Millennial Veteran Entrepreneurship: Research on the Next Generation of Veteran Entrepreneurs

by

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Executive Summary

Post-9/11 veteran entrepreneurs are the next generation of veterans to continue the growth of veteran-owned businesses. However, little is known about this group of entrepreneurs and the barriers they may encounter in starting their own businesses. Veterans own more than 9 percent of all U.S. businesses, employ a total of 5.8 million individuals, and produce more than $1 trillion in revenue annually, a significant contribution to the U.S. economy (Sobota, 2017). Historically, veterans have been more likely than their civilian peers to start and run their own businesses. However, in recent years, rates of veteran entrepreneurship have shown signs of decline, more so among post-9/11 veteran entrepreneurs (Sankaran & Battisto, 2018). With increasing numbers of Vietnam veterans aging out of the workforce, veteran entrepreneurship is at a crossroads.

This study focuses on a particular subgroup of post-9/11 veteran entrepreneurs—millennial veteran entrepreneurs. This subgroup was chosen because millennials are in the early to midstage of their careers and represent 34 percent of veterans who served in the post-9/11 era. Born between 1981 and 1996, millennials are the largest generation in U.S. history, and 96 percent of millennial veterans served in the post-9/11 era (Dimock, 2019; Goldman Sachs, n.d.; U.S. Census Bureau, 2015).

This report uses data from the U.S. Census Bureau's 2014–2018 American Community Survey to examine the specific traits and characteristics of millennial veteran entrepreneurs. The analysis examines entrepreneurship outcomes among millennial veterans and their nonveteran peers. It also compares millennial veteran entrepreneurs with (1) nonveteran millennial entrepreneurs, (2) employed millennial veterans who are not entrepreneurs, and (3) older generations of veteran

entrepreneurs. Findings from the logistic regression models estimate average marginal effects, which present the change in the probability of the outcome.

Findings indicate millennial veterans are less likely to be entrepreneurs than millennial nonveterans. Significant differences in gender, ethnicity, and disability status exist between millennial veteran entrepreneurs and millennial nonveteran entrepreneurs. Similarly, there are several statistically significant differences between millennial veteran entrepreneurs and employed millennial veterans with regard to gender, presence of a service-connected disability, and use of Department of Veterans Affairs (VA) health insurance. Finally, millennial veteran entrepreneurs differ from veteran entrepreneurs of older generations in gender, race, ethnicity, presence of a service-connected disability, and those who have VA health insurance.

Given that millennial veterans are less likely to be entrepreneurs than their nonveteran peers, this group of veterans may experience barriers to entrepreneurship. In particular, lower entrepreneurship rates may indicate potential barriers for millennial female veteran entrepreneurs in addition to Black and Hispanic millennial veteran entrepreneurs when compared with males and non-Hispanic White nonveteran millennial entrepreneurs and veteran millennial non-entrepreneurs. Education, personal income, and geographic mobility may be factors that hinder millennial veterans' propensity toward entrepreneurship. For instance, the higher rate of geographic mobility for veteran entrepreneurs may reduce the size of their local networks and resources. Financial literacy is also a demonstrated issue among millennials and veteran entrepreneurs (Boldon & Maury, 2017; Mottola, 2014). Lastly, while there are opportunities for veterans with service-connected disabilities who own a business, millennial veterans reporting a

service-connected disability may also experience barriers to entrepreneurship due to findings that they are less likely to be millennial entrepreneurs.

Federal, State, and local policies can improve access and provide additional support for new and current entrepreneurs. Based on this study's findings, four policy recommendations to support millennial veteran entrepreneurs follow:

1. Tailor support for female millennial veterans and Hispanic and Black millennial veterans pursuing entrepreneurship.

2. Continue support for veterans with service-connected disabilities to start their own businesses.

3. Increase network and mentorship support for a geographically mobile population of entrepreneurs.

4. Improve financial literacy related to businesses and entrepreneurship for military and veteran populations.

Section 1. Introduction

Historically, veterans have proven themselves to be a successful and robust group of entrepreneurs. Rates of veteran entrepreneurship, when compared with civilians, have been high: veterans are more likely than their civilian peers to start and run their own businesses (Hope & Mackin, 2011). However, overall rates of veteran entrepreneurship have been declining. For example, 15 percent of veterans were entrepreneurs in 2005 compared with 11 percent of nonveterans. Nearly 10 years later in 2014, the percentage of veteran entrepreneurs had dropped to 12 percent for veterans and 10 percent for nonveterans (Boldon & Maury, 2016). In 2018, the percentage of veterans and nonveterans who were entrepreneurs converged at 11 percent (Sankaran & Battisto, 2018). Another sign of declining veteran entrepreneurship is the recent decrease in the rate of new veteran entrepreneurs.[1] Since 2014 the rate of new veteran entrepreneurs has steadily decreased, while the rate of new nonveteran entrepreneurs has increased (Fairlie et al., 2019).

Recent research indicates there may be unique factors hindering veterans' pursuit of entrepreneurship and business ownership. Surveys and interviews with veteran entrepreneurs reveal difficulty accessing capital, challenges building credit, unfamiliarity with the financial and regulatory landscape of establishing and operating a business, and a lack of professional networks or mentors who could provide advice on navigating these barriers (Boldon et al., 2017; Sankaran & Battisto, 2018). Although opening and maintaining a small business can be challenging for all

[1] The rate of new entrepreneurs is a measurement of the percentage of non-business-owning adults who start a business each month (Fairlie et al., 2019).

entrepreneurs, this research suggests veteran entrepreneurs may encounter a unique set of barriers.

While entrepreneurship is generally declining among all young people, recent research has shown some post-9/11 veterans may be even less likely to be entrepreneurs than their nonveteran peers. Only 3 percent of veterans aged 35 or younger are entrepreneurs compared with 16 percent of nonveterans in this age range (Boldon & Maury, 2017). Little is known about the specific traits and characteristics of post-9/11 veteran entrepreneurs, including how they compare with their nonveteran and veteran peers and what barriers they may face in pursing entrepreneurship. This research focuses on a particular group of post-9/11 veterans, namely, millennials[2] born between 1981 and 1996 (Dimock, 2019). Millennial veterans are currently in the early to midstages of their working years, and they represent the largest group of veterans whose military service has occurred entirely in the post-9/11 era. As Vietnam veterans age out of the workforce, millennial veterans will become the next generation of veteran entrepreneurs.

[2] Millennial post-9/11 veterans are referred to in this paper as "millennial veterans."

Section 2. Literature Review

With little to no direct research on post-9/11 veteran entrepreneurs or millennial veteran entrepreneurs, this review uses literature on veteran entrepreneurs and millennial entrepreneurs to build understanding of entrepreneurship trends in both populations. Following is a discussion of common barriers to entrepreneurship in general and specific barriers to veteran entrepreneurship and millennial entrepreneurship.

A. Veteran Entrepreneurs

Since the Vietnam War, the military has relied on a smaller, all-volunteer force: 8.7 million individuals served in the Vietnam era, compared with 2.3 million who fought in Desert Shield and Desert Storm, and 2.7 million have served in support of the wars in Iraq and Afghanistan in the post-9/11 era (VA [U.S. Department of Veterans Affairs], 2017a; Wenger et al., 2018). Over the next 30 years the population of veterans is expected to decline by 8.8 million, so the overall number of veteran entrepreneurs is also expected to decrease (VA, 2019). Declines in veteran entrepreneurship may be influenced by a continued reduction of the veteran population. With a growing number of Vietnam veterans aging out of the workforce, veteran entrepreneurship is at a crossroads.

Much of the current research on veteran entrepreneurship focuses on sociodemographic characteristics associated with veteran entrepreneurship. Additional studies have noted specific variables related to military service, including length of service, era of service, and health- and well-being-related measures that affect veteran entrepreneurship. This review of the literature on veteran entrepreneurship covers veterans of all service eras, including post-9/11 veterans.

1. Veteran entrepreneurs are more likely to be older and to have served in the Vietnam era

Notably, studies have consistently found that veterans have a higher rate of entrepreneurship at older ages when compared with their nonveteran peers. More than 70 percent of veteran entrepreneurs are aged 56 or older compared with only 33 percent of nonveteran entrepreneurs. Conversely, at younger ages, veterans are less likely to be entrepreneurs when compared with their nonveteran peers: 16 percent of nonveteran entrepreneurs are under age 35 compared with only 3 percent of veteran entrepreneurs (Boldon & Maury, 2017). Low rates of entrepreneurship among young veterans may reflect a lack of time in civilian life outside the military. In line with this age disparity, Vietnam-era veterans, who served in the mid-1960s to mid-1970s, have the highest rates of entrepreneurship. Iraq and Afghanistan veterans, who served after September 2001, have the lowest rates of entrepreneurship (Heinz et al., 2017; Hope & Mackin, 2011).

2. The overwhelming majority of veteran entrepreneurs are men, but women veteran entrepreneurs are a growing population

While most veteran entrepreneurs are men, women veterans show promising signs of more rapid growth in becoming entrepreneurs. Of veteran-owned businesses, 84 percent are owned by a man, 15 percent are owned by a woman, and fewer than 1 percent are owned equally by a man and a woman (Dilger & Lowry, 2019). Comparatively, women make up 9 percent of the total veteran population, a proportion anticipated to continue rising to nearly 16 percent by 2040 (VA, 2017b). Even more striking is the rate at which women who are veterans are starting their own businesses when compared with their nonveteran counterparts. Between 2007 and 2012, the number of women veteran-owned businesses increased by 295 percent compared with an increase of only 23 percent for women who are nonveterans (Rowen, 2017). The continued

disproportionate representation of men in the military will equate to a substantial difference in the number of male and female veteran entrepreneurs even as the overall population of female veterans rises.

3. Most veteran entrepreneurs are White, but there is some racial diversity

Although most veteran entrepreneurs are White, there are indications certain groups of minority veterans may be more likely to own their own business when compared with nonveterans. Nearly 30 percent of small businesses in America are owned by racial or ethnic minorities. However, only 15 percent of veteran entrepreneurs are racial and ethnic minorities (SBA, 2018; Sobota, 2017). Around 85 percent of veteran entrepreneurs are White, compared with 11 percent African American, 2 percent Asian, 1 percent American Indian or Alaska Indian, and less than 1 percent Native Hawaiian or Pacific Islander. Seven percent of veteran entrepreneurs are Hispanic (Sobota, 2017). In comparison, racial and ethnic minorities represent 23 percent of the veteran population overall (VA, 2016).

4. Veteran entrepreneurs have experienced varying lengths of military service and are more likely to use VA healthcare

In general, veterans with fewer than 4 years of service are most likely to be entrepreneurs. The longer individuals serve in the military, the less likely they are to become entrepreneurs (Hope & Mackin, 2011; Heinz et al., 2017). However, this trend holds true only for veterans who have served for fewer than 20 years in the military. Among career veteran retirees (those who have served more than 20 years), rates of entrepreneurship increase with length of service. Additional financial support of a military pension may provide greater fiscal resources for retired service members to pursue entrepreneurship (Hope & Mackin, 2011). Veteran entrepreneurs are more likely than other veterans to use the VA as their primary healthcare provider (Heinz et al., 2017).

Lastly, despite specific small business designations for service-disabled veteran-owned small businesses, veterans with a service-connected disability are less likely than other veterans to be entrepreneurs (Haynes, 2015).

5. Research draws mixed conclusions: veteran households' income, net worth, and education

Research on veteran entrepreneurs' household income and wealth is sparse. In a recent study, Haynes (2015) found no statistically significant differences in the household income and net worth of veteran versus nonveteran entrepreneurs. When expanding the scope beyond veteran entrepreneurs to all veteran households, research reveals mixed results on differences between veteran and nonveteran households. A consistent finding across nearly three decades has been that veteran households have higher median incomes than comparable nonveteran households. In 2017, veteran households (aged 25 to 54) had a median annual income of $88,700 compared with $76,100 of nonveteran households (Bennett, 2019). However, other studies have found veteran and nonveteran household incomes to be similar when controlling for relevant household characteristics (Haynes, 2015). In a comparison of income between post-9/11 veterans and comparable nonveterans, Tennant (2012) found no significant differences in income or disability-related income. However, Iraq and Afghanistan veterans are less likely to be in poverty than comparable nonveterans.

While there is a dearth of research on educational attainment of veteran entrepreneurs, some findings show veteran entrepreneurs may have higher levels of education than other veterans. Controlling for other sociodemographic measures, veteran entrepreneurs are more likely than nonentrepreneur veterans to have at least some college education (Heinz et al., 2017). When compared with nonveteran entrepreneurs, veteran entrepreneurs are less likely to have a

bachelor's degree. However, veteran entrepreneurs are more likely to have a graduate degree; over 20 percent of veteran entrepreneurs report having a master's degree or higher (Sobota, 2017).

B. Millennial Entrepreneurs

Veterans are not the only group experiencing a decline in entrepreneurship. Millennial entrepreneurship rates are falling below those of previous generations. Thirty-five percent of all startups were created by those between the ages of 20 to 30 in 1996. However, by 2014, when millennials had moved into that age range, the number had dropped to 18 percent, indicating a decline in entrepreneurship among the millennial generation (Struckell, 2019). Similarly, the Small Business Administration (SBA) Office of Advocacy has found the percentage of business owners younger than 30 has fallen 65 percent, from 8 percent of Generation X in 1980 to just 2 percent of millennials in 2014 (Wilmoth, 2016; Struckell, 2019). Preliminary research suggests increasing debt loads combined with lower credit scores are contributing factors to millennials taking fewer financial risks, including entrepreneurship and business ownership (Durante & Chen, 2019; Lettieri, 2016; Struckell, 2019).

