses

Table 26. Mean, Median, and Mode Calculator.
Adapted from Calculator Soup (n.d.)



Emergency Preparedness Mean, Median, and Mode Calculator

Table 27. Crisis Management Survey Responses. Adapted from United States Census Bureau (n.d.)

Crisis Management: Small Businesses Business Practices adopt or expanded digital technology.						
	National	NCR	DC	MD	PA	VA
Total Count x	26.6	170.5	50.0	31.3	62.4	26.8
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	2,117,121.40	1,142,576.77	11,997	43,648	189,212	54,529
Rational Behavior %		53.97%				

Crisis Management: Small Businesses Business Practices changed management practices.						
	National	NCR	DC	MD	PA	VA
Total Count x	21.9	99.4	27.9	23.8	24.4	23.3
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	1,743,043.56	666,112.20	6,694	33,189	73,987	47,408
Rational Behavior %		38.22%				

Crisis Management: Small Businesses Business Practices changed business strategies.						
	National	NCR	DC	MD	PA	VA
Total Count x	28.9	123.1	32.3	31.1	29.0	30.7
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	2,300,180.77	824,933.72	7,750	43,369	87,935	62,464
Rational Behavior %		35.86%				

Crisis Management: Small Businesses Business Practices introduced new goods or services.						
	National	NCR	DC	MD	PA	VA
Total Count x	14.6	57.7	12.0	15.1	15.2	15.4
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	1,162,029.04	386,666.74	2,879	21,057	46,090	31,334
Rational Behavior %		33.28%				

Crisis Management: Small Businesses Business Practices improved existing goods or services.						
	National	NCR	DC	MD	PA	VA
Total Count x	16.9	69.9	18.8	16.8	17.7	16.6
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	1,345,088.41	468,422.97	4,511	23,427	53,671	33,776
Rational Behavior %		34.82%				

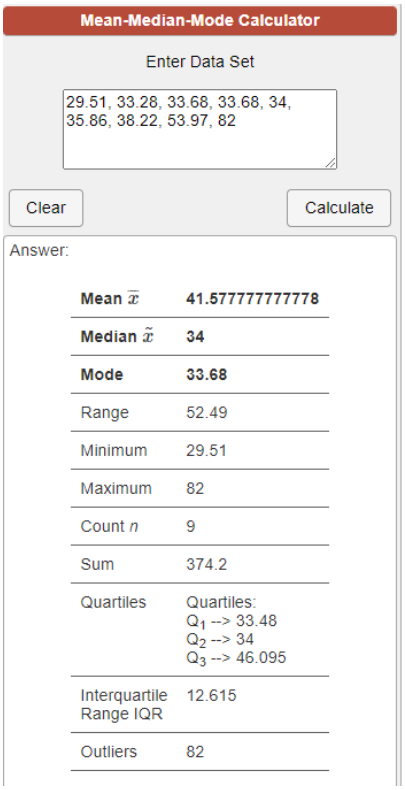
Crisis Management: Small Businesses Business Practices improved methods of producing goods or services.						
	National	NCR	DC	MD	PA	VA
Total Count x	10.9	38.2	5.6	10.6	11.1	10.9
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	867,542.23	255,990.81	1,344	14,782	33,658	22,178
Rational Behavior %		29.51%				

Crisis Management: Small Businesses Business Practices improved methods of logistics, delivery, or distribution.						
	National	NCR	DC	MD	PA	VA
Total Count x	10.9	43.6	8.4	11.5	12.5	11.2
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	867,542.23	292,177.99	2,015	16,037	37,903	22,788
Rational Behavior %		33.68%				

Crisis Management: Small Businesses Business Practice has not made any of these changes.						
	National	NCR	DC	MD	PA	VA
Total Count x	10.9	43.6	8.4	11.5	12.5	11.2
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	867,542.23	292,177.99	2,015	16,037	37,903	22,788
Rational Behavior %		33.68%				

Quantitative Analysis: Crisis Management Survey Responses

Table 28. Mean, Median, and Mode Calculator. Adapted from Calculator Soup (n.d.)



Crisis Management Mean, Median, and Mode Calculator

Table 29. Risk Mitigation Survey Responses. Adapted from United States Census Bureau (n.d.)

