Unemployment among recent veterans during the Great Recession

R. Jason Faberman and Taft Foster

Introduction and summary

Recent veterans have fared relatively poorly in the labor market during and after the Great Recession. As figure 1 shows, veterans who had recently served in the military had higher unemployment rates than older veterans and nonveterans over this period. The three-month moving average of unemployment peaked for recent veterans at 13.9 percent of the labor force. The unemployment peak for nonveterans was 9.2 percent, while the peak for older veterans was 7.9 percent. Unemployment remained high for recent veterans throughout most of this time, before falling sharply in 2012. In contrast, during the previous recession and subsequent "jobless recovery" (early 2001 through late 2003), unemployment rates for recent veterans and nonveterans were nearly identical. During the preceding economic downturn (late 1990 to early 1992), however, unemployment rates among recent veterans were again relatively high. High unemployment among new veterans has been highlighted recently in the press.[1] It is also something that employers are aware of, as several large companies have announced hiring initiatives focused on veterans.[2]

In this article, we examine why recent veterans have such high unemployment rates relative to the rest of the labor force. In theory, there are several reasons we may observe relatively high unemployment rates for recent veterans. For one, new veterans tend to be younger and less educated than the average worker. These are groups that have high unemployment rates in the general population, implying that the high rates among recent veterans may be due to demographic factors. Second, there is the question of how transferable military human capital is to civilian employment. For example, Goldberg and Warner (1987) find that experience in the military was transferable to a select number of particular tasks and occupations. Thus, the relatively high unemployment rates may simply be an artifact of the transition from military to civilian life. Third, it may be that people who enter the civilian labor force during an economic downturn end up worse off in their labor market prospects than those who enter during better economic times, as research by Beaudry and DiNardo (1991) and Kahn (2010) suggests. Their research focused on entering the labor force after finishing school, but it is plausible that new veterans entering the labor force during bad times may face similar hurdles. Finally, relatively high unemployment may be caused by factors that have less to do with the recession and more to do with wartime deployments. Being deployed in a war zone may lead to physical or psychological trauma that might make it difficult

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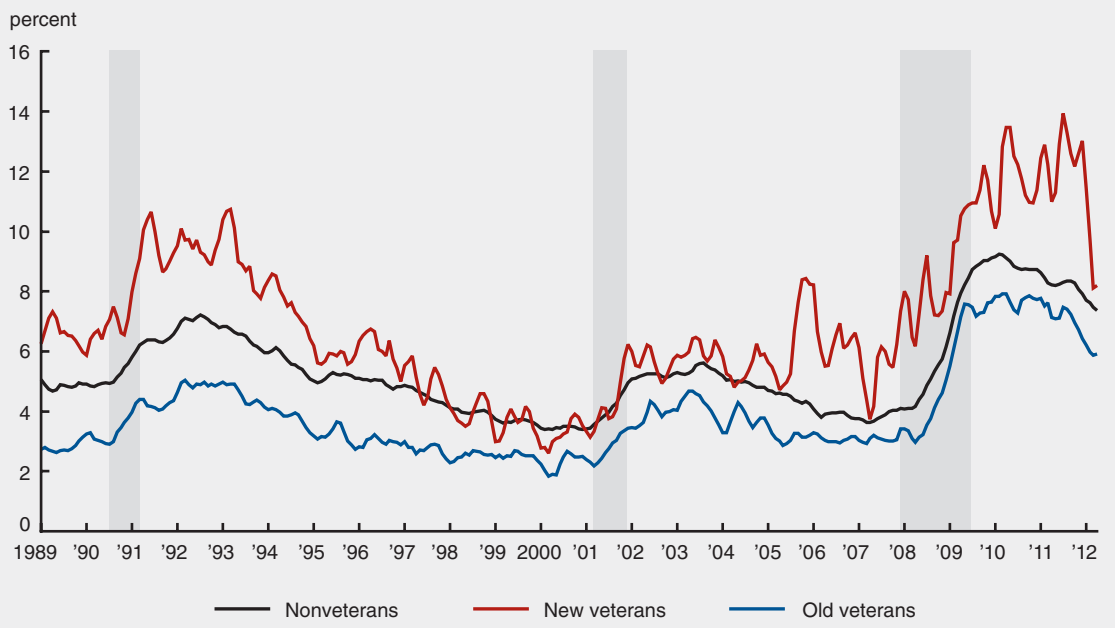
FIGURE 1

Unemployment by veteran status, 1989–2012



Source: Authors' calculations using monthly data from the U.S. Bureau of Labor Statistics, *Current Population Survey*.

to find work. It may also lead to more war-related duties (as opposed to peacetime training duties) that generate human capital that is less transferable to the civilian labor market. Further, wartime may induce a selection effect along one or more margins. The high opportunity cost of reenlisting during wartime may cause individuals who would have otherwise chosen a military career to move to the civilian labor market. If the skills and abilities of these individuals were better suited to military life, such a switch may result in a "mismatch" between their skills and the skills required for available civilian jobs.[3] Alternatively, the demand for new service members may cause the armed services to relax their recruitment standards during wartime. Individuals with lower skills or abilities, who might otherwise have been considered unfit for service, may therefore be accepted for military service and be counted among recent veterans when they enter the civilian work force. This would skew the population of recent veterans toward the low-skilled segment of the work force, driving up the average unemployment rate for recent veterans during wartime.

In this article, we use data on both veteran and nonveteran labor force participants to examine how various factors affect the relative unemployment probability of recent veterans during the Great Recession. We examine the 1989–2012 period, which gives us a natural comparison of two periods (1990–92 and 2008–11) during which there was a rise in wartime deployment that coincided with an economic downturn. We show that neither demographics nor simply being a new veteran by themselves can account for the rise in relative unemployment rates for new veterans. Instead, our results suggest that prolonged deployments overseas account for much of the difference in unemployment rates between recent veterans and nonveterans. When we account for the fraction of active service members who are overseas, there is essentially no difference in the unemployment incidence of recent veterans and nonveterans. We also find little difference between recent veterans and nonveterans in their flows between unemployment and employment. We do, however, find a slightly rising trend in the relative flows of recent veterans between unemployment and being out of the labor force, suggesting that recent veterans may be more likely to be only marginally attached to the labor force than in the past.