C. General Barriers to Entrepreneurship

Acquiring capital to start and run a small business is one of the greatest barriers to entrepreneurship (Boldon & Maury, 2017; Hwang et al., 2019). The source of financial capital to start a business can include personal or family savings, personal or business credit cards, traditional loans or microloans,[3] business grants, angel investors,[4] and grants from government

[3] Microloans are issued by individuals rather than banks or credit unions.
[4] An angel investor is an affluent individual who provides capital for a business startup, usually in exchange for convertible debt (equity at a later date) or ownership equity.

agencies (Library of Congress for National Women's Business Council, 2018). More than three-quarters of entrepreneurs do not have access to venture capital or traditional loans from banking institutions to start their businesses. As a result, most entrepreneurs depend on their personal savings or savings from their families. Some use personal credit cards to provide startup capital (Hwang et al., 2019). In recent years, entrepreneurs have increasingly turned to crowdfunding or peer-to-peer lending, which allows individuals to make small investments online through social media channels (Hwang et al., 2019).

1. Access to capital and geographic barriers

While lack of access to financial capital is considered the greatest barrier to entrepreneurship, geographic barriers intensify insufficient access because individuals residing in rural areas are less likely to acquire financial capital. Research has shown online crowdfunding platforms such as PayPal, Kiva, Kickstarter, and GoFundMe have largely filled the gap for funding of small- and medium-sized enterprises left by the significant and unprecedented decline in rural community banks following the 2007 financial crisis (Ahmed et al., 2016; Lettieri, 2016). Research also indicates specific regions are more likely to receive financial capital than others. For example, when controlling for the business age, industry, ownership status, and funding year, new businesses in Silicon Valley receive capital faster and are more likely to receive multiple rounds of financing than startups in other areas (Furchtgott-Roth, 2008). Between 2010 and 2014, more than half of all new businesses were formed in just five metro areas: Los Angeles, Houston, Dallas, New York City, and Miami. Researchers have suggested investors may eschew middle America because they would rather invest in businesses and entrepreneurs who are closer to them geographically (Hwang et al., 2019).

2. Access to capital and entrepreneurs who are racial and ethnic minorities

The landscape of entrepreneurship, including entry, startup success, and business survival rates, has been shaped by differences in access to capital across racial and ethnic groups. When securing initial funding, research has demonstrated that firms owned by minorities are disproportionately denied access to financial capital. Using the Kauffman Firm Survey, a longitudinal survey of nearly 5,000 new businesses in the United States, one research team found credit scores explained a substantial portion of the disparity in funding between White-owned and Black-owned businesses (Fairlie et al., 2016). Yet even when controlling for credit scores and personal wealth, researchers find Latino and Black entrepreneurs are less likely to apply for loans, less likely to leverage their home equity line to secure startup capital (Cole, 2014; Fairlie, 2018), and roughly three times more likely to report "they did not apply for credit when needed for fear of having their loan application denied" than their White peers (Fairlie et al., 2016, p. 3). Research from the Survey of Small Business Finances and the U.S. Census Bureau demonstrates that even when controlling for variables affecting creditworthiness, loans for racial and ethnic minority owned businesses are statistically smaller and have higher interest rates than those disbursed to White-owned businesses (Fairlie, 2018). As a result, White-owned businesses start with nearly three times more financial capital than Black-owned businesses (Hwang et al., 2019) and have higher levels of funding from all major sources (Fairlie et al., 2016).

3. Access to capital for female entrepreneurs

While the rate of entry into entrepreneurship for women has increased over the past two decades, women are still significantly less likely than men to start a business (Hwang et al., 2019). Women tend to fund nascent businesses with less capital than their male counterparts (Hwang et al., 2019; Library of Congress for National Women's Business Council, 2018; Coleman & Robb,

2009). Like Black and Latino entrepreneurs, female entrepreneurs are less likely to apply for a loan because of fear of rejection (Hwang et al., 2019; Library of Congress for National Women's Business Council, 2018). Research has shown women are less likely than their male counterparts to receive business loans from traditional banks, including one study that found "men were 60 percent more likely to secure funding than women when pitching the same business" (Hwang et al., 2019, p. 10). Other issues related to funding may present barriers for female entrepreneurs. When women-owned firms are offered loans, they are associated with higher interest rates and require women to put up more collateral than those disbursed to firms owned by men (Hwang et al., 2019). Female entrepreneurs depend more on personal resources, including personal and family savings and credit cards, and less on financing from traditional banks or commercial lending institutions when compared to male entrepreneurs (Hwang et al., 2019; Coleman & Robb, 2009).

D. Barriers to Veteran Entrepreneurship

Though all entrepreneurs can encounter challenges in opening and maintaining a small business, some recent evidence suggests veteran entrepreneurs may deal with a unique set of barriers. These recent studies identify four particular barriers for veteran entrepreneurs: (1) limited access to capital, (2) unfamiliarity with the financial landscape of establishing and operating a business, (3) regulatory barriers, and (4) a lack of professional networks and mentors (Boldon & Maury, 2017; Sankaran & Battisto, 2018).

1. Veterans experience difficulty accessing capital

Acquiring capital to fund nascent businesses is one of the greatest challenges entrepreneurs face. For example, current research indicates it may be more difficult for veterans to receive funding from major credit sources (Boldon & Maury, 2017). Veteran-owned businesses see lower

approval rates across the top three sources of credit—large banks, small banks, and online lenders—despite submitting applications for loans, lines of credit, and cash advances more frequently than nonveteran-owned businesses. Likewise, 60 percent of veteran-owned businesses report financing shortfalls compared with only 52 percent of nonveteran-owned businesses (Sankaran & Battisto, 2018). This disparity may be further exacerbated by discrepancies in the loan amounts nonveterans and veterans receive. During the post-recession economic recovery in 2010–2017, SBA guaranteed loans increased 82 percent for nonveteran borrowers but only 48 percent for veteran borrowers (Sankaran & Battisto, 2018). These findings illustrate systemic differences in access to funding between veteran-owned and nonveteran-owned businesses and demonstrate how access to capital may be a barrier for veteran entrepreneurs.

2. Veterans may be less familiar with the business financial landscape

Research has also suggested a lack of familiarity with or awareness of the variety of funding opportunities bars some veterans from entrepreneurship. Many veteran entrepreneurs are unaware of available resources to help them start their businesses, including resources that specifically target veteran entrepreneurs (Boldon & Maury, 2017; Shaheen & Myhill, 2009). For example, interviews with personnel at the SBA's Office of Veteran Business Development indicated many veteran entrepreneurs did not seek financial assistance until they had already tried and failed to obtain business funding (Sankaran & Battisto, 2018). This may especially be true for veterans with disabilities, who may be unaware they qualify for specific benefits or have concerns their VA benefits will be affected (Tihic, 2019). Veterans also reported a lack of understanding of loan eligibility requirements, recounting they did not apply for grants despite needing capital because the forms were overly complicated or the amount of work required outweighed the

potential capital (Boldon & Maury, 2017). Whereas some veterans have difficulty accessing capital, others have reported the predatory financial atmosphere can make accessing capital too easy, leading to poor financial decisions.

3. Complex regulatory barriers to entrepreneurship

Even when veterans receive funding, they report difficulty sustaining capital because of government regulations that can restrict the growth of small businesses. During interviews, veteran entrepreneurs reported their businesses could not reach their growth potential as quickly, stunted by complex rules and regulations (Boldon & Maury, 2017). For example, licensing and permitting regulations are the source of confusion, frustration, and potential loss of earnings for new veteran business owners (Steinberg, 2014). Such reports suggest simplifying and streamlining the regulatory processes involved in starting and growing businesses would mitigate some of the barriers veterans face when considering entrepreneurship.

4. Lack of relevant network or mentors for entrepreneurship

Previous research has demonstrated entrepreneurs with strong social capital, demonstrated through professional networks and mentorships, tend to outperform those with weak or underused social capital (Bauernschuster et al., 2010). Veterans cited difficulty establishing professional networks or finding advisors and mentors when pursuing entrepreneurship because 50 percent of veterans move to an area other than their hometown after completing their military service (Boldon & Maury, 2017). These moves may create disruptions in social networks that present a barrier to entrepreneurship (Blue Star Families, 2014). Veterans with PTSD, depression, or anxiety may avoid social contact, limiting their integration into the community (Resnik et al., 2012). Veterans who lack a strong network of local community connections may rely more on a

disparate cross-national network, which may not be immediately useful when starting their business.

5. Additional research is needed on barriers to veteran entrepreneurship

To date, little is known about barriers to veteran entrepreneurship, especially for those with disabilities, women, and racial minorities. Only two sources, the interviews conducted by the Institute for Veteran and Military Families at Syracuse University and data from the Federal Reserve Bank's Small Business Credit Surveys, explicitly discuss obstacles veteran entrepreneurs face (Boldon & Maury, 2017; Sankaran & Battisto, 2018). Sankaran and Battisto (2018) posit that because of the high level of geographic mobility for service members, veterans may have accumulated fewer financial assets; have less robust credit score histories; or lack local professional networks they can rely on for advice, counsel, or initial seed funding. Current research on barriers to veteran entrepreneurship is limited, and more is needed to identify and explain casual factors in this area.

E. Barriers to Millennial Entrepreneurship

Millennials, those born between 1981 and 1996, have the lowest entrepreneurship rates in history (Dimock, 2019; Struckell, 2019). While some researchers have identified contributing factors such as significant debt and credit issues and low financial literacy, much is still unknown. Some have pointed to specific characteristics of the millennial generation, including risk aversion, which counter the characteristics most frequently associated with successful entrepreneurs. Coming of age during the 2007 financial crisis and subsequent 2008 recession, millennials are a particularly risk-averse generation, opting for savings accounts over stocks and side jobs over entrepreneurship (Durante & Chen, 2019; Struckell, 2019; Lettieri, 2016). More than half of

millennials surveyed, especially Black and Hispanic millennials, reported an interest in starting a business, suggesting external factors may be affecting the low rate of millennial entrepreneurs rather than intrinsic motivation for entrepreneurship (Steinberg, 2014).

1. Millennials have more significant debt and credit issues than previous generations

Research has shown the dramatic decline in millennial business creation stems in part from startlingly high rates of debt among millennials. For example, researchers have found significant negative correlations between increases in student loan debt and net business formation (Ambrose et al., 2015). Millennials are weighed down by $1.7 trillion in student debt, with an average debt of $37,000 per student (Struckell, 2019). The average balance held by students has increased by more than 77 percent since the early 2000s, and the number of students taking out loans has also increased more than 89 percent (Lettieri, 2016). High student loan payments make it difficult for many entrepreneurs to invest capital in their new businesses because available cash is spent on student loan payments first (Steinberg, 2014). High debt-to-income ratios also make it difficult for entrepreneurs to take out additional loans. As a result, when asked, millennials "consistently cited student debt as one of the biggest hurdles to starting a business" (Steinberg, 2014, p. 3).

An analysis of 2018 credit card debt found millennials were saddled with an average of $5,231 each in credit card debt, adding to a total average debt of $80,666 per person (Stolba, 2019). High debt-to-income ratios create a perpetual cycle in which an individual is unable to secure capital to launch entrepreneurial ventures or build equity for future loans (Steinberg, 2014). As a result, significant debt loads decrease credit scores; limit access to capital; and are associated with delayed marriage, homeownership, and risk aversion (Struckell, 2019; Lettieri, 2016).

2. Millennials have lower financial literacy than previous generations

Research demonstrates financial literacy increases the probability of being an entrepreneur and improves performance of one's business (Klapper et al., 2015). Because millennials have low levels of financial literacy, this may be a contributing factor. Research from the FINRA Investor Education Foundation's National Financial Capability Study (State-by-State Survey) found millennials displayed a lack of familiarity with the financial landscape and engaged in risky financial habits (Mottola, 2014). Despite low levels of financial literacy, nearly 70 percent of millennial respondents believe they have a high level of financial knowledge (Scheresberg & Lusardi, 2014). Similarly, while many engage in problematic or risky financial behaviors and carry a significant amount of debt, 74 percent of millennial respondents indicate they are good at managing daily financial tasks, including tracking their expenses, dealing with checking accounts, and managing their credit and debit cards (Scheresberg & Lusardi, 2014).

F. Summary of Literature Review

Research on veteran entrepreneurship primarily focuses on the sociodemographic characteristics of veterans who become entrepreneurs. Veteran entrepreneurs largely resemble the broader population of veterans they come from. Most veteran entrepreneurs are older, White, and male; they served in the Vietnam era; and are more likely to have obtained some college education; and more likely to use VA benefits such as healthcare. However, as the veteran population diversifies and broadly shrinks over time, veteran entrepreneurship will likely see increasing representation from women and racial and ethnic minorities. Literature on millennial entrepreneurs shows this generation is also experiencing a decline in entrepreneurship.

