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UNION ARMY DESERTERS LEAVE HOME

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ABSTRACT

During the Civil War not all men served honorably and this was known by everyone in their communities. We study how shame and ostracism affect behavior by examining whether men who deserted from the Union Army, and who faced no legal sanctions once the war was over, returned home or whether they moved and re-invented themselves. We build a unique panel data set that provides us with a control group for deserters because we can identify men who deserted but then returned to fight with their companies. We find that, compared to non-deserters and returned deserters, deserters were more likely to move both out of state and further distances. This effect was stronger for deserters from pro-war communities. When deserters moved they were more likely to move to anti-war states than non-deserters. Our study provides a rare test of the empirical implications of emotion. While both shame and ostracism would push deserters out of their home community, we find no evidence that deserters faced economic sanctions.

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1 Introduction

Fourteen percent of surviving Union Army soldiers had ever deserted during the Civil War, the bloodiest conflict in the nation's history. Because such a large fraction of men had served in the army roughly 6 to 11 percent of the Northern male cohorts born between 1835 and 1845 were deserters.[1] How could these men, whose war record was known to all in their home communities, be re-integrated into post-war society when they had been marked as having failed cause and comrades? Deserters faced the choice of returning home in shame or of moving and re-inventing themselves. Contemporary accounts are surprisingly silent about their fates.

This paper uses a unique panel data set to uncover Union Army veterans' community interactions between enlistment and 1880. If only standard economic push and pull factors influence migration then we should observe no difference in the migration choices of observationally identical deserters and non-deserters. But, shame, defined as "the negative emotion experienced when an actor knows that others are aware that the actor has behaved in a blameworthy fashion" (Fessler and Haley 2003), would lead deserters to leave home because the "action tendency" of shame is to hide or disappear (Elster 1998). Public shaming and ostracism, the social exclusion of an individual, would re-enforce the incentive to exit the home community. The Civil War provides us with a unique opportunity to study behavior motivated by shame. Once the war ended there were no legal sanctions preventing deserters from returning. Because even on the Northern home front the Civil War was deeply divisive (e.g. Klement 1999), we expect that deserters from pro-war communities would feel the greatest shame and be least likely to return.

Recent studies have investigated the economic benefits of group loyalty (Berman 2000; Berman 2003; Levitt and Venkatesh 2000; La Ferrara 2003; Luttmer 2001). In contrast, our work examines the social and economic costs of disloyalty