Data and measurement

We use individual microdata from the U.S. Bureau of Labor Statistics' *Current Population Survey* (CPS) from January 1989 through April 2012 for our analysis. The period includes three recessions, all featuring a weak employment recovery. Including these weak

employment recoveries, each downturn roughly spans 1990:Q3–1992:Q3, 2001:Q1–2003:Q3, and 2008:Q1–2010:Q3, respectively. The period also includes two wartime periods: Gulf War I (1990:Q3–1991:Q1) and the overlapping Afghanistan War (2001:Q4–present); and Gulf War II (2003:Q2–2011:Q4). The veterans of these conflicts, unlike the veterans examined in most previous studies of veteran employment outcomes, come from an all-volunteer force.[4] This complicates our analysis somewhat because the earlier studies were able to use exogenous variation in draft outcomes as a control for unobserved differences across veterans.[5]

In our analysis, we differentiate between "new" veterans and "old" veterans, defined as follows. The CPS categorizes veterans according to whether they served in a major conflict or between conflicts (the "other veteran" category in the data). From 2006 forward, the CPS data include a "Gulf War-era II" category, which includes all veterans of the recent conflicts in Afghanistan and Iraq. For this period, we define new veterans as those within the "Gulf War-era II" category, and old veterans as all other veterans. Prior to August 2005, the data only contained categorizations for the Vietnam War, Korean War, and World War II. For these data, we identify new veterans as those under age 40 in the "other veteran" category, and old veterans as all others. We do this based on a comparison of the age distribution of veterans in this category during 1989–93 (that is, around the time of Gulf War I) and veterans in the Gulf War-era II category from 2006 onward. Figure 2 shows that the distributions in the 18–40 age range are very similar, and that this age range represents the left density of a bimodal distribution for the other veteran category in the 1989–93 period. Nonveterans are all other respondents who report never having served in the military.

We focus only on labor force participants. This avoids issues with changes in veteran nonemployment due to disabilities sustained while on active duty. Our analysis examines differences in the incidence of unemployment for labor force participants who are recent veterans, compared with older veterans and nonveterans, controlling for various factors. When we examine gross flows, we study all possible labor market transitions, including those into and out of the labor force. We calculate our gross flow statistics using standard methods in the literature.[6]

Finally, we control for the fraction of active servicemen deployed overseas using published statistics on deployments from the Department of Defense Personnel & Procurement Reports.[7] The data are annual through 2002 and quarterly thereafter. We use this measure as a proxy for the probability that a new veteran served in a war zone.

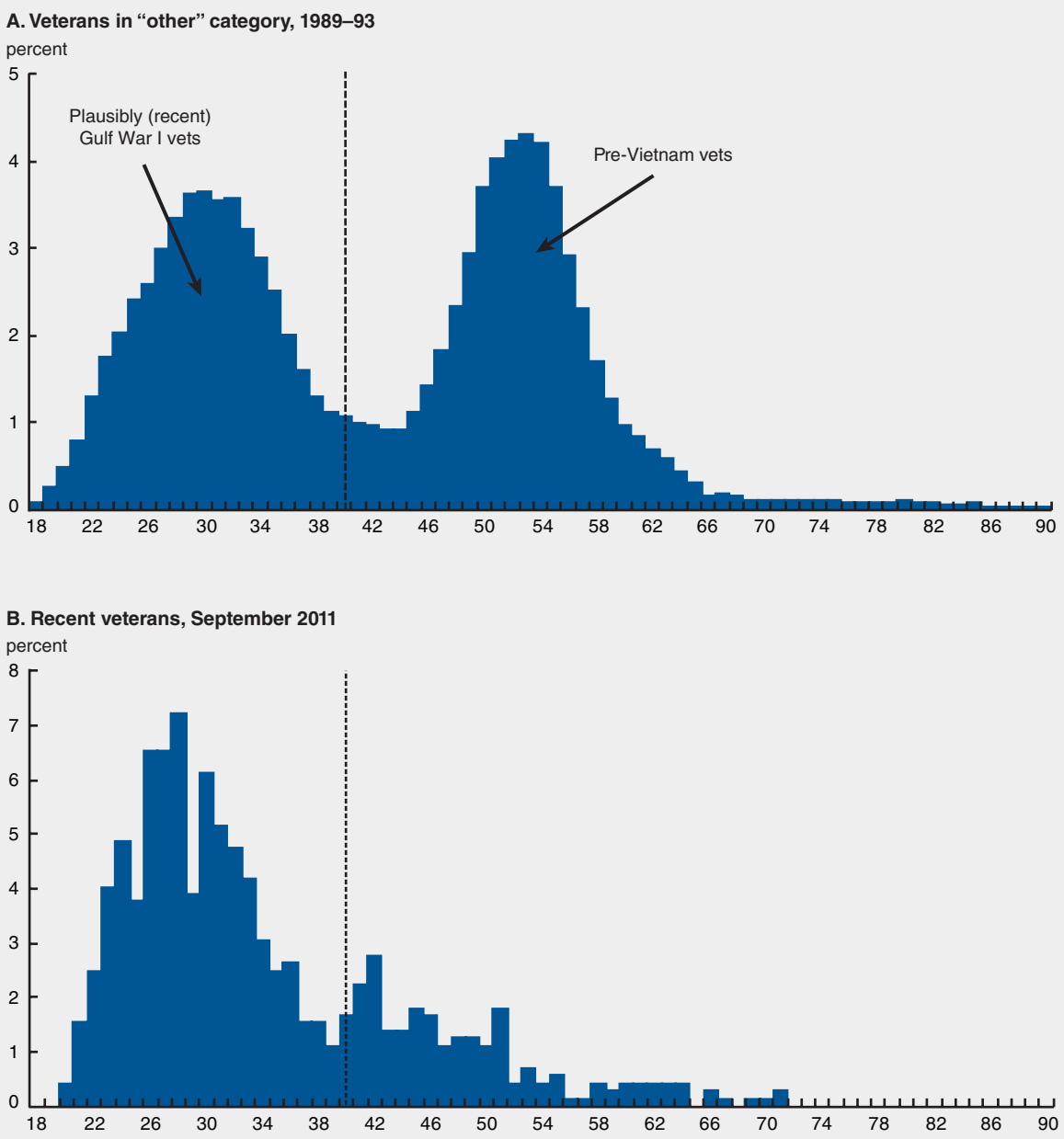
Role of demographics and veteran status

We begin our analysis by examining the extent to which differences in demographic characteristics between new veterans and others can account for the observed differences in unemployment rates, particularly during the Great Recession. Recent veterans tend to be younger and less educated than the general working-age population, and younger and less educated workers tend to have higher unemployment rates in the civilian labor force. As table 1 shows, new veterans are 32 years old, on average, compared with an average of about 43 years for the nonveteran population. Older veterans are 61 years old, on average. The fraction of new veterans with a college degree is just over 14 percent, compared with 21 percent for the nonveteran population. Enlistment standards cause very few veterans to have less than a high school degree, but the fraction with only a high school degree is 42 percent, compared with 32 percent in the nonveteran population.