Comprehensive research is needed to understand why, but economic conditions and changing financial circumstances for young people, such as increased debt loads, may provide clues.

Access to capital is a significant barrier to entrepreneurship, and unequal access to capital reveals the ways inequality shapes the landscape of those who become entrepreneurs. Research demonstrates women and racial and ethnic minorities may face greater barriers in pursuit of entrepreneurship, specifically with accessing capital. While emerging social media trends, such as crowdfunding, may present new opportunities for entrepreneurs, challenges remain. Current research on barriers to veteran entrepreneurship is limited, and more is needed to identify and explain casual factors in this area. Research on millennial entrepreneurs is also limited but points to economic circumstances, such as credit and debt issues and poor financial literacy, as challenges to pursuing entrepreneurship.

Section 3. Research Questions

While research points to some barriers to entrepreneurship for veteran entrepreneurs and millennial entrepreneurs, almost nothing is known about millennial veteran entrepreneurs. This paper represents the first analysis of millennial veteran entrepreneurs, capturing who they are and examining what barriers they may face as they pursue entrepreneurship. Several research questions motivate the analysis:

1. Are millennial veterans more likely to be entrepreneurs than their nonveteran millennial peers?

2. How do millennial veteran entrepreneurs differ from their nonveteran millennial entrepreneur peers? What are the sociodemographic differences between millennial veteran entrepreneurs and their nonveteran millennial peers who are entrepreneurs?

3. How do millennial veteran entrepreneurs differ from other employed millennial veterans? What are the sociodemographic differences between millennial veteran entrepreneurs and millennial veterans who are employed but not entrepreneurs?

4. How do millennial veteran entrepreneurs differ from veterans of previous generations? What are the sociodemographic differences between millennial veteran entrepreneurs and veteran entrepreneurs from previous generations?

5. Based on these findings, are there potential barriers to entrepreneurship for millennial veterans?

Section 4. Data

This study uses data from the 2014–2018 American Community Survey (ACS), an annual survey of approximately 3.5 million households conducted by the U.S. Census Bureau. ACS gathers data on topics such as employment, educational attainment, income, disability, and veteran status. The 5-year Public Use Microdata Sample combines 5 years of annual surveys, drawing from approximately 5 percent of the U.S. population.

ACS is one of the few publicly available datasets that measures veteran status and provides a veteran sample large enough to explore subgroups of veterans (e.g., post-9/11 veterans, women veterans). In addition to the large veteran sample, ACS provides up-to-date data critical for examination of millennial veterans and nonveteran entrepreneurs. Data from the Department of Defense estimated post-9/11 veterans represent 17 percent of the overall living veteran population in the United States (VA, 2017a).

While the ACS was selected for the strength of its large sample, its limitation is the lack of detailed information on veterans' military service. ACS asks respondents if they have ever served on active duty in the U.S. Armed Forces, Reserves, or National Guard. If yes, respondents are asked to select all eras in which they served, responding to predetermined time- and/or war-cohort-based- options.[5] ACS does not collect any information about respondents' experiences during military service, their length of military service, or their year of exit from the military. Another limitation of the ACS data is that military service and veteran status are self-reported.

[5] Respondents are encouraged to check all that apply, even if service occurred in only part of the period: September 2001 or later, August 1990 to August 2001 (including the Persian Gulf War), May 1975 to July 1990, Vietnam era (August 1964 to April 1975), February 1955 to July 1964, Korean War (July 1950 to January 1955), January 1947 to June 1950, World War II (December 1941 to December 1946), November 1941 or earlier.

Respondents' claims of active-duty military service are not substantiated or compared with military administrative records, such as the discharge document Form DD 214. All surveys outside of official Department of Defense and Department of Veteran Affairs data also encounter similar challenges of self-reported military service.

In addition to the ACS data, the U.S. Department of Agriculture Economic Research Service's urban-rural continuum rating is used for each Public Use Microdata Area (PUMA). This continuum assigns county Federal Information Processing Standard (FIPS) codes to one of nine levels based on population and proximity to a metro area. The research team linked each ACS PUMA to a county FIPS code using a crosswalk created by the U.S. Census Bureau.

The research team explored using other publicly available datasets for analysis, such as the Current Population Survey (CPS), also produced by the U.S. Census Bureau. The CPS has a rotating supplemental survey on veterans with more detailed questions about their military service, but the sample size of veteran entrepreneurs is too small for analysis of post-9/11 veterans, and more specifically millennial veteran entrepreneurs.

A. Sample Population

1. Millennial Veterans

The population of interest for this study is millennial veteran entrepreneurs. Almost all millennial veteran entrepreneurs—over 96 percent—served in the post-9/11 era. When operationalizing the definition of veteran for this study, the research team first excluded anyone currently on active duty because veteran is defined here as someone who previously served in the military. The sample of veterans is limited to individuals who previously served on active duty in

some capacity because respondents are prompted to report only their service era if they served on active duty outside National Guard or Reserve training activations.

The research team chose to narrow the sample to millennial veterans to ensure the analysis compares veteran and nonveteran respondents at reasonably similar career stages who may face comparable barriers to entrepreneurship and likely served most of their military service in the post-9/11 era. Post-9/11 veterans from other generations, except Generation Z, [6] are represented in the sample in the "older generations of veteran entrepreneurs" analysis group.[7] While focusing on millennial veterans restricts the scope to a subset of post-9/11 veterans, this classification facilitates an in-depth examination of these veterans and identification of a comparable group of nonveteran entrepreneurs.

2. Millennials

The working definition of millennial for this analysis follows the Pew Foundation's widely accepted classification that individuals born between 1981 and 1996 are millennials (Dimock, 2019). Respondent birth date is not available in the public-use ACS data, but age and quarter of birth are available. The research team constructed birth year for respondents by subtracting the respondent's reported age from the year in which the survey response was recorded.[8]

[6] The Pew Research Center defines Generation Z as people born from 1997 onward (Dimock, 2019).
[7] Ninety-five respondents who are millennial veteran entrepreneurs did not serve after September 11, 2001. These individuals are included in the "older generations of veteran entrepreneurs" analysis group.
[8] This does not account for whether a respondent's birthday in the survey year happens before or after they take the survey. As a result, a respondent's birth year could be misrepresented by a maximum of 1 year. Using a variable indicating the quarter in which the respondent was born, the research team subtracted 1 year from the birth year of respondents born in the second half of the year to improve the accuracy of the birth year variable. This method calculates birth year as though all respondents completed the survey on June 30 of the survey year (i.e., at the time of the survey respondents born in quarters 1 or 2 have had birthdays in the survey year, and respondents born in quarters 3 and 4 have not). The ACS is fielded throughout the year, so this is not perfectly accurate, but this adjustment to birth year misrepresents a respondent's birth year by a maximum of 6 months rather than a maximum of 1 year.

3. Entrepreneurs

ACS asks respondents to report their current and most recent job activity. For this research, entrepreneurs are defined as respondents who indicated they are self-employed in an incorporated or not-incorporated business, professional practice, or farm. Non-entrepreneurs are defined as respondents who are employees of a private company or individual, are government employees, or are working without pay in a family business or farm. Those who were unemployed or looking for work were excluded from the sample.

B. Sample Refinement

Based on the definitions above, there are 741,852 respondents in the analysis sample who share a household with at least 1 other respondent in the analysis sample. The descriptive statistics and logistic regressions were run with standard errors clustered by household to account for the lack of independence between observations. Table 1 provides detailed definitions of all sample-defining variables and unweighted sample sizes for each analysis group.

Table 1. Definitions of Analysis Groups and Sample Size

Characteristic	Millennial Entrepreneurs		Millennial Non-entrepreneurs		Older Generations of Veteran Entrepreneurs
	Veterans	Nonveteran	Veterans	Nonveteran	
Veteran status	Not currently active duty; served after 9/11, regardless of other service era(s)	Never served in military	Not currently active duty; served after 9/11, regardless of other service era(s)	Never served in military	Not currently active duty; served before or after 9/11
Birth year	1981–1996	1981–1996	1981–1996	1981–1996	Born before 1981[a]
Self-employment	Yes	Yes	No	No	Yes
Unweighted Sample Size	**2,368**	**120,811**	**61,110**	**2,259,895**	**76,587**
Weighted Sample Size	**53,064**	**2,759,647**	**1,505,678**	**54,775,219**	**1,269,927**

Notes:
[a] Veteran entrepreneurs from Generation Z (born between 1997 and 2012) were excluded from this analysis.
Source: 2014–2018 American Community Survey Public Use Microdata Area sample

C. Control Variables

In addition to the variables used to define the sample, the research team selected several control variables representing respondents' sociodemographic and household information collected by ACS. The research team selected these control variables based on a comprehensive review of the literature on veteran and millennial entrepreneurs. Sociodemographic control variables include age, sex, race, ethnicity (Hispanic), presence of disability, and highest educational attainment. Family composition control variables include marital status and number of own children. Income and wealth control variables are home ownership and income. Location and geographic mobility control variables include location, urbanicity, and geographic mobility. Veteran-specific control variables are presence of service-connected disability and use of or enrollment in VA health insurance. See table A.1 in appendix A for a summary of variables.

Disability is defined as a respondent's identification with at least one of the following difficulties: self-care difficulty, hearing difficulty, vision difficulty, independent living difficulty, ambulatory difficulty, and cognitive difficulty. Service-connected disability is a separate question directed only to veterans and asks respondents to self-report their service-connected disability rating from the VA. Therefore, it is possible for respondents to indicate a service-connected disability without a general disability. That is, a veteran may have a service-connected disability that does not cause difficulty with activities of daily living. Such veterans are present in the ACS data.

Section 5. Methodology

This section discusses the study's methodology, including descriptive statistics, tests for statistical significance, and the design of logistic regression models to test the research questions and hypotheses.

A. Descriptive Statistics

Descriptive statistics of the sample populations of interest are presented in tables 2–5. For continuous variables,[9] the research team calculated means for each analysis group. The research team performed two sample *t*-tests to compare the millennial veteran entrepreneurs with each analysis group. For categorical variables in the analysis,[10] the research team used chi-squared tests of independence to examine whether the distribution of the categorical variable was the same for millennial veteran entrepreneurs and each other analysis group.

1. Sociodemographic, Economic, and Household Characteristics

Table 2 provides the sociodemographic, economic, and household characteristics for each analysis group, including age, gender, race/ethnicity, presence of a disability, highest education level, marital status, number of children living in the household, home ownership, and personal income.

[9] Continuous variables used were age, number of respondent's own children in the household, and personal income.
[10] Categorical variables used were gender, race/ethnicity, presence of a disability, education, marital status, home ownership, respondent region, geographic mobility in past year, length of time in current house or apartment, urbanicity, presence of service-connected disability, service-connected disability rating, and use of VA health insurance.

Table 2. Descriptive Statistics of Sociodemographic, Economic, and Household Characteristics by Analysis Group

Characteristic	Millennial Entrepreneurs		Millennial Non-entrepreneurs		Older Generations of Veteran Entrepreneurs
	Veteran	Nonveteran	Veteran	Nonveteran	
Weighted sample size	**53,064**	**2,759,647**	**1,505,678**	**54,775,219**	**1,269,927**
Age (mean)	30.4	29.2*	29.1*	27.2*	64.1*
Gender (percent)					
Male	85.2	57.0^	82.3^	49.6^	95.3^
Female	14.8	43.0^	17.7^	50.4^	4.7^
Race/ethnicity (percent)					
Non-Hispanic White	70.8	61.7^	65.0^	56.9^	85.4^
Non-Hispanic Black	9.6	7.8^	12.9^	12.9^	6.7^
Hispanic	13.2	21.5^	14.7^	20.5^	4.6^
Other[a]	6.4	9.0^	7.4^	9.7^	3.3^
Presence of disability[b] (percent)	12.7	4.7^	10.9^	4.5^	22.3^
Education (percent)					
Less than high school, high school graduate, or GED	25.2	37.7^	24.6	33.0^	29.0^
Some college without degree or associate's degree	50.6	32.6^	53.2	35.4^	33.7^
Bachelor's degree	17.6	22.4^	16.7	22.9^	18.9^
Master's, professional, or doctoral degree	6.6	7.2^	5.5	8.7^	18.4^
Marital status (percent)					
Currently or previously married	65.6	50.3^	62.2^	35.7^	94.0^
Never married	34.4	49.7^	37.8^	64.3^	6.0^
Number of own children living in household (mean)	0.9	0.9	0.8*	0.7*	0.2*
Owns a home, with or without a mortgage or loan (percent)	53.7	52.1	49.3^	49.5^	84.7^
Personal income, summed for married and unmarried partners (mean dollar amount)	76,994	77,492	71,202*	72,487*	108,252*

Notes:
* Denotes statistically significant difference in means (.05 level). Comparisons made within table rows, relative to the first column.
^ Denotes statistically significant difference in distribution as determined by a chi-squared test (.05 level). Comparisons are made across all levels of the categorical variable, relative to the first column.
[a] Includes non-Hispanic respondents who selected any of the following response options for race: American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, some other race, two or more races
[b] Respondents with at least one of self-care difficulty, hearing difficulty, vision difficulty, independent living difficulty, ambulatory difficulty, and cognitive difficulty
Source: 2014–2018 American Community Survey Public Use Microdata Area sample

Millennial veteran entrepreneurs are slightly older than other employed millennial veterans and their millennial nonveteran peers. As expected because of the size of older veteran cohorts,

older generations of veteran entrepreneurs are substantially older with a mean age of 64 compared to 30 for millennial post-9/11 veteran entrepreneurs. Significant differences emerge when comparing the gender distribution of millennial veteran entrepreneurs and other analysis groups. When compared with older generations of veteran entrepreneurs, women represent a greater share of millennial veteran entrepreneurs. For example, nearly 15 percent of millennial veterans are women, while fewer than 5 percent of older generations of veteran entrepreneurs are women. However, 43 percent of nonveteran millennial entrepreneurs are women.