Risk Mitigation: Small Businesses Future Business Practices adopt or expanded digital technology.						
	National	NCR	DC	MD	PA	VA
Total Count x	14.0	63.8	18.5	15.9	14.0	15.5
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	1,114,274.42	427,544.85	4,439	22,172	42,451	31,537
Rational Behavior %		38.37%				

Risk Mitigation: Small Businesses Future Business Practices changed management practices.						
	National	NCR	DC	MD	PA	VA
Total Count x	10.4	41.0	8.0	12.1	9.3	11.6
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	823,767.16	274,754.53	19,194	16,873	28,200	23,602
Rational Behavior %		33.35%				

Risk Mitigation: Small Businesses Future Business Practices changed business strategies.						
	National	NCR	DC	MD	PA	VA
Total Count x	18.7	70.0	13.7	18.3	18.9	19.2
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	1,488,352.26	469,093.10	3,287	2,551,917	57,309	39,066
Rational Behavior %		31.52%				

Risk Mitigation: Small Businesses Future Business Practices introduced new goods or services.						
	National	NCR	DC	MD	PA	VA
Total Count x	12.3	42.8	4.7	11.9	13.0	13.2
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	978,969.67	286,816.92	1,128	16,594	39,419	26,858
Rational Behavior %		29.30%				

Risk Mitigation: Small Businesses Future Business Practices improved existing goods or services.						
	National	NCR	DC	MD	PA	VA
Total Count x	19.6	72.9	12.4	20.3	18.7	21.5
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	1,559,984.19	488,526.96	2,975	28,308	56,703	43,745
Rational Behavior %		31.32%				

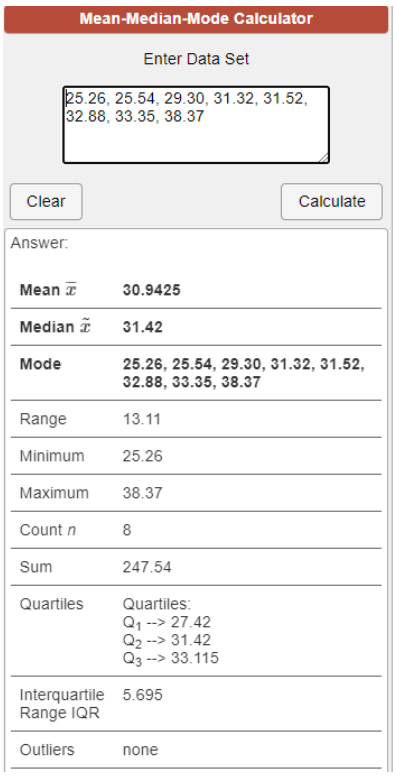
Risk Mitigation: Small Businesses Future Business Practices improved methods of producing goods or services.						
	National	NCR	DC	MD	PA	VA
Total Count x	12.2	37.0	-	12.9	12.2	12.0
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	971,010.57	247,949.21	-	17,989	36,993	24,416
Rational Behavior %		25.54%				

Risk Mitigation: Small Businesses Future Business Practices improved methods of logistics, delivery, or distribution.						
	National	NCR	DC	MD	PA	VA
Total Count x	10.5	31.5	-	10.1	10.9	10.5
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	835,705.82	211,091.90	-	14,084	33,051	21,364
Rational Behavior %		25.26%				

Risk Mitigation: Small Businesses Future Business Practices has not made any of these changes.						
	National	NCR	DC	MD	PA	VA
Total Count x	55.7	217.5	52.9	56.6	54.5	53.5
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
# of SB Responses	4,433,220.37	1,457,539.28	12,692	78,928	165,257	108,855
Rational Behavior %		32.88%				

Quantitative Analysis: Risk Mitigation Survey Responses

Table 30. Mean, Median, and Mode Calculator. Adapted from Calculator Soup (n.d.)



Risk Mitigation Mean, Median, and Mode Calculator

Table 31. Overall Survey Responses. Adapted from United States Census Bureau (n.d.)

OVERALL						
	National	**NCR**	**DC**	**MD**	**PA**	**VA**
Emergency Preparedness/	174.10	672	144.65	171.40	180.90	174.65
Crisis Management/	142	646	163	152	185	146
Risk Mitigation/	153	576	110	158	151	157
Total Small Businesses	7,959,103	670,133	23,993	139,449	303,224	203,467
% Receiving All Three	**0.01%**	**0.28%**	1.74%	0.34%	0.17%	0.23%
% Receiving Only Two	**0.01%**	**0.20%**	1.28%	0.23%	0.12%	0.16%
% Receiving Only One	**0.00%**	**0.10%**	0.60%	0.12%	0.06%	0.09%
% Receiving None	**0.00%**	**0.00%**	0.00%	0.00%	0.00%	0.00%

Quantitative Analysis: Overall Survey Responses

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