Wars and the business cycle may also affect military recruiting standards. For example, during wartime, the armed forces may relax the education requirements for some recruits if they have trouble meeting their enlistment targets. Conversely, during poor economic times, recruiters may be able to enlist more qualified candidates who would have otherwise chosen civilian employment. The final three columns of table 1 list the demographic characteristics of new veterans during the 1991–93 period (Gulf War I), 1994–2001 (peacetime), and 2003–11 (Gulf War II era). It also lists the average fraction of military recruits who scored in at least the 50th percentile of the Armed Forces Qualifier Test (AFQT). The AFQT is a test of basic knowledge that is used to determine whether an individual has the basic skills to enter the military. There is no hard minimum score required, and waivers are often granted for low-scoring individuals when the demand for new recruits is high. In labor economics, the AFQT score is often used as a measure of an individual's unobserved ability, particularly in studies that use data from the National Longitudinal Surveys of Youth (NLSY). Table 1 shows that there are no clear differences in demographics between the wartime and peacetime cohorts of new veterans, although there are increasing trends in the average age and education level of new veterans over time. Furthermore, the fraction of military recruits scoring in the top half of the AFQT is substantially lower during the two wartime periods. We return to the effect of changes in recruiting standards over time later.

FIGURE 2

Age distribution of recent veterans



Notes: The vertical axis lists the fraction of all veterans in either the "other veteran" (top panel) or "Gulf War-era I" veteran category of the U.S. Bureau of Labor Statistics, *Current Population Survey*. The dashed lines represent the age-40 cutoff used to define new veterans prior to 2006.
Source: Authors' calculations based on pooled monthly data from the U.S. Bureau of Labor Statistics, *Current Population Survey*.

To examine the role of demographics, we first estimate a linear probability model where we regress the incidence of unemployment for individuals in our pooled CPS sample on a set of year dummies, indicator variables for whether the individual is a new veteran or old veteran, year dummies interacted with new veteran status, and year dummies interacted with old veteran status. Formally, the model is as follows:

$$1) \quad u_{it} = \gamma^T + \delta_0 NV_{it} + \delta_1 OV_{it} + \mu_0^T NV_{it} + \mu_1^T OV_{it} + \varepsilon_{it},$$

where u_{it} is an indicator equal to one if individual i is unemployed in month t; γ_t^T, $\mu_{0,t}^T$, and $\mu_{1,t}^T$ are vectors

TABLE 1

Demographic statistics by veteran status

			New veterans			
	Nonveterans	Old veterans	All	1991–93	1994–2001	2003–11
Average age	42.6	60.8	31.9	30.3	32.3	32.9
Percent ≤ 35 years old	40.1	1.5	71.3	84.2	67.7	65.6
Percent male	42.1	96.0	86.5	88.2	86.9	84.1
Percent married	53.2	74.7	56.7	55.2	58.3	55.4
Average household size	3.1	2.5	3.2	3.2	3.2	3.2
Percent white, non-Hispanic	70.4	85.7	71.9	72.8	72.5	69.8
Education level						
Percent < high school	20.8	13.7	3.5	5.1	3.1	2.0
Percent high school graduates	32.4	35.0	41.7	48.5	42.1	33.1
Percent some college	17.9	19.6	29.2	27.1	29.6	31.8
Percent ≥ bachelor's degree	21.4	22.7	14.5	9.3	15.0	20.6
Person-month observations	24,631,423	2,937,437	387,865	66,386	172,623	90,011
Percent of recruits scoring in top half of AFQT			57.6	55.9	59.7	55.4

Sources: Authors' calculations based on pooled monthly data from the U.S. Bureau of Labor Statistics, *Current Population Survey* (demographic statistics), or annual recruiting data from the U.S. Department of Defense, *Population Representation in the Military Services: Fiscal Year 2011 Summary Report* (Armed Forces Qualifier Test, or AFQT, statistics).

of dummy variables for each of T years; NV_{it} is an indicator for whether the individual is a new veteran; and OV_{it} is an indicator for whether the individual is an old veteran. The predicted unemployment rates for new and old veterans relative to nonveterans (that is, $\hat{\mu}_0^T$ and $\hat{\mu}_1^T$) are depicted in figure 3. On average, old veterans have lower unemployment rates than nonveterans, and there is little variation in the difference over our sample period. The difference in unemployment rates between new veterans and nonveterans, on the other hand, varies widely over the period. During the 1990–92 downturn, which coincides with Gulf War I, the unemployment rate for new veterans is about 2 percentage points higher than the rate for nonveterans. New veterans and nonveterans have similar unemployment rates between 1994 and 2004. This occurs despite the fact that there was an economic downturn between 2001 and 2003. New veterans have relatively higher unemployment rates starting in 2005. The relative rate continues to rise until it peaks at 4 percentage points higher than the nonveteran unemployment rate in 2011.

We next estimate the same model depicted in figure 3, but include demographic and geographic controls. These are controls for gender, education, race, marital status, household size, state of residence, and a quadratic in age. Our specification assumes that the role of demographics is fixed over time. The results of this model are in figure 4. Controlling for demographics has a large effect on the relative unemployment rates of older veterans. They go from having unemployment rates that are about 2 percentage points lower than nonveterans, on average, to having unemployment rates that are about 1 percentage point higher, on average. Demographics do little, however, to change the pattern of relative unemployment rates for new veterans. There is only a slight decrease in their unemployment rate relative to that of nonveterans over the full sample period.

Note also that, outside of the relatively high rates during the war/recession periods in the early 1990s and late 2000s, there is no evidence of a fixed new veteran difference in unemployment rates over the period. Both figures 3 and 4 show almost no difference in unemployment rates between new veterans and nonveterans between 1994 and 2004.