A similar pattern appears when comparing race and ethnicity among the analysis groups. Millennial veteran entrepreneurs are more likely to be White and generally less racially and ethnically diverse than nonveteran millennial entrepreneurs, but they are more racially and ethnically diverse than older generations of veteran entrepreneurs. A higher percentage of millennial veteran entrepreneurs are Black compared with nonveteran millennial entrepreneurs. Millennial veterans, whether entrepreneurs or not, report higher levels of disability than nonveteran analysis groups. Fifty percent of millennial veteran entrepreneurs reported some college or an associate's degree as their highest level of educational achievement compared with only one-third of nonveteran millennial entrepreneurs. Compared with millennial veteran entrepreneurs, nonveteran millennial entrepreneurs have a greater representation both of those with less education (less than high school or high school graduates) and those with more education (at least a bachelor's degree or higher).

Nearly two-thirds of millennial veteran entrepreneurs report they are currently or were previously married compared with roughly half of nonveteran millennial entrepreneurs. In general, millennial veterans, regardless of whether they are entrepreneurs, have lower rates of having

never been married. There is no statistically significant difference between millennial veteran entrepreneurs and nonveteran millennial entrepreneurs in mean number of own children living in the household. However, millennial veteran entrepreneurs do have a higher mean number of their own children living in the home than millennial veteran non-entrepreneurs and nonveteran millennial non-entrepreneurs. As would be expected given the mean age of older generations of veteran entrepreneurs, the number of own children living in the household is significantly fewer than millennial veteran entrepreneurs.

Millennial veteran entrepreneurs have a statistically significant higher rate of homeownership when compared with millennial veterans who are not entrepreneurs, but they show similar rates of home ownership as nonveteran millennial entrepreneurs. Finally, millennial entrepreneurs, regardless of veteran status, have a higher level of personal income than millennial non-entrepreneurs.

2. Location, Geographic Mobility, and Urbanicity

Table 3 provides information on the geographic location of respondents by analysis group, including measures of geographic mobility and urbanicity.

Table 3. Descriptive Statistics of Location, Geographic Mobility Measure, and Urbanicity by Analysis Group

Characteristic	Millennial Entrepreneurs		Millennial Nonentrepreneurs		Older Generations of Veteran Entrepreneurs
	Veteran	Nonveteran	Veteran	Nonveteran	
Weighted sample size	**53,064**	**2,759,647**	**1,505,678**	**54,775,219**	**1,269,927**
Region (percent)					
Northeast	11.2	15.5^	10.5	17.3^	14.1^
Midwest	19.4	18.8^	18.4	21.4^	20.2^
South	43.4	37.2^	45.5	36.7^	41.0^
West	26.0	28.5^	25.6	24.7^	24.7^

Characteristic	Millennial Entrepreneurs		Millennial Nonentrepreneurs		Older Generations of Veteran Entrepreneurs
	Veteran	Nonveteran	Veteran	Nonveteran	
Length of time in current house or apartment (percent)					
23 months or less	40.9	33.5^	46.1^	36.2^	10.9^
2 to 4 years	29.3	28.6^	27.0^	25.0^	12.1^
5 to 9 years	14.7	17.7^	11.9^	14.5^	13.9^
10 years or more	15.1	20.2^	15.0^	24.3^	63.1^
Urbanicity[a] (percent)					
Metro county	78.7	81.4^	79.1	83.0^	73.6^
Nonmetro county	21.3	18.6^	20.9	17.0^	26.4^

Notes:
^ Denotes statistically significant difference in distribution as determined by a chi-squared test (.05 level). Comparisons are made across all levels of the categorical variable, relative to the first column.
[a] As defined in 2013 U.S. Department of Agriculture Economic Resource Services urban-rural continuum
Source: 2014–2018 American Community Survey Public Use Microdata Area sample

The largest group of millennial veteran entrepreneurs reside in the South, followed by the West, the Midwest, and the Northeast. The same geographic distribution pattern occurs across all other analysis groups. Compared with millennial veteran non-entrepreneurs, a smaller percentage of millennial veteran entrepreneurs reside in the South and have greater representation in other regions.

Millennial veteran entrepreneurs have less tenure in their current house or apartment than nonveteran millennial entrepreneurs. Nearly 41 percent of millennial veteran entrepreneurs have been in their current house or apartment for 23 months or less, while only 34 percent of nonveteran millennial entrepreneurs report the same tenure length. Millennial veteran entrepreneurs may have greater geographic mobility than nonveteran millennial entrepreneurs based on the length of time at their current house or apartment. A greater percentage (21 percent) of millennial veteran entrepreneurs live in nonmetro countries than nonveteran millennial entrepreneurs (19 percent). When compared with older generations of veteran entrepreneurs, a higher percentage of millennial veteran entrepreneurs live in metro counties.

3. Veteran-Specific Variables

Table 4 presents descriptive statistics on the presence and rating of veterans' service-connected disability and enrollment or use of VA health insurance for each veteran analysis group.

Table 4. Descriptive Statistics of Service-Connected Disability and VA Health Insurance by Veteran Analysis Group

Characteristic	Millennial Veteran Entrepreneurs	Millennial Veteran Nonentrepreneurs	Older Generations of Veteran Entrepreneurs
Weighted sample size	**53,064**	**1,505,678**	**1,269,927**
Presence of service-connected disability (percent)	29.7	28.3	16.0^
Service-connected disability rating (percent)			
0 percent	3.6	4.0	6.0^
10 or 20 percent	17.4	22.0	36.7^
30 or 40 percent	18.4	19.8	18.4^
50 or 60 percent	17.6	17.4	12.7^
70 percent or higher	36.6	30.3	21.2^
Not reported	6.5	6.5	5.1^
Ever used or enrolled in VA health insurance (percent)	40.5	33.3^	33.6^

Notes:
^ Denotes statistically significant difference in distribution as determined by a chi-squared test (.05 level). Comparisons are made across all levels of the categorical variable, relative to the first column.
Source: 2014–2018 American Community Survey Public Use Microdata Area sample

Of all veteran analysis groups, millennial veteran entrepreneurs are most likely to report a service-connected disability. For example, nearly 30 percent of millennial veterans have a service-connected disability compared with 28 percent of millennial veteran non-entrepreneurs and only 16 percent of veteran entrepreneurs from older generations. Over one-third of millennial veteran entrepreneurs with a service-connected disability report their rating as 70 percent or higher, which is a greater proportion than millennial veteran non-entrepreneurs or veteran entrepreneurs of older generations. Forty-one percent of millennial veteran entrepreneurs report they have used or enrolled in VA health insurance, compared with only 33 percent of millennial veteran non-entrepreneurs and 34 percent of veteran entrepreneurs of older generations.

4. Veteran Status and Entrepreneurship

An examination of millennial veterans, millennial nonveterans, and veterans of older generations by entrepreneurship status demonstrates a lower percentage of millennial veterans are entrepreneurs. Fewer than 4 percent of millennial veterans are entrepreneurs compared with roughly 5 percent of millennial nonveterans and 13 percent of veterans of older generations. Table 5 presents the cross-tabulation results.

Table 5. Veteran Status and Entrepreneurship Status Among Millennials

Characteristic	Millennial Veterans (Percent)	Millennial Nonveterans (Percent)	Veterans of Older Generations (Percent)
Non-entrepreneurs	96.6	95.2^	86.8^
Entrepreneurs	3.4	4.8^	13.2^
Total	100.0	100.0	100.0

Notes:
^ Denotes statistically significant difference in distribution as determined by a chi-squared test (.05 level). Comparisons are made across all levels of the categorical variable, relative to the first column.
Source: 2014–2018 American Community Survey Public Use Microdata Area sample

B. Logistic Regression Methodology

The analyses presented so far considered each variable of interest by analysis group. To combine information from these variables, the research team estimated logistic regressions (for additional information on the logistic regression methodology, see appendix C). The regression calculated an average marginal effect for each independent variable. From this marginal effect, the team determined, for example, how the probability of entrepreneurship differed for males versus females, holding all other independent variables constant. The team compared marginal effects for different variables to determine which variables were most predictive of the regression outcome. As with descriptive statistics, a household identifier was used as a clustering variable to

account for the lack of independence when multiple members of the same household were included in the analysis.

The analysis was composed of four logistic regression models to address the research questions and test the hypotheses. The first logistic regression model helped determine whether millennial veterans were more likely to be entrepreneurs than their nonveteran millennial peers. In the first logistic regression model, the outcome variable was self-employment among millennials, with sociodemographic variables, veteran status, and other household information used as control variables.

The research team compared average marginal effects for different variables to determine which variables were most predictive of millennial entrepreneurship. Based on this regression, the team assessed whether, controlling for demographic and other variables, veterans were more or less likely to be entrepreneurs when compared with their nonveteran peers.

Three additional logistic regression models compared millennial veteran entrepreneurs with (a) nonveteran millennial entrepreneurs, (b) employed millennial veterans who are not entrepreneurs, and (c) older generations of veteran entrepreneurs. In logistic models that compared veterans to veterans, additional relevant independent variables presence of service-connected disability and use of VA health insurance were added to the models. For continuous variables, the average marginal effects in the findings section represent the change in the probability of the outcome for a one-unit increase. Income was rescaled, so the average marginal effect represents the change in the probability of the outcome associated with a $10,000 increase in income.

For categorical variables, the average marginal effects represent the change in the probability of the outcome when moving from the reference category to another level of the categorical variable. That is, the average marginal effect listed for non-Hispanic Blacks represents the difference in probability of the outcome between non-Hispanic Blacks and the reference category, non-Hispanic Whites, when all other control variables are held constant. Likewise, the average marginal effect listed for Hispanics represents the difference in probability of the outcome between Hispanics and non-Hispanic Whites, holding all other control variables constant.

Multiplying the average marginal effect by 100 provides the average percentage point increase or decrease in the outcome variable associated with each control variable. The following categories are used as reference groups, with coefficients displayed for nonreference groups in the tables showing logistic regression results: nonveteran, male, non-Hispanic White, absence of a disability, less than college education, never married, not owning a home, living in the South, living in current house or apartment fewer than 2 years, and living in a metro county. For regressions that involve only veterans, additional categorical reference groups are absence of a service-connected disability and never using VA health insurance.

In addition to average marginal effects for each independent variable, the proportion of respondents with the modeled outcome was included. To assess model fit, McFadden's pseudo R^2 was presented for each model. This generalized the R^2 typically calculated for a linear regression and ranged between 0 and 1; higher values indicated better model fit. The number of respondents used in each logistic regression (i.e., sample size) was also included.

Section 6. Findings

Findings from each logistic regression model appear below, organized by research question.

A. Research Question 1: Are millennial veterans more likely to be entrepreneurs than their nonveteran millennial peers?

Results from a multivariate logistic regression of entrepreneurship for millennials appear in Table 6. The logistic regression estimated the likelihood of being an entrepreneur for millennials, controlling for veteran status, age, gender, race/ethnicity, presence of a disability, education, marital status, number of children in the household, home ownership, personal income, region, geographic mobility, and urbanicity.

Table 6. Average Marginal Effect Estimates for Regression Predicting Millennial Entrepreneurship

Control Variable	Average Marginal Effect	Standard Error
Veteran status		
Nonveteran	-	-
Veteran	-0.0229***	0.0007
Age	0.0038***	0.0000
Gender		
Male	-	-
Female	-0.0126***	0.0003
Race/ethnicity		
Non-Hispanic White	-	-
Non-Hispanic Black	-0.0219***	0.0005
Hispanic	-0.0077***	0.0005
Other [a]	-0.0072***	0.0006
Presence of a disability		
No	-	-
Yes [b]	0.0009	0.0008
Education		
Less than high school, high school graduate, or GED	-	-
Some college without degree or associate's degree	-0.0082***	0.0005
Bachelor's degree	-0.0124***	0.0005
Master's, professional, or doctoral degree	-0.0249***	0.0006

Control Variable	Average Marginal Effect	Standard Error
Marital status		
Never married	-	-
Currently or previously married	0.0082***	0.0004
Number of own children living in household	0.0030***	0.0002
Home ownership		
Does not own a home	-	-
Owns a home, with or without a mortgage or loan	0.0004	0.0004
Personal income, summed for married and unmarried partners (increments of 10 thousand dollars)	0.0002***	0.0000
Region		
South	-	-
Northeast	-0.0049***	0.0005
Midwest	-0.0079***	0.0005
West	0.0045***	0.0005
Length of time in current house or apartment		
23 months or less	-	-
2 to 4 years	0.0027***	0.0005
5 to 9 years	0.0032***	0.0006
10 years or more	-0.0022***	0.0005
Urbanicity		
Metro county	-	-
Nonmetro county	0.0009*	0.0005
Unweighted sample mean	5.04	
Weighted sample mean	4.76	
R-squared	0.0352	
Sample size (*n*)	2,444,184	

Notes:
Marginal effects statistically significantly different from 0 are denoted by * ($p < .05$), ** ($p < .01$), and *** ($p < .001$).
- Indicates the effect was not calculated because the level of the categorical variable was the reference category. The other covariates in the category were estimated in reference to the omitted variable.
[a] Includes non-Hispanic respondents who selected any of the following response options for race: American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, some other race, two or more races
[b] Respondents with at least one of self-care difficulty, hearing difficulty, vision difficulty, independent living difficulty, ambulatory difficulty, and cognitive difficulty.
Unweighted and weighted sample means are the average percentage of millennial self-employed respondents.
R-squared is the pseudo *r*-squared statistic from the logistic regression model.
Multiplying the average marginal effect by 100 provides the average percentage point increase or decrease in the outcome variable associated with each control variable.
Source: 2014–2018 American Community Survey Public Use Microdata Area sample

Holding all other variables constant, there were statistically significant differences in the propensity toward entrepreneurship for millennial veterans and nonveterans. Compared with millennial nonveterans, millennial veterans are an average of 2.3 percentage points less likely to be entrepreneurs.

The following groups are statistically significantly less likely to be entrepreneurs after controlling for veteran status: females, racial and ethnic minorities, those with education beyond a high school degree, and those who have never been married. Compared with millennials living in the South, millennials living in the West are an average of 0.5 percentage points more likely to be entrepreneurs. Millennials living in nonmetro county areas are more likely to be entrepreneurs.

B. Research Question 2: How do millennial veteran entrepreneurs differ from their nonveteran millennial entrepreneur peers?

Results from a multivariate logistic regression of veteran status among millennial entrepreneurs appear in Table 7. The logistic regression estimated the likelihood of a millennial entrepreneur respondent being a veteran when controlling for age, gender, race/ethnicity, presence of a disability, education, marital status, number of children in the household, home ownership, personal income, region, geographic mobility, and urbanicity. Based on this regression, the study team assessed which demographic characteristics were most closely related to veteran status for millennial entrepreneurs.

Table 7. Average Marginal Effect Estimates for Regression Predicting Veteran Status Among Millennial Entrepreneurs

Control Variable	Average Marginal Effect	Standard Error
Age	0.0010***	0.0001
Gender		
Male	-	-
Female	-0.0238***	0.0009
Race/ethnicity		
Non-Hispanic White	-	-
Non-Hispanic Black	0.0015	0.0022
Hispanic	-0.0090***	0.0012
Other [a]	-0.0069***	0.0015
Presence of a disability		
No	-	-
Yes [b]	0.0340***	0.0035
Education		
Less than high school, high school graduate, or GED	-	-
Some college without degree or associate's degree	0.0177***	0.0013
Bachelor's degree	0.0030*	0.0012
Master's, professional, or doctoral degree	0.0048*	0.0019
Marital status		
Never married	-	-
Currently or previously married	0.0116***	0.0011
Number of own children living in household	-0.0004	0.0004
Home ownership		
Does not own a home	-	-
Owns a home, with or without a mortgage or loan	0.0007	0.0011
Personal income, summed for married and unmarried partners (increments of $10,000)	-0.0001*	0.0001
Region		
South	-	-
Northeast	-0.0072***	0.0014
Midwest	-0.0047***	0.0014
West	-0.0035**	0.0013
Length of time in current house or apartment		
23 months or less	-	-
2 to 4 years	-0.0051***	0.0013
5 to 9 years	-0.0094***	0.0013
10 years or more	-0.0084***	0.0015

Control Variable	Average Marginal Effect	Standard Error
Urbanicity		
Metro county	-	-
Nonmetro county	-0.0003	0.0012
Unweighted sample mean	1.92	
Weighted sample mean	1.89	
R-squared	0.0942	
Sample size (*n*)	123,179	

Notes:
Marginal effects statistically significantly different from 0 are denoted by * ($p < .05$), ** ($p < .01$), and *** ($p < .001$).
- Indicates the effect was not calculated because the level of the categorical variable was the reference category. The other covariates in the category were estimated in reference to the omitted variable.
[a] Includes non-Hispanic respondents who selected any of the following response options for race: American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, some other race, two or more races.
[b] Respondents with at least one of self-care difficulty, hearing difficulty, vision difficulty, independent living difficulty, ambulatory difficulty, and cognitive difficulty.
Unweighted and weighted sample means are the average percentage of millennial post-9/11 veteran entrepreneur respondents.
R-squared is the pseudo *r*-squared statistic from the logistic regression model.
Multiplying the average marginal effect by 100 provides the average percentage point increase or decrease in the outcome variable associated with each control variable.
Source: 2014–2018 American Community Survey Public Use Microdata Area sample

Statistically significant findings indicate that while holding all other factors constant, millennial entrepreneurs who are female are less likely to be veterans, with a decrease of 2.3 percentage points, on average. Millennial entrepreneurs who are Hispanic are on average 0.9 percentage points less likely to be veterans than those who are non-Hispanic White. However, non-Hispanic Black entrepreneurs are just as likely as non-Hispanic White entrepreneurs to be veterans. Millennial entrepreneurs who report having a disability are more likely to be veterans (an average increase of 3.4 percentage points). Compared with millennial entrepreneurs with a high school education or less, those having completed some college or an associate's degree are more likely to be veterans (increase of 1.7 percentage points, on average). Millennial entrepreneurs who are geographically mobile, live in the South, and have been married are more likely to be veterans.

C. Research Question 3: How do millennial veteran entrepreneurs differ from other employed millennial veterans?

Results from a multivariate logistic regression of entrepreneurship among millennial veterans appear in Table 8. The logistic regression estimated the likelihood of a millennial veteran being an entrepreneur controlling for age, gender, race/ethnicity, presence of a disability, education, marital status, number of children in the household, home ownership, personal income, region, geographic mobility, urbanicity, presence of a service-connected disability, and use of VA health insurance.

Table 8. Average Marginal Effect Estimates for Regression Predicting Entrepreneurship Among Millennial Veterans

Control Variable	Average Marginal Effect	Standard Error
Age	0.0028***	0.0003
Gender		
Male	-	-
Female	-0.0047*	0.0022
Race/ethnicity		
Non-Hispanic White	-	-
Non-Hispanic Black	-0.0099***	0.0027
Hispanic	-0.0060*	0.0024
Other [a]	-0.0069*	0.0031
Presence of a disability		
No	-	-
Yes [b]	0.0037	0.0029
Education		
Less than high school, high school graduate, or GED	-	-
Some college without degree or associate's degree	-0.0051*	0.0024
Bachelor's degree	-0.0062*	0.0030
Master's, professional, or doctoral degree	-0.0048	0.0041
Marital status		
Never married	-	-
Currently or previously married	-0.0026	0.0021
Number of own children living in household	0.0025**	0.0008
Home ownership		
Does not own a home	-	-
Owns a home, with or without a mortgage or loan	-0.0010	0.0021

Control Variable	Average Marginal Effect	Standard Error
Personal income, summed for married and unmarried partners (increments of $10,000)	0.0002	0.0002
Region		
South	-	-
Northeast	0.0004	0.0030
Midwest	0.0007	0.0025
West	0.0019	0.0022
Length of time in current house or apartment		
23 months or less	-	-
2 to 4 years	0.0023	0.0022
5 to 9 years	0.0044	0.0028
10 years or more	0.0042	0.0031
Urbanicity		
Metro county	-	-
Nonmetro county	-0.0008	0.0021
Presence of a service-connected disability		
No	-	-
Yes	-0.0061**	0.0021
Ever used or enrolled in VA health insurance		
No	-	-
Yes	0.0115***	0.0022
Unweighted sample mean	3.73	
Weighted sample mean	3.40	
R-squared	0.0192	
Sample size (*n*)	63,478	

Notes:
Marginal effects statistically significantly different from 0 are denoted by * ($p < .05$), ** ($p < .01$), and *** ($p < .001$).
- Indicates the effect was not calculated because the level of the categorical variable was the reference category. The other covariates in the category were estimated in reference to the omitted variable.
[a] Includes non-Hispanic respondents who selected any of the following response options for race: American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, some other race, two or more races.
[b] Respondents with at least one of self-care difficulty, hearing difficulty, vision difficulty, independent living difficulty, ambulatory difficulty, and cognitive difficulty.
Unweighted and weighted sample means are the average percentage of post-9/11 veteran entrepreneur respondents.
R-squared is the pseudo *r*-squared statistic from the logistic regression model.
Multiplying the average marginal effect by 100 provides the average percentage point increase or decrease in the outcome variable associated with each control variable.
Source: 2014–2018 American Community Survey Public Use Microdata Area sample

There are several statistically significant, yet small, differences between millennial veteran entrepreneurs and employed millennial post-9/11 veterans who are not entrepreneurs. As shown in Table 8, millennial veterans reporting a service-connected disability are an average of 0.6 percentage points less likely to be entrepreneurs when controlling for all other factors. Millennial veterans who have used VA health insurance are an average of 1.2 percentage points more likely to be entrepreneurs than millennial veterans who have not used VA health insurance. Millennial veterans who have education beyond a high school degree, are not White, and are female are less likely to be entrepreneurs than those who have a high school degree or less, are White, and are male, respectively.

D. Research Question 4: How do millennial veteran entrepreneurs differ from veteran entrepreneurs of previous generations?

Results from the final logistic regression model, which predicts membership as a millennial veteran entrepreneur compared with older veteran entrepreneurs, appear in Table 9. The logistic regression estimates the likelihood of being a millennial veteran entrepreneur compared with a veteran entrepreneur of an older generation, controlling for gender, race/ethnicity, presence of a disability, education, marital status, number of children in the household, home ownership, personal income, region, geographic mobility, urbanicity, presence of a service-connected disability, and VA health insurance. This model does not control for age because age perfectly predicts millennial status.[11]

[11] The *R*-squared value is highest for this regression model because the dependent variable, generation, is related to age, and many of the predictor variables are strongly related to age.

Table 9. Average Marginal Effect Estimates for Regression Predicting Membership in the Millennial Generation Among Veteran Entrepreneurs

Control Variable	Average Marginal Effect	Standard Error
Gender		
Male	-	-
Female	0.0289***	0.0043
Race/ethnicity		
Non-Hispanic White	-	-
Non-Hispanic Black	-0.0105***	0.0029
Hispanic	0.0254***	0.0046
Other [a]	0.0114*	0.0044
Presence of a disability		
No	-	-
Yes	-0.0186***	0.0019
Education		
Less than high school, high school graduate, or GED	-	-
Some college without degree or associate's degree	0.0116***	0.0025
Bachelor's degree	-0.0006	0.0029
Master's, professional, or doctoral degree	-0.0198***	0.0026
Marital status		
Never married	-	-
Currently or previously married	-0.1173***	0.0066
Number of own children living in household	0.0182***	0.0009
Home ownership		
Does not own a home	-	-
Owns a home, with or without a mortgage or loan	-0.0102***	0.0023
Personal income, summed for married and unmarried partners (increments of 10 thousand dollars)	-0.0004***	0.0001
Region		
South	-	-
Northeast	-0.0001	0.0033
Midwest	0.0021	0.0028
West	-0.0048*	0.0022
Length of time in current house or apartment		
23 months or less	-	-
2 to 4 years	-0.0204***	0.0047
5 to 9 years	-0.0516***	0.0042
10 years or more	-0.0734***	0.0038
Urbanicity		
Metro county	-	-
Nonmetro county	-0.0036	0.0022

Control Variable	Average Marginal Effect	Standard Error
Presence of a service-connected disability		
No	-	-
Yes [b]	0.0317***	0.0032
Ever used or enrolled in VA health insurance		
No	-	-
Yes	-0.0003	0.0022
Unweighted sample mean	3.00	
Weighted sample mean	4.01	
R-squared	0.2896	
Sample size (*n*)	78,955	

Notes:
Marginal effects statistically significantly different from 0 are denoted by * ($p < .05$), ** ($p < .01$), and *** ($p < .001$).
- Indicates the effect was not calculated because the level of the categorical variable was the reference category. The other covariates in the category were estimated in reference to the omitted variable.
[a] Includes non-Hispanic respondents who selected any of the following response options for race: American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, some other race, two or more races.
[b] Respondents with at least one of self-care difficulty, hearing difficulty, vision difficulty, independent living difficulty, ambulatory difficulty, and cognitive difficulty.
Unweighted and weighted sample means are the average percentage of millennial post-9/11 veteran entrepreneur respondents.
R-squared is the pseudo *r*-squared statistic from the logistic regression model.
Multiplying the average marginal effect by 100 provides the average percentage point increase or decrease in the outcome variable associated with each control variable.
Source: 2014–2018 American Community Survey Public Use Microdata Area sample

Controlling for all other factors, statistically significant findings indicate that compared with males, female veteran entrepreneurs are an average of 2.9 percentage points more likely to be millennial veterans than veterans of a previous generation. Holding all other variables constant, non-Hispanic Black veteran entrepreneurs are an average of 1.1 percentage points less likely than non-Hispanic White veteran entrepreneurs to be millennial veteran entrepreneurs. Hispanic veterans are an average of 2.5 percentage points more likely than non-Hispanic Whites to be millennial veteran entrepreneurs. Those who own a home are an average of roughly 1 percentage point less likely to be millennials, and those who have been married are an average of 11.7 percentage points less likely to be millennial veteran entrepreneurs. Millennial veteran entrepreneurs are more likely to have their own children living in the home than older generations

of veteran entrepreneurs (the probability that a respondent is a millennial veteran increases by 1.8 percentage points, on average, with each additional child).