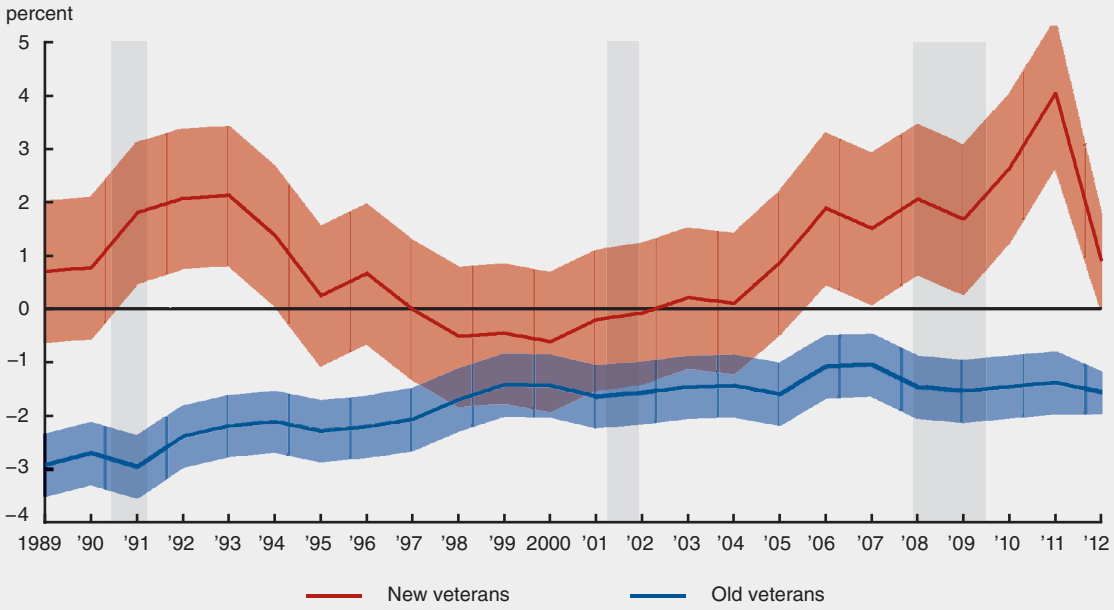
Role of the business cycle and veteran status

Both figures 3 and 4 show clear variations in the relative unemployment rates of new veterans over time. These differences may be driven by the business cycle. Research on civilian labor force participants has shown that individuals who enter the labor force during a recession tend to fare worse than those entering during better economic times and that these effects can last well after the end of the recession.[8] It is plausible that recent veterans face similar outcomes when leaving military service and entering the civilian labor force.

In some sense, the results in figures 3 and 4 already cast doubt on the hypothesis that the relatively high unemployment rates of new veterans are due to cyclical factors. For one, there is no rise in relative unemployment during the 2001–03 downturn. Secondly,

FIGURE 3

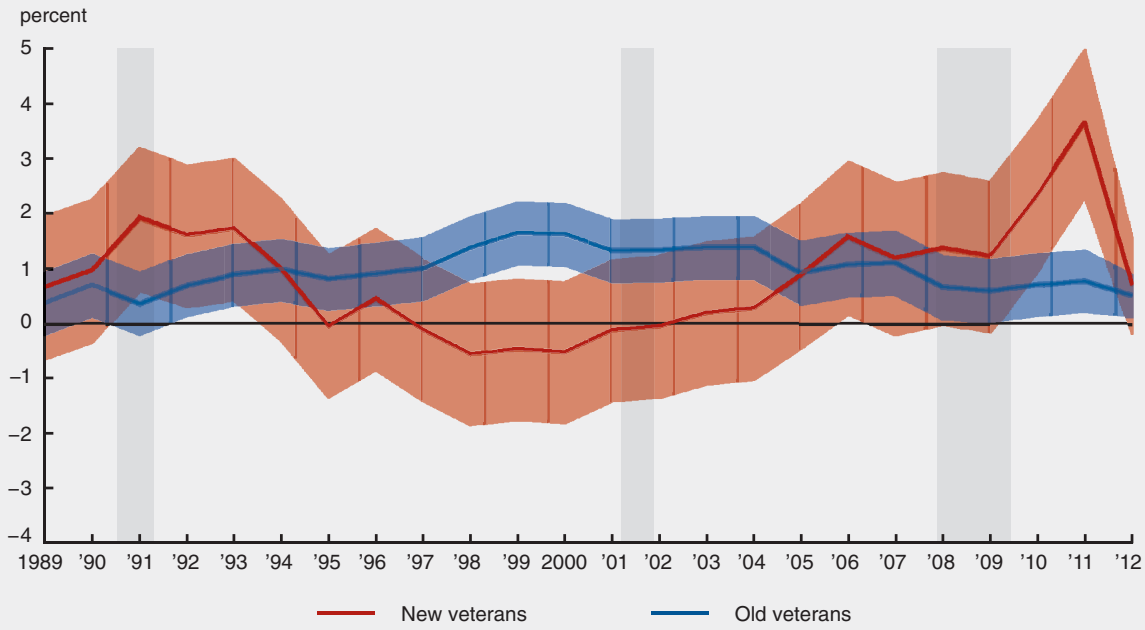
Veteran versus nonveteran unemployment



Notes: The figure lists estimates of the interaction of year fixed effects with veteran status from the regression of the probability of unemployment on these variables: See text for details. Nonveterans are the reference group. The shaded areas represent 95 percent confidence intervals.
Source: Authors' calculations based on pooled monthly data from the U.S. Bureau of Labor Statistics, *Current Population Survey*.

FIGURE 4

Veteran versus nonveteran unemployment, controlling for demographics



Notes: The figure lists estimates of the interaction of year fixed effects with veteran status from the regression of the probability of unemployment on these variables, as well as demographic and geographic controls: See text for details. Nonveterans are the reference group. The shaded areas represent 95 percent confidence intervals.
Source: Authors' calculations based on pooled monthly data from the U.S. Bureau of Labor Statistics, *Current Population Survey*.

TABLE 2

Veteran status and business cycle effects

	No percentage of service abroad	With percentage of service abroad
New veteran	0.0043*	−0.0103*
	(0.0005)	(0.0017)
Recession effect	0.0055*	0.0059*
	(0.0004)	(0.0004)
Jobless recovery effect	0.0015*	0.0014*
	(0.0004)	(0.0004)
Recession effect × new veteran	−0.0002	−0.0019
	(0.0016)	(0.0016)
Great Recession effect × new veteran	0.0099*	0.0039
	(0.0029)	(0.0030)
Jobless recovery effect × new veteran	0.0042*	0.0043*
	(0.0011)	(0.0011)
Recent jobless recovery effect × new veteran	0.0104*	0.0032
	(0.0026)	(0.0027)
Percentage of active service deployed abroad		−0.0157*
		(0.0040)
Percentage of active service deployed abroad × new veteran		0.0704*
		(0.0076)
R-squared	0.039	0.061

*Significant at the 1 percent level.

Notes: The results are for the ordinary least squares (OLS) regressions of the probability of unemployment on demographic and geographic controls and the listed explanatory variables. Standard errors are in parentheses.

Source: Authors' calculations based on pooled monthly data from the U.S. Bureau of Labor Statistics, *Current Population Survey*.

the rise in relative unemployment rates during the Great Recession period actually began in 2005, three years before the start of the Great Recession. Nevertheless, we conduct a formal test of the effect of the business cycle on the relative unemployment rates of new veterans. Formally, we regress an unemployment indicator on indicator variables for whether the economy is in recession or in a "jobless" recovery, additional indicators for the Great Recession and its subsequent jobless recovery, indicators for new veteran or old veteran status, interactions of these indicators, and the demographic controls from our earlier model. We report the relevant coefficient estimates in the first column of table 2.

Table 2 shows, as one might expect, that all individuals have a higher unemployment rate during recessions or jobless recoveries. Contrary to the patterns observed in figures 3 and 4, the results suggest that recent veterans have unemployment rates that are 0.4 percentage points higher than those of nonveterans regardless of the business cycle. On the other hand, the results also show that there is almost no difference in unemployment rates between new veterans and nonveterans during the first two recessions, though new veterans have unemployment rates that are 0.4 percentage points higher during the first two jobless recovery periods. During the Great Recession and its subsequent jobless recovery, new veterans are much more likely to be unemployed. Combining the estimated effects, new veterans are predicted to have unemployment rates that are 1.0 percentage point and 1.5 percentage points higher than nonveterans during the two periods, respectively. Thus, if we only control for demographics, our estimates suggest that, in contrast to the casual observations in figures 3 and 4, new veterans did experience an increase in their unemployment rate during the Great Recession period, particularly during the subsequent jobless recovery.

Another way to examine the effects of the business cycle on the unemployment rate of new veterans is to examine whether industries that tend to employ new veterans are hit especially hard during recessions. Table 3 shows that new veterans tend to work in construction, manufacturing, transportation and utilities, and government, all industries that had especially weak growth during the Great Recession period. For each month, we calculate the employment growth rate for all nonveterans by major industry and

TABLE 3

New veteran and nonveteran employment shares by industry

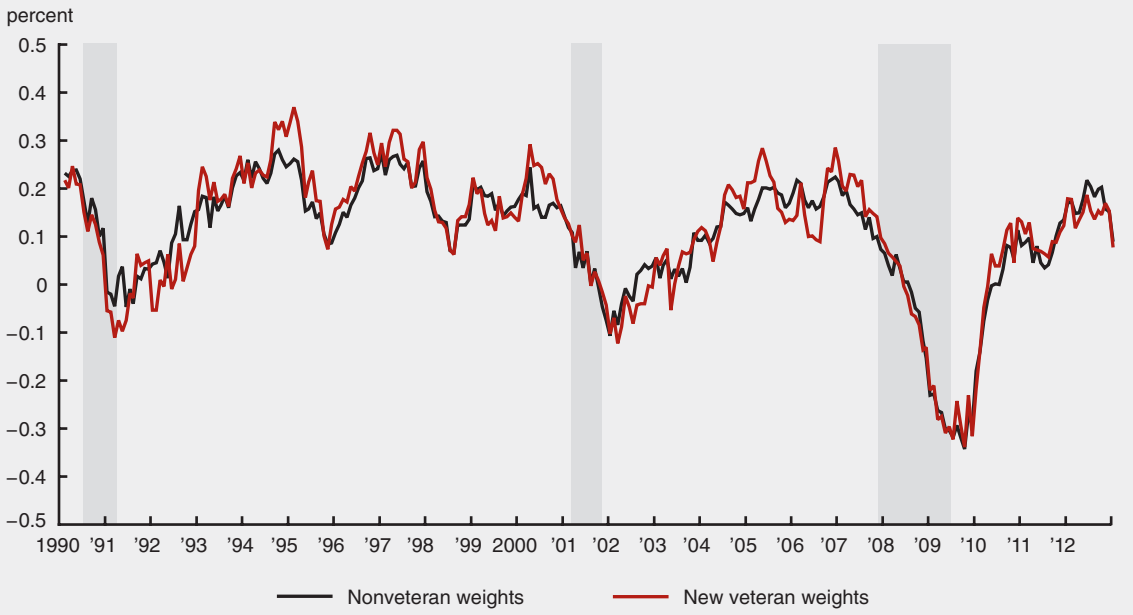
Industry	Nonveterans	New veterans
Agriculture and mining	2.7	2.0
Construction	6.5	9.2
Manufacturing	13.5	16.9
Transportation and utilities	4.9	9.7
Wholesale and retail trade	18.6	15.8
Education and health	21.1	10.5
Other services	28.5	24.5
Government	4.2	11.5

Note: The columns report the percentage of nonveteran and new veteran employment by major industry group.

Source: Authors' calculations based on pooled monthly data from the U.S. Bureau of Labor Statistics, *Current Population Survey*.

FIGURE 5

Actual and counterfactual aggregate employment growth



Note: The figure lists the aggregate employment growth rate for nonveterans, as well as a counterfactual growth rate that reweights industry growth rates by the fraction of new veterans that work within each industry.
Source: Authors' calculations based on monthly data from the U.S. Bureau of Labor Statistics, *Current Population Survey*.

take the weighted average growth rate across all industries. We then calculate a reweighted average growth rate using the fraction of new veterans who work in that industry as the new weight. If industries that tend to employ new veterans are hit relatively hard during recessions, we would expect that the reweighted average growth rate would exhibit larger drops in employment growth during recessions. Figure 5, however, shows no notable differences in employment growth between the two series over our sample period. The reported differences in industry employment in table 3 are not large enough to generate a sizable difference between the actual and counterfactual growth rates. This implies that the relatively high unemployment rates of new veterans are not due to their sorting into industries that are more cyclically sensitive.