Millennial veteran entrepreneurs are also more geographically mobile. Compared with respondents living in their current home for less than 2 years, respondents living in their current home for 2 to 4 years are an average of roughly 2 percentage points less likely to be millennial post-9/11 veteran entrepreneurs, and respondents living in their current home 5 to 9 years are an average of 5.16 percentage points less likely to be a millennial veteran entrepreneur than veteran entrepreneurs of older generations. Veteran entrepreneurs living in their current home 10 years or more are 7.3 percentage points, on average, less likely to be millennial veteran entrepreneurs than veteran entrepreneurs of a previous generation.

Compared with those who have a high school education or less, respondents with some college experience are more likely to be millennial veteran entrepreneurs (increase of 1.2 percentage points, on average), but respondents with a graduate degree are less likely to be a millennial veteran entrepreneur (decrease of nearly 2 percentage points, on average). Finally, veteran entrepreneurs who report having a service-connected disability are an average of 3.2 percentage points more likely to be a millennial veteran, but those who report having a disability as defined by ACS criteria are an average of 1.9 percentage points less likely to be a millennial veteran than veterans of a previous generation.

Section 7. Discussion

Millennial veterans are, on average, 2.3 percentage points less likely to be entrepreneurs than nonveteran millennials. This finding aligns with previous research indicating the proportion and rate of veteran entrepreneurship is declining overall. Veterans are less likely to be entrepreneurs at young ages and more likely to be entrepreneurs at older ages when compared with similar nonveterans (Boldon & Maury, 2017). Overall, 3.4 percent of millennial veterans reported being entrepreneurs compared with 4.8 percent of millennial nonveterans.

When compared with nonveteran millennial entrepreneurs, millennial veteran entrepreneurs are older, male, geographically mobile, and married. These results are consistent with the average characteristics of U.S. service members: they are male, required to move frequently during their military service, and more likely to marry at younger ages than their nonveteran peers. While the research team expected millennial veteran entrepreneurs would be more likely to report disabilities than peers of their similar age because service members may experience significant wear-and-tear on their bodies during military service, it is notable the extent to which this is true. Millennial entrepreneurs who report having a disability (defined by ACS criteria) showed an average increase of 3.4 percentage points in their likelihood of being a veteran as opposed to a nonveteran. Millennial veteran entrepreneurs also report higher levels of educational achievement than nonveteran millennial entrepreneurs. This might be related to education benefits received by service members. There is no statistically significant difference between non-Hispanic Black millennial entrepreneurs and non-Hispanic White millennial entrepreneurs regarding post-9/11 veteran status. However, Hispanic millennial entrepreneurs are less likely to be post-9/11 veterans than millennial entrepreneurs who are non-Hispanic White.

Compared with employed millennial veterans, millennial veteran entrepreneurs are older, White, and male; have more children living in the home; and rely on VA healthcare more than other employed millennial veterans. These results were expected because veterans are more likely to be entrepreneurs at older ages; a greater proportion of entrepreneurs are White, male, and have children; and VA health insurance provides additional financial stability for veterans and their families who may not receive coverage with an employer. Millennial veterans who have used VA health insurance are an average of 1.2 percentage points more likely to be entrepreneurs than millennial veterans who have not used VA health insurance. Home ownership was not a statistically significant factor predicting entrepreneurship among millennial veterans. Increased access to home ownership through VA loans for veterans may contribute to the lack of significance for this traditional source of capital for entrepreneurship.

Compared with veteran entrepreneurs of previous generations, millennial veteran entrepreneurs have more gender diversity, which is representative of longstanding efforts by the U.S. military to recruit and retain more women in the force. Millennial veteran entrepreneurs are more likely to be Hispanic but less likely to be non-Hispanic Black than veteran entrepreneurs of a previous generation. Millennial veteran entrepreneurs are also less likely to be have been married, own a home, have lived in the same home 10 years or longer, or earned a bachelor's degree or beyond, which are likely a result of being younger than veteran entrepreneurs of older generations. Of all generations of veteran entrepreneurs in the study, veteran entrepreneurs who report having a service-connected disability are an average of 3.2 percentage points more likely to be millennials. This finding is surprising given the younger age of millennial veteran entrepreneurs because younger ages usually indicate lower disability rates. However, this finding may indicate

younger veterans document their service-connected conditions and disabilities sooner than veterans of previous generations.

When taken together, these findings show millennial veterans are a unique group when compared with other groups of nonveteran entrepreneurs and veteran entrepreneurs. Millennial veteran entrepreneurs are, on average, older than their nonveteran millennial entrepreneur peers and other employed millennial veterans when controlling for other factors. Across all analysis groups except veteran entrepreneurs from older generations, millennial veteran entrepreneurs are more likely to be male. Veteran entrepreneurs with a service-connected disability are more likely to be millennials than to be members of an older generation. Among millennial veterans, those with a service-connected disability are less likely to be entrepreneurs than to be otherwise employed in the labor force. Millennial veteran entrepreneurs are more geographically mobile when compared with their nonveteran millennial entrepreneur peers or veteran entrepreneurs from older generations but less so than employed millennial veteran non-entrepreneurs in the labor force.

A. Research Question 5: Based on these findings, are there potential barriers to entrepreneurship for millennial veterans?

The findings demonstrate millennial veterans are less likely to be entrepreneurs, indicating this particular group of veterans may be experiencing barriers to entrepreneurship: 4.8 percent of millennial nonveterans are entrepreneurs compared with 3.4 percent of millennial veterans. Controlling for other variables, millennial veterans are an average of 2.3 percentage points less likely to be entrepreneurs than other millennials.

It is unclear what factors influence the statistically significant difference in entrepreneurship for millennial veterans. It is possible veterans may have increased opportunities in other portions of the labor market, such as law enforcement or within the Federal government, drawing them toward those opportunities and away from entrepreneurship. Veterans may pursue entrepreneurship later in life because they choose to pursue higher education or more career stability after leaving the military.

Findings from across the logistic regression models indicate potential barriers for millennial female veterans and Hispanic veterans when compared with males and non-Hispanic White respondents. Education, personal income, and geographic mobility may also be factors that hinder millennial veterans' propensity toward entrepreneurship. Lastly, while there are opportunities for veterans with service-connected disabilities who own a business, millennial veterans with a service-connected disability may also experience barriers to entrepreneurship.

1. Female, Hispanic, and Black millennial veteran entrepreneurs

Gradual changes in the demographic composition of the military force are reflected in the millennial veteran population, particularly regarding a growing share of women veterans and Hispanic veterans. While millennial female veterans are much more likely to be entrepreneurs than older generations of female veterans, they are less likely to be entrepreneurs than other millennial veterans.

This same trend holds for millennial veteran entrepreneurs who are Hispanic when compared with non-Hispanic White veterans. While there are no statistically significant differences in entrepreneurship for Black millennial veterans when compared with their nonveteran peers, Black millennial veterans are less likely to be entrepreneurs when compared with their millennial

veteran peers and older generations of veteran entrepreneurs. These findings indicate emerging diverse groups of veterans may encounter barriers when pursuing entrepreneurship or may not see entrepreneurship as a viable career path. A smaller presence of female, Hispanic, and Black millennial entrepreneurs could indicate these particular groups of millennial veteran entrepreneurs are experiencing challenges in pursuing entrepreneurship that prevent them from owning their own businesses.

2. Education and millennial veteran entrepreneurship

The findings demonstrate millennial veteran entrepreneurs are more educated than their nonveteran entrepreneur peers but less educated than employed millennial veterans. Benefits provided to service members, such as tuition assistance and the post-9/11 Veterans Educational Assistance Act of 2008 (known as the Post-9/11 GI Bill),[12] may encourage millennial veterans to pursue higher education and provide access to education beyond a high school degree. While millennial veteran entrepreneurs are more educated than millennial nonveteran entrepreneurs, veterans who have pursued higher education during or after their military service may see entrepreneurship as a less viable option. The education benefits of military service are highly emphasized and used as a draw for recruits, particularly those who join in the years following high school. However, millennial veterans may pursue higher education and consider traditional labor market participation a more stable path than entrepreneurship, particularly if their education has prepared them for a particular job or career. An emphasis on higher education without proper

[12] The act includes funding 100 percent of a public 4-year undergraduate education for a veteran who has served 3 years on active duty since September 11, 2001.

resources and support for pursuing entrepreneurship could be deterring recent and millennial veterans from pursuing entrepreneurship.

3. Personal income and millennial veteran entrepreneurship

While millennial veteran entrepreneurs have an average greater personal income than other employed veterans, they are less likely to have a greater personal income than their millennial entrepreneurs who are not veterans. Therefore, on an individual level, it is possible millennial veteran entrepreneurs are making less money than nonveteran entrepreneurs of their generation. This finding could potentially indicate challenges for millennial veterans in the pursuit of or success in their entrepreneurship.

4. Greater geographic mobility for millennial veteran entrepreneurs

Millennial veteran entrepreneurs are more geographically mobile than nonveteran millennial entrepreneurs. Forty-one percent of millennial veteran entrepreneurs reported moving in the last 24 months compared with only 33 percent of nonveteran millennial entrepreneurs. Millennial veteran entrepreneurs have less long-term tenure (lived at same residence for 5 years or more) than nonveteran millennial entrepreneurs. Veterans' geographic mobility may be a barrier to entrepreneurship. Moving, whether near or far, is disruptive and may prevent millennial veterans from pursuing entrepreneurship or detract from their entrepreneurial pursuits. Geographic mobility has the potential to reduce network connections and relationships within a local community, which could influence their ability to successfully start and grow their business.

5. Service-connected disability and millennial veteran entrepreneurship

Without controlling for other factors, millennial veteran entrepreneurs and employed millennial veterans have a similar rate of reporting the presence of a service-connected disability.

However, with control variables in the regression models, millennial veterans with a service-connected disability are less likely to be entrepreneurs. This finding is particularly striking given the Federal Government provides contracting opportunities for businesses owned by veterans with service-connected disabilities. Despite additional incentives for entrepreneurship, millennial veteran entrepreneurs may face obstacles in pursuing entrepreneurship, including stigma, and they may need greater support to create pathways toward entrepreneurship.

Section 8. Conclusions and Policy Implications

Veteran entrepreneurs of all generations provide important contributions to the U.S. economy and are crucial members of the entrepreneurship community. As Vietnam veterans age out of the workforce and millennial veteran entrepreneurs become the next generation of veteran entrepreneurs, ensuring their success and opportunity remains vital. The success of millennial veteran entrepreneurs is particularly important given this study's findings that millennial veterans are less likely to be entrepreneurs than their nonveteran peers. Additional research is needed on millennial veteran entrepreneurs and veteran entrepreneurs more broadly, particularly as rates of entrepreneurship are declining among the general population. This study provides foundational knowledge about millennial veteran entrepreneurs and identifies veterans who may be experiencing barriers to entrepreneurship. Future research using qualitative methods, such as interviews or focus groups, would complement this study by providing more in-depth information on the barriers millennial veterans encounter when pursuing entrepreneurship.

Federal, State, and local policies can improve access and provide support for entrepreneurs, especially for underrepresented and disadvantaged groups. The remainder of this section discusses potential policy implications and recommendations for millennial veteran entrepreneurship based on this study's findings.

A. Tailor support for female and Hispanic and Black millennial veterans pursuing entrepreneurship

Results from this study show that female, Hispanic, and Black veterans are less likely to be entrepreneurs than other millennial veterans. These findings may indicate these three groups are experiencing challenges or barriers to entrepreneurship preventing them from starting their own

businesses. There are programs and resources aimed at supporting veteran entrepreneurs, such as training programs, lender matching tools, and Federal policies to expand contracting opportunities for veteran-owned businesses. The Department of Defense offers a "Boots to Business" program in partnership with SBA for service members preparing to transition out of the military (SBA, n.d.a.). However, these programs conceptualize "veterans" as a singular group and neglect the diverse needs of subgroups within the veteran community.

Vietnam veterans likely have different circumstances, modes of communication, and business support needs than millennial veterans. Similarly, research on entrepreneurship among female and racial/ethnic minorities has documented unique barriers and successes for these demographic groups (Cole, 2014; Fairlie, 2018; Fairlie et al., 2016). While veterans currently have access to targeted programs and policies, additional work could support specific subgroups of veterans, such as millennial female, Hispanic, or Black veterans. A notable example of tailored support is Syracuse University's Institute for Veterans and Military Families (IVMF): Among its other programs, IVMF offers an entrepreneurship training program targeted specifically to women called Veteran Women Igniting the Spirit of Entrepreneurship or V-WISE. V-WISE supports women veterans and female military spouses and partners through a three-phase program to launch or grow a business (IVMF, n.d.).