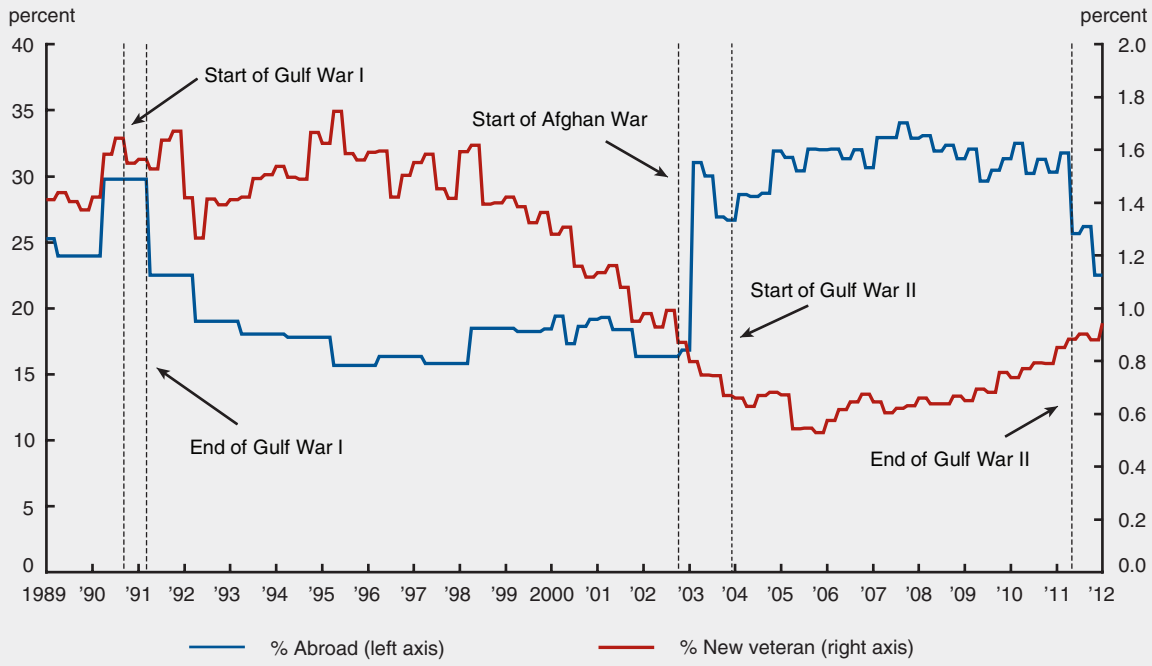
Role of wartime deployment

Finally, we examine what role, if any, deployments during wartime have on the incidence of unemployment among recent veterans. We do not have direct measures of whether veterans in the CPS were deployed overseas, nor do we have information on when they were discharged from the military. Therefore, we use aggregate data on the fraction of active duty personnel that are deployed overseas. This measure should vary over time in conjunction with major armed conflicts, even if the overall size of the (all-volunteer) military was relatively stable over this period. Figure 6 confirms that this is the case. The share deployed overseas rises from 25 percent to 30 percent of active personnel during Gulf War I, then falls to almost 15 percent during the 1990s. It rises to just over 32 percent at the start of the Afghanistan War, and remains around that level until the major drawdown of troops in Iraq at the end of operations related to Gulf War II in late 2011. The fraction of the labor force made up of recent veterans varies over this period as well.[9] The fraction fell somewhat following Gulf War I, but remained relatively high for much of the 1990s. It fell steadily between 1999 and 2005, but has been rising steadily ever since.

There are several reasons one might believe that deployment during wartime may have an effect on the incidence of unemployment for new veterans. First, there are the physical and psychological effects of warfare. Individuals who return from wartime service may suffer from a variety of issues when returning home that can affect their employment prospects and not be captured by our demographic controls. Second, the training individuals receive during a wartime deployment versus

FIGURE 6

Shares of active service members abroad and new veterans in labor force



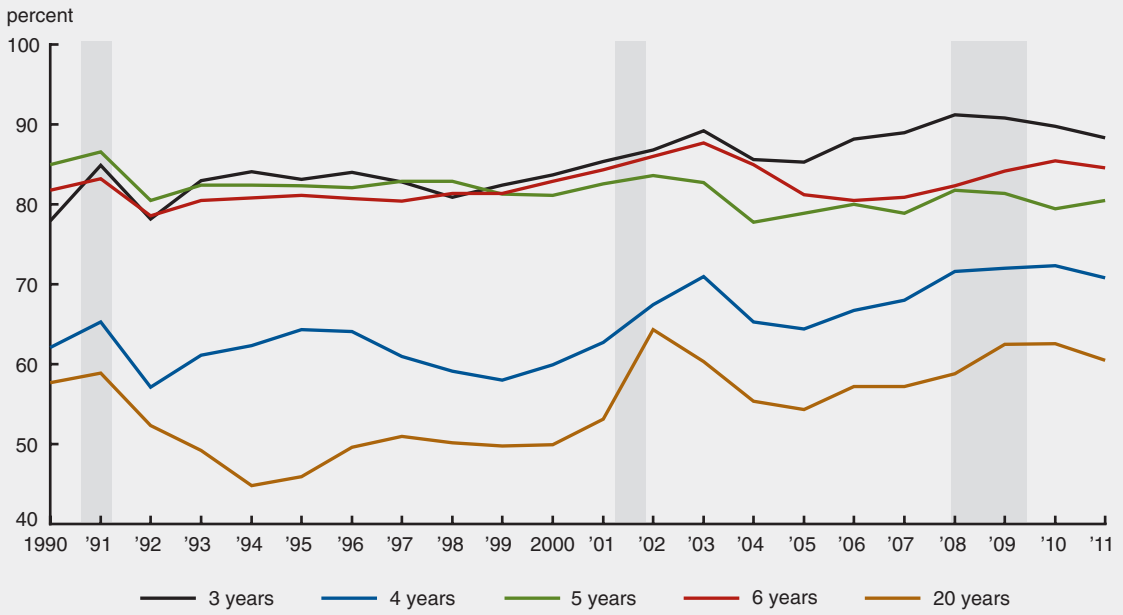
Notes: The figure lists the fraction of total active service members deployed overseas (blue line) and the fraction of the labor force made up of recent veterans (red line). The dashed lines represent the beginning and end of major military conflicts.