B. Continue support for veterans with service-connected disabilities to start their own businesses

The Service-Disabled Veteran-Owned Small Business Concern program (SDVOSBC) established veteran entrepreneurs with a service-connected disability as a recognized group of veteran entrepreneurs. SDVOSBC facilitates directing procurement opportunities to businesses owned by veterans with a service-connected disability business designation (SBA, n.d.b.). Despite this

support, previous research shows veterans with a service-connected disability are less likely than other veterans to be entrepreneurs, and veterans may be concerned about losing VA benefits if they pursue entrepreneurship resources (Haynes, 2015; Tihic, 2019). Results from this study present a more nuanced picture about the relationship between service-connected disability and entrepreneurship for millennial veterans.

While a relatively large percentage of millennial veteran entrepreneurs report having a service-connected disability compared with veteran entrepreneurs of older generations, millennial veterans with a service-connected disability are less likely to be entrepreneurs. Veterans with service-connected disabilities remain an important community of veteran entrepreneurs, and continued support is necessary for their success. It is possible veterans with service-connected disabilities face stigma, resulting in even greater challenges to pursuing entrepreneurship (Tihic, 2019). More resources and support should be targeted toward millennial veterans with service-connected disabilities to identify potential barriers to entrepreneurship they may face.

C. Increase network and mentorship support for a geographically mobile population of entrepreneurs

Millennial veteran entrepreneurs are more geographically mobile than millennial nonveteran entrepreneurs and veteran entrepreneurs of older generations. Service members may be required to move frequently during their military service (Sankaran & Battisto, 2018). As a more transient population, millennial veterans may require additional support targeted to their needs and disparate geographic connections. Such support could include programs that increase their social capital through rapid establishment of local social networks and resources on how to leverage geographically disperse networks for entrepreneurship, access and find mentorship in local communities, and locate support services in their community. Such programs and services should

emphasize the importance of developing network connections that are immediately applicable to millennial veterans as budding entrepreneurs.

D. Improve financial literacy related to businesses and entrepreneurship for military and veteran populations

While studies indicate veteran entrepreneurs in general face barriers related to lower financial literacy and a lack of familiarity with the business financial landscape (Boldon & Maury, 2017; Shaheen & Myhill, 2009), these challenges may be even more prevalent among millennial veteran entrepreneurs. In response to persistently low levels of financial literacy among the military population, Congress enacted legislation in 2016 (10 § U.S.C. 992) mandating the U.S. Department of Defense to provide all Service members with comprehensive financial literacy training. This training currently covers Federal and private-sector financial services available to Service members and how those services are typically marketed toward Service members, including predatory financial lending schemes. However, more training specifically focused on entrepreneurship is still needed, including resources for gaining initial funding, transferring relevant military skills, and money management. In particular, training is needed prior to service members' transition out of the military. For example, Syracuse University's IVMF offers many training programs, classes, conferences, and boot camps to inspire veteran entrepreneurship and help veterans grow their businesses. Finally, SBA itself offers a variety of resources and training programs specifically for veteran entrepreneurs and those aspiring to start their own businesses. These are coordinated by SBA's Office of Veterans Business Development through a wide network of resource partners. More widespread programming and services, such as those offered by SBA and IVMF, can help veteran entrepreneurs increase their financial literacy and mitigate common barriers to entrepreneurship.

References

Ahmed, U., Beck, T., McDaniel, C., & Schropp, S. (2016). Filling the gap: How technology enables access to finance for small-and medium-sized enterprises. *The MIT Press Journals, Innovations: Technology, Governance, Globalization, 10*(3–4), 35–48.

Akhtar, A. (2019). 9 incredibly successful companies founded by military veterans. *Business Insider.* May 27. https://www.businessinsider.com/companies-started-by-military-veterans-2016-11

Ambrose, B. W., Cordell, L., & Ma, S. (2015). The impact of student loan debt on small business formation. *Elsevier Social Science Research Network*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2417676

Bauernschuster, S., Falck, O., & Heblich, S. (2010). Social capital access and entrepreneurship. *Journal of Economic Behavior & Organization, 76*(3), 821–833.

Bennett, J. (2019). Veteran households in U.S. are economically better off than those of non-veterans. *Pew Research Center Factank*. https://www.pewresearch.org/fact-tank/2019/12/09/veteran-households-in-u-s-are-economically-better-off-than-those-of-non-veterans/

Blue Star Families. (2014). *Military family lifestyle survey: Findings and analysis.* Washington, DC: Blue Star Families.

Boldon, N. Y., & Maury, R. V. (2017). *Bridging the gap: Motivations, challenges, and successes of veteran entrepreneurs* (Operation Vetrepreneurship Series, Interim Report). Syracuse, NY: Institute for Veterans and Military Families, Syracuse University.

Boldon, N., Maury, R., Armstrong, N., & Van Slyke, R. (2016). *The state of veteran entrepreneurship research: What we know and next steps* (Veteran Entrepreneurship Research, Paper No. 1). Syracuse, NY: Institute for Veterans and Military Families, Syracuse University.

Clever, M., & Segal, D. (2013). The demographics of military children and families. *The Future of Children, 23*(2), 13–39.

Cole, R. A. (2014). *Credit scores and credit market outcomes: Evidence from the Survey of Small Business Finances and the Kauffman Firm Survey*. U.S. Small Business Administration Office of Advocacy.

Coleman, S., & Robb, A. (2009). A comparison of new firm financing by gender: Evidence from the Kauffman Firm Survey Data. *Small Business Economics, 33*, 391–411.

Demartino, R., & Barbato, R. (2003). Differences between women and men MBA entrepreneurs: Family flexibility and wealth creation as career motivators. *Journal of Business Venturing, 18*(6), 815–832.

Dilger, R. J., & Lowry, S. (2019). *SBA veterans assistance programs: An analysis of contemporary issues.* Washington, DC: Library of Congress, Congressional Research Service.

Dimock, M. (2019). Defining generations: Where millennials end and Generation Z begins. *Pew Research Center*, *17*.

Durante, A., & Chen, L. (2019). *Report on the economic well-being of US households in 2017* (Report for the Board of Governors of the Federal Reserve System). Washington, DC: Board of Governors of the Federal Reserve System.

Fairlie, R. (2018). *Latino business ownership: Contributions and barriers for U.S.-born and immigrant Latino entrepreneurs*. U.S. Small Business Administration Office of Advocacy.

Fairlie, R., Robb, A., & Robinson, D. T. (2016). Black and white: Access to capital among minority-owned startups. *Stanford Institute for Economic Policy Research*, 17-003.

Fairlie, R., Sameeksha, D., & Herrmann, A. J. (2019). *2017 national report on early-stage entrepreneurship.* Kauffman Foundation.

Furchtgott-Roth, D. (Ed.). (2008). *Overcoming barriers to entrepreneurship in the United States*. Lexington Books.

Goldman Sachs. (n.d.). *Millennials: Coming of age.* https://www.goldmansachs.com/insights/archive/millennials/

Haynes, G. W. (2015). *Income and net worth of veteran business owners over the business cycle, 1989–2010.* Washington, DC: U.S. Small Business Administration, Office of Advocacy.

Heinz, A. J., Freeman, M. A., Harpaz-Rotem, I., & Pietrzak, R. H. (2017). American military veteran entrepreneurs: A comprehensive profile of demographic, service history, and psychosocial characteristics. *Military Psychology, 29*(6), 513–523.

Hogan, P. F., & Seifert, R. F. (2009). Marriage and the military: Evidence that those who serve marry earlier and divorce earlier. *Armed Forces & Society, 36*(3), 420–438.

Hope, J. B., & Mackin, P. C. (2011). *Factors affecting entrepreneurship among veterans.* Annandale, VA: SAG Corporation.

Hwang, V., Desai, S., & Baird, R. (2019). Access to capital for entrepreneurs: Removing barriers. *Elsevier Social Science Research Network*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3389924

IVMF (Institute for Veterans and Military Families at Syracuse University). (n.d.). *VWISE program: Veteran women igniting the spirit of entrepreneurship*. https://vwise.vets.syr.edu/

Klapper, L., Lusardi, A., & Panos, G. (2015). *Financial literacy and entrepreneurship*. Global Financial Literacy Excellence Center working paper, 3.

Lettieri, J. (2016). *America without entrepreneurs: The consequences of dwindling startup activity.* Testimony before the Committee on Small Business and Entrepreneurship, United States Senate. https://www.sbc.senate.gov/public/_cache/files/0/d/0d8d1a51-ee1d-4f83-b740-515e46e861dc/7F75741C1A2E6182E1A5D21B61D278F3.lettieri-testimony.pdf

Library of Congress for National Women's Business Council. (2018). *Understanding the landscape: Access to markets for women entrepreneurs.* https://www.nwbc.gov/2018/03/01/understanding-the-landscape-access-to-capital-for-women-entrepreneurs/

Lutz, A. (2008). Who joins the military? A look at race, class, and immigration status. *Journal of Political and Military Sociology*, *36*(2), 167–188.

Mottola, G. R. (2014). The financial capability of young adults—A generational view. *FINRA Foundation Financial Capability Insights*, March.

Resnik, L., Bradford, D. W., Glynn, S. M., Jette, A. M., Johnson Hernandez, C., & Wills, S. (2012). Issues in defining and measuring veteran community reintegration: Proceedings of the working group on community reintegration. VA Rehabilitation Outcomes Conference, Miami, FL. *Journal of Rehabilitation Research & Development, 49*(1).

Rockefeller, M. L. (2016). *The top 25 veteran-founded startups in America*. Forbes. https://www.forbes.com/sites/marklrockefeller/2016/11/11/the-top-25-veteran-startups-in-america/#3c947a0c6e84

Rowen, D. (2017). *Employing the U.S. Census Survey of Business Owners and Self-Employed Persons and the Annual Survey of Entrepreneurs to develop a profile of veteran women-owned firms*. National Women's Business Council.

Sankaran, S., & Battisto, J. (2018). *Financing their future: Veteran entrepreneurs and capital access.* New York, NY: Federal Reserve Bank of New York.

SBA (U.S. Small Business Administration). (n.d.a.) *Welcome to boots to business.* https://sbavets.force.com/s/

SBA. (n.d.b.). *Veteran-owned businesses*. https://www.sba.gov/business-guide/grow-your-business/veteran-owned-businesses

SBA Office of Advocacy. (2019, September). *Frequently asked questions about small businesses*. https://cdn.advocacy.sba.gov/wp-content/uploads/2019/09/24153946/Frequently-Asked-Questions-Small-Business-2019-1.pdf

Scheresberg, C., & Lusardi, A. (2014). *Gen Y personal finances: A crisis of confidence and capability*. Working Paper, Global Financial Literacy Excellence Center.

Shaheen, G., & Myhill, W. (2009). *Entrepreneurship for veterans with disabilities: Lessons learned from the field* (Issue Brief No. 1). New Brunswick, NJ: NTAR Leadership Center.

Sobota, J. (2017). *Veteran-owned businesses and their owners: Data from the U.S. Census Bureau's Survey of Business Owners*. U.S. Small Business Administration, Office of Advocacy.

Steinberg, S. (2014). *Promoting entrepreneurship among millennials.* Center for American Progress. https://cdn.americanprogress.org/wpcontent/uploads/2014/11/MillennialEntrepren.pdf?_ga=2.242946304.34539403.1623075267-1975582633.1623075267

Stolba, S. (2019) *Millennials and credit: The struggle is real.* https://www.experian.com/blogs/ask-experian/taking-a-look-at-millennial-credit-scores/

Struckell, E. M. (2019). Millennials: A generation of un-entrepreneurs. *Journal of Business Diversity, 19*(2).

Tihic, M. (2019). *Experiences of entrepreneurs with disabilities: A critical disability theory perspective.* Dissertations, ALL. 1028. Syracuse University. https://surface.syr.edu/etd/1028

Tennant, J. (2012). Disability, employment, and income: Are Iraq/Afghanistan-era U.S. veterans unique? *Monthly Labor Review, U.S. Bureau of Labor Statistics*. https://www.bls.gov/opub/mlr/2012/article/disability-employment-and-income-are-iraqafghanistan-era-us-veterans-unique.htm

U.S. Census Bureau. (2015). *Millennials outnumber baby boomers and are far more diverse, Census Bureau reports.* https://www.census.gov/newsroom/press-releases/2015/cb15-113.html

VA (U.S. Department of Veterans Affairs). (2016). *Veteran population projections 2017–2037.* Washington, DC: Office of Public Affairs. https://www.va.gov/vetdata/docs/Demographics/New_Vetpop_Model/Vetpop_Infographic_Final31.pdf

VA. (2017a). *America's wars.* Washington, DC: Office of Public Affairs. https://www.va.gov/opa/publications/factsheets/fs_americas_wars.pdf

VA. (2017b). *Women veterans report: The past, present, and future of women veterans*. Washington, DC: National Center for Veterans Analysis and Statistics. https://www.va.gov/vetdata/docs/SpecialReports/Women_Veterans_2015_Final.pdf

VA. (2019). *Veteran population.* Washington, DC: National Center for Veterans Analysis and Statistics. https://www.va.gov/vetdata/docs/Demographics/VetPop_Infographic_2019.pdf

Wenger, J. L., O'Connell, C., & Cottrell, L. (2018). *Examination of recent deployment experience across the services and components.* Santa Monica, CA: RAND Corporation. https://www.rand.org/pubs/research_reports/RR1928.html

Wilmoth, D. (2016). *The missing millennial entrepreneurs*. Economic Research Series. U.S. Small Business Administration Office of Advocacy. https://www.sba.gov/sites/default/files/advocacy/Millenial_IB.pdf

Appendix A. Control Variables

Table A.1 provides a summary of each control variable used in the analysis, including variable name and description. Unless otherwise noted, all variables in table A.1 are from the ACS.

Table A.1. Description of Control Variables

Descriptive Variable Name	Variable Name	Variable Description
Sociodemographic variables		
Age	AGEP	Variable indicating respondent's age
Sex	SEX	Variable indicating respondent's sex
Race	RAC1P	Variable indicating respondent's race
Ethnicity: Hispanic	HISP	Variable indicating whether respondent has Hispanic origin
Disability	DDRS (self-care difficulty) DEAR (hearing difficulty) DEYE (vision difficulty) DOUT (independent living difficulty) DPHY (ambulatory difficulty) DREM (cognitive difficulty)	Variable indicating whether respondent answered yes to any of the disability-related questions
Educational attainment	SCHL	Variable indicating highest educational attainment achieved by respondent
Family composition		
Marital status	MAR	Variable indicating respondent's marital status
Number of children	NOC	Variable indicating number of respondent's own children
Income and wealth		
Home ownership	TEN	Variable indicating whether respondent owns or rents current home
Income	PINCP	Variable indicating respondent's personal income; if respondent is married or has unmarried partner in household, spouse/partner's personal income will be combined (Note: ADJINC[a] will be used to convert income values to 2018 dollars)
Location and geographic mobility		
Location	REGION	Variable indicating respondent's region based on 2010 Census definition
	PUMA	Variable indicating respondent's Public Use Microdata Area
	ST	Variable indicating respondent's State
	RUCC_2013[b]	Rural-urban continuum code for each U.S. county[c]
Geographic mobility	MV	Variable indicating when respondent moved into current house or apartment

Descriptive Variable Name	Variable Name	Variable Description
Veteran-specific variables		
Presence of SCD	DRATX	Variable indicating whether respondent has a veteran SCD
Percentage of SCD	DRAT	Variable indicating percentage categories of respondent's veteran SCD
VA health insurance	HINS6	Variable indicating whether respondent has used or has ever enrolled in VA healthcare
Sample creation and weighting		
Person weight	PWGTP	ACS-provided person-level weight for generating statistics on individuals

Notes:
[a] ADJINC is the ACS variable for applying inflation adjustments.
[b] From U.S. Department of Agriculture (USDA) Economic Research Service
[c] The most recent publicly available version is based on the population in 2013, from USDA Economic Research Service.
SCD = service-connected disability
ACS = American Community Survey
Source: 2014–2018 ACS Public Use Microdata Area Sample Dictionary

Appendix B. Hypotheses

The research team formulated the hypotheses based on the literature, an understanding of the veteran population, and the data available in ACS. For each research question, a null hypothesis (H_0) and alternative hypothesis (H_1) are presented along with an explanation for anticipated outcomes.

A. Research Question 1: Are millennial veterans more likely to be entrepreneurs than their nonveteran millennial peers?

H_0 = Millennial veterans are just as likely to be entrepreneurs when compared with their nonveteran millennial peers.

H_1 = Millennial veterans are less likely to be entrepreneurs than their nonveteran millennial peers. Table B.1 presents the alternative hypothesis and includes a detailed explanation.

Table B.1. Alternative Hypothesis and Explanation for Research Question 1

Compared with millennial nonveterans, it is anticipated millennial veterans are less likely to be …

Hypothesis Component	Explanation
Entrepreneurs	The proportion and rate of veteran entrepreneurship is declining. Previous research has shown veterans are less likely to be entrepreneurs at young ages and more likely to be entrepreneurs at older ages when compared with similar nonveterans.

Source: Research team

B. Research Question 2: How do millennial veteran entrepreneurs differ from their nonveteran millennial entrepreneur peers?

H_0 = There are no statistically significant differences in the control variables between millennial veteran entrepreneurs and their nonveteran millennial entrepreneur peers.

H_1 = There are statistically significant differences in the control variables between millennial veteran entrepreneurs and their nonveteran millennial entrepreneur peers. Table B.2 presents a detailed explanation of anticipated findings for the alternative hypotheses based on the literature review and previous research on the veteran population.

Table B.2. Alternative Hypothesis and Explanations for Research Question 2

Compared with nonveteran millennial entrepreneurs, it is anticipated millennial veteran entrepreneurs are more likely to …

Hypothesis Component	Explanation
Be older	Millennial veteran entrepreneurs may have spent several years in the military or pursuing higher education before becoming entrepreneurs.
Be White	The vast majority of U.S. service members are White; therefore, it is anticipated millennial veteran entrepreneurs are more likely to be White.
Be male	The vast majority of U.S. service members are male; therefore, it is anticipated millennial veteran entrepreneurs are more likely to be male.
Be married	Service members are more likely to marry at younger ages.[a] Therefore, it is anticipated millennial veteran entrepreneurs are more likely to be married.
Have children	Service members are more likely to have children at younger ages.[b] Therefore, it is anticipated millennial veteran entrepreneurs are more likely to have children.
Own a home	Veterans have access to VA home loans; therefore, it is anticipated millennial veteran entrepreneurs are more likely to own a home.
Have a disability	Service members may experience significant wear-and-tear on their bodies during military service; therefore, it is anticipated millennial veteran entrepreneurs are more likely to have disabilities.
Be geographically mobile	Service members may be required to move frequently during their military service; therefore, it is anticipated millennial veteran entrepreneurs are more likely to have experienced recent geographic mobility.
Live in rural areas	More service members join the military from rural areas than urban areas.[c] Therefore, it is anticipated millennial veteran entrepreneurs are more likely to be living in rural areas.
Have lower levels of educational attainment	Military service often overlaps with the years nonveterans traditionally attend college or graduate school; therefore, it is anticipated millennial veteran entrepreneurs have lower levels of educational attainment.
Have higher household income	Veterans have had higher levels of household income than nonveterans; therefore, it is anticipated millennial veteran entrepreneurs will have higher levels of household income.

Notes:
[a] Service members are three times more likely to be married than civilians their age (Hogan & Seifert, 2009).
[b] Military families tend to have children younger than similar civilians (Clever & Segal, 2013).
[c] More than one-third of post-9/11 service members are from rural areas (Lutz, 2008).
Source: Research team

C. Research Question 3: How do millennial veteran entrepreneurs differ from other employed millennial veterans?

Millennial veterans are divided into two groups: those who are self-employed, either through an incorporated or nonincorporated business; and those who are employees of a private company or individual, are government employees, or are working without pay in a family business or farm.

H_0 = There are no statistically significant differences in the control variables between millennial veteran entrepreneurs and other employed millennial veterans.

H_1 = There are statistically significant differences in the control variables between millennial veteran entrepreneurs and other employed millennial veterans. Table B.3 presents a detailed explanation of anticipated findings for the alternative hypotheses based on the literature review and previous research on the veteran population.

Table B.3. Alternative Hypothesis and Explanations for Research Question 3

Compared with millennial veteran nonentrepreneurs, it is anticipated millennial veteran entrepreneurs are more likely to …

Hypothesis Component	Explanation
Be older	Veterans are more likely to be entrepreneurs at older ages; therefore, it is anticipated millennial veteran entrepreneurs are more likely to be older.
Be White	A greater proportion of entrepreneurs are White; therefore, it is anticipated millennial veteran entrepreneurs are more likely to be White.
Be male	A greater proportion of entrepreneurs are male; therefore, it is anticipated millennial veteran entrepreneurs are more likely to be male.
Be married	Marriage may bring additional financial resources or stability; therefore, it is anticipated millennial veteran entrepreneurs are more likely to be married.
Have children	Entrepreneurs are more likely to have children.[a] Therefore, it is anticipated millennial veteran entrepreneurs are more likely to have children.
Own a home	Millennial veteran entrepreneurs are more likely to be homeowners because home equity can be used as leverage to secure additional financial investment.
Not have a disability	It is anticipated millennial veteran entrepreneurs are more likely to not have disabilities because those with disabilities may have additional challenges in pursing entrepreneurship.
Be geographically mobile	Entrepreneurs may pursue the best market opportunities; therefore, it is anticipated millennial veteran entrepreneurs are more likely to have experienced recent geographic mobility.

Hypothesis Component	Explanation
Live in an urban area	Opportunities, financial capital, and network support for entrepreneurship may be greater in urban areas; therefore, it is anticipated millennial veteran entrepreneurs are more likely to be living in urban areas.
Have higher levels of educational attainment	Veteran entrepreneurs have higher rates of advanced higher education; therefore, it is anticipated millennial veteran entrepreneurs to have higher levels of educational attainment.
Have higher household income	Veterans with greater financial resources may have better opportunities to start their own business; therefore, it is anticipated millennial veteran entrepreneurs will have higher levels of household income.
Have VA health insurance	VA health insurance provides additional financial stability for veterans and their families; therefore, it is anticipated millennial veteran entrepreneurs will be more likely to use VA health insurance.
Have a service-connected disability	Service-disabled, veteran-owned small business is a defined small business status; therefore, it is anticipated millennial veteran entrepreneurs will be more likely to have a service-connected disability.

Note: [a] The presence of children in a household is related to an increased likelihood of entrepreneurship for some entrepreneurs (DeMartino & Barbato, 2003).
Source: Research team

D. Research Question 4: How do millennial veteran entrepreneurs differ from veterans of previous generations?

H_0 = There are no statistically significant differences in the control variables between millennial veteran entrepreneurs and veteran entrepreneurs from previous generations.

H_1 = There are statistically significant differences in the control variables between millennial veteran entrepreneurs and veteran entrepreneurs from previous generations. Table B.4 presents a detailed explanation of anticipated findings for the alternative hypotheses based on the literature review and previous research on the veteran population.

Table B.4. Alternative Hypothesis and Explanation for Research Question 4

Compared with veteran entrepreneurs of older generations, it is anticipated millennial veteran entrepreneurs are more likely to ...

Hypothesis Component	Explanation
Be racially and ethnically diverse	Post-9/11 veterans have greater racial and ethnic diversity; therefore, it is anticipated millennial veteran entrepreneurs are more likely to be racially and ethnically diverse.
Be female	More women are serving than ever before; therefore, it is anticipated millennial veteran entrepreneurs are more likely to be female.

Hypothesis Component	Explanation
Not be married	It is anticipated millennial veteran entrepreneurs are more likely to be unmarried because they are younger.
Not have children	It is anticipated millennial veteran entrepreneurs are more likely to not have children because they are younger.
Not own a home	It is anticipated millennial veteran entrepreneurs are more likely to not own a home because millennials have lower rates of home ownership.
Not have a disability	It is anticipated millennial veteran entrepreneurs are more likely to not have a disability because they are younger.
Be geographically mobile	It is anticipated millennial veteran entrepreneurs are more likely to be geographically mobile because they are younger and may not be settled in one community or area.
Live in urban areas	Urban areas are more densely populated with younger populations; therefore, it is anticipated millennial veteran entrepreneurs are more likely to be living in urban areas.
Have lower levels of educational attainment	Millennial veteran entrepreneurs are more likely to have lower levels of educational attainment because they have had fewer years to pursue higher education.
Have lower household income	Millennial veteran entrepreneurs are younger; therefore, it is anticipated they will have lower household income because they have not had as many years to advance in their careers and build financial resources.
Not have VA health insurance	Millennial veteran entrepreneurs may be healthier and less reliant on health insurance; therefore, it is anticipated millennial veteran entrepreneurs will be less likely to use VA health insurance.
Not have a service-connected disability	Millennial veteran entrepreneurs are younger and may have had less time for service-connected disability symptoms to progress or worsen; therefore, it is anticipated millennial veteran entrepreneurs will be less likely to have a service-connected disability.

Source: Research team

E. Research Question 5: Based on these findings, are there potential barriers to entrepreneurship for millennial veterans?

The final research question draws on findings from research questions 1 through 4 to identify potential barriers to entrepreneurs for millennial veterans.

Appendix C. Logistic Regression Details

A logistic regression assumes the dependent variable is binary, mutually exclusive, and exhaustive; that is, all respondents in this analysis had one of two values for the outcome variable. A logistic regression also assumes a linear relationship between the log-odds of the probability of the outcome for respondent *i*, $p_i = Prob\ (Y_i = 1)$ and the predictor variables. This model can be expressed as follows, for each respondent $i = 1, \ldots, n$:

$$log\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \cdots + \beta_K x_{iK}$$

The log odds of the probability of the outcome is a function of several x variables, or predictor variables. In the first logistic regression, for example, the outcome variable was modeled as a binary value with 0 representing millennials who were employed (not self-employed) and 1 representing millennial entrepreneurs who were self-employed. The x_i variables represented characteristics for respondent *i*: veteran status, age, gender, race/ethnicity, disability, education, marital status, number of the respondent's children living in the household, home ownership, household income, region, length of time living in current home, and urbanicity. The β represents regression coefficients, except for β_0, which was the intercept term. The variance of a binomially distributed variable is determined by sample size and the probability of the outcome, so there is no error term in this model.