Sources: Authors' calculations based on deployment data from the U.S. Department of Defense, Personnel & Procurement Reports and Data Files, and pooled monthly data from the U.S. Bureau of Labor Statistics, *Current Population Survey*.

what they receive during a peacetime deployment may differ. If skills gained from peacetime training are more transferable to the civilian labor market, then those veterans who return from wartime service may be at a relative disadvantage when seeking civilian employment. Third, the higher demand for personnel during wartime may cause recruiters to reduce enlistment standards. As noted above, recruiters may relax education standards in response, and the evidence in table 1 (p. 5) suggests that fewer recruits had acceptable AFQT scores during the two wartime periods in our sample. Recruiters might also relax other standards not captured by the data, for example, standards relating to physical fitness or criminal history. If these characteristics are correlated with a lower probability of finding a job among the civilian population, then an influx of individuals with these characteristics during wartime will cause the subsequent new veterans to have lower job-finding probabilities, on average. Finally, wartime may cause a selection effect for new veterans. That is, wars increase the opportunity cost of (re)enlistment. This may cause individuals who may have been better suited for either starting or continuing a military career to choose civilian work instead. This may cause a "mismatch" between the skills of these individuals and the skills required for the available civilian jobs, limiting their job prospects. This notion of mismatch is analogous to that in models of structural unemployment.[10] In these models, workers in declining industries (for example, manufacturing) are eventually forced to search for work in industries where their skills are less valuable. Consequently, they have a harder time finding work, and often earn lower wages as a result. Figure 7 reports reenlistment rates for active service members based on their total years of military service. We focus on individuals with three to six years of tenure because, empirically, they are the most likely to exit the military among individuals with less than ten years of service, as well as individuals with 20 years of tenure, because the start of pension eligibility at that point causes a discrete drop in retention. Note that there is a similar drop in retention after four years because that is when the commitment requirements for officers trained through the Reserve Officers' Training Corps ends. The figure shows sizable drops in retention following Gulf War I and after the start of Gulf War II.

FIGURE 7

Military reenlistment rates by tenure



Note: The lines represent reenlistment rates for service members with the listed number of years of military service.
Source: Authors' calculations based on deployment data from the U.S. Department of Defense, *Population Representation in the Military Services: Fiscal Year 2011 Summary Report*.

It also shows large increases in retention when labor market conditions are weak, notably during the 1991 recession and during the 2001 recession and subsequent jobless recovery. Notably, however, the Great Recession period does not show nearly as large a spike in retention rates as the previous two downturns. We consider this to be suggestive evidence that wartime deployments may have had at least some effect on the reenlistment decisions of longer-tenured active service members.

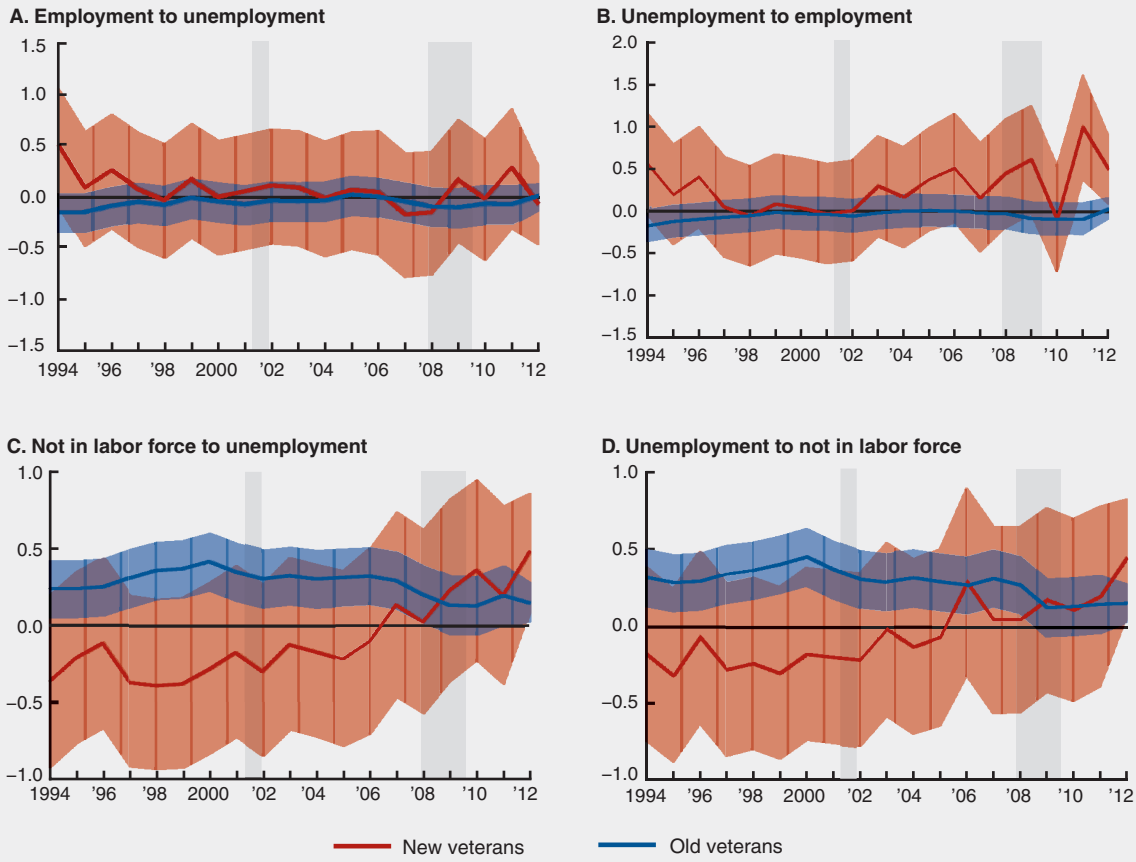
We estimate the effects of wartime deployment on the unemployment incidence of recent veterans by expanding the model from the first column of table 2. The second column reports the results of adding the share of active service members deployed overseas, both by itself and interacted with new veteran status, directly to the ordinary least squares (OLS) regression. We use the level rather than the change in the share deployed overseas because our hypothesis suggests that potential wartime should stem from the total number of veterans serving overseas, not the change in the number. The results suggest that wartime deployments have a substantial effect on the unemployment outcomes of new veterans. First, the effect of being a new veteran switches its sign, yet it remains statistically significant. The results now suggest that, all else equal, the unemployment rate of recent veterans would be 1 percentage point lower than the rate for nonveterans. Furthermore, while there remains a significantly positive effect of jobless recoveries on the unemployment incidence of new veterans, the additional effects of the Great Recession and its subsequent jobless recovery disappear once we add the controls for the percentage of service members serving abroad. The estimates are somewhat positive (about 0.3–0.4 percentage points), but neither is significant. The percentage abroad variable alone predicts lower unemployment, implying that wartime deployments and unemployment are negatively correlated over our sample period. The interaction of percentage abroad with new veteran status, however, predicts a sizable increase in the incidence of unemployment. Being a new veteran when the percentage of service members deployed overseas rises by 1 percentage point predicts a 7 percentage point increase in the probability of being unemployed. Thus, once we control for all factors, extended wartime deployments, not the effects of the Great Recession, appear to account for the relatively high unemployment rates among recent veterans.

Dynamics of new veteran unemployment

As a final exercise, we examine the gross flows of individuals into and out of unemployment to see

FIGURE 8

Unemployment transitions by veteran status



Notes: The figure lists estimates of the interaction of year fixed effects with veteran status from the regression of the each listed transition probability on these variables, as well as demographic and geographic controls: See text for details. Nonveterans are the reference group. The shaded areas represent 95 percent confidence intervals.
Source: Authors' calculations based on pooled monthly data from the U.S. Bureau of Labor Statistics, *Current Population Survey*.

where the differences between the experiences of new veterans and others are greatest. In particular, we want to know whether the high unemployment rates of new veterans are due to relatively lower job-finding rates, higher probabilities of job loss, or weaker labor force attachment.

We calculate the transition rates between employment (E) and unemployment (U) and between unemployment and out of the labor force (N) separately for new veterans, old veterans, and nonveterans. We estimate a model as in equation 1, with the same demographic controls as before, but this time we use the probability of transitioning to another labor force state as the dependent variable. We estimate the relative differences in transitions for flows between employment and unemployment (EU), unemployment and employment (UE), unemployment to exiting the labor force (UN), and entering the labor force as unemployed (NU). Note that our measure of new veteran status does not identify individuals right at the point of military discharge, so the observed transitions may occur following one or more spells of employment or unemployment. This also implies that NU transitions are likely not direct transitions from military service to unemployment.

Our results are shown in the four panels of figure 8. Panels A and B show the relative differences in movements between E and U. In both cases, differences between old veterans and nonveterans are almost nonexistent. The differences between new veterans and nonveterans are also relatively small. If anything, new veterans show somewhat higher job-finding rates (UE transitions) from 2005 forward. Panels C and D show movements between N and U. These panels show

that old veterans have a consistently higher probability of either entering or leaving the labor force. New veterans had a somewhat lower chance of either entering or leaving the labor force in the mid-1990s, but there is an increasing trend in their relative difference so that, by the late 2000s, new veterans have a slightly higher chance of moving between unemployment and out of the labor force. This suggests that recent veterans may now have weaker labor force attachment than they did previously, though the differences with nonveterans are not statistically significant at any point during the sample period.

Conclusion

Recent veterans have had high unemployment rates relative to nonveterans during and after the Great Recession. These relatively high rates did not appear during the late 1990s and early 2000s, though recent veterans also had relatively high unemployment rates in the early 1990s, at the time of the 1990–91 recession and Gulf War I.

We find that demographic differences between new veterans and nonveterans account for only a small fraction of the differences in unemployment rates. We also find only limited evidence of an effect from the business cycle. For example, there are no differences in the incidence of unemployment during the 2001–03 economic downturn. Instead, we find evidence that deployments during wartime have a strong negative effect on the subsequent labor market outcomes of recent veterans. We find little evidence that this is due to differences in the unemployment dynamics between new veterans and nonveterans, though new veterans exhibit a slight declining trend in their labor force attachment over the sample period.

While the effect of wartime deployments appears strong, the root causes of this effect are uncertain. Wartime deployments may affect the physical or psychological abilities of new veterans or restrict the amount of training they receive that would be transferable to the civilian labor market. Deployments may also be a time of lax recruiting standards for the military, and the high unemployment rates may simply reflect the reentry into the labor force of individuals who would have had trouble finding work regardless of military service. Finally, wartime deployments may reduce the incentive for individuals to reenlist and, consequently, lead individuals who were best suited to a military career to seek civilian employment instead. Such a mismatch of military skills with the civilian labor market for these individuals may lead to a lower job-finding rate.

We conclude that the extended deployments that began in late 2001 and continue to the present period have not only put a strain on these individuals during their military service, but also appear to be hampering their labor market outcomes once they return to civilian life. We hope that further research on the relationship between wartime deployments and the labor market outcomes of new veterans can shed light on why such an adverse effect exists.

NOTES

[1]For example, see Fletcher (2011) and Dewan (2011).

[2]For example, see the efforts put forth by JPMorgan Chase Bank (www.chase.com/online/military/military-jobs.htm) and the Walt Disney Company (http://disneycareers.com/en/working-here/heroes-work-here/).

[3]Mismatch in this sense has been studied theoretically for individuals who switch sectors in which they have accumulated some amount of sector-specific human capital, which is lost upon movement to a new industry. Examples of economic models along these lines include Moscarini (2001) and Shimer (2007). This is also related to policy discussions of a skills mismatch potentially leading to structural unemployment (see, for example, Şahin et al., 2012).

[4]A notable exception is the study by Angrist (1998).

[5]See, for example, the studies by Angrist (1990) and Angrist and Krueger (1994).

[6]See, for example, Frazis et al. (2005) and Shimer (2012).

[7]Available at http://siadapp.dmdc.osd.mil/.

[8]See, for example, Beaudry and DiNardo (1991) and Khan (2010).

[9]In this section, we use an indicator for new veteran status that is adjusted for the change in the definition used between 2005 and 2006. We do this to remove any break in the time series created by the definitional change. When we reestimated our earlier results with the adjusted measure, we obtained nearly identical results.

[10]See, for example, the model by Shimer (2007), and empirical work by Şahin et al., (2012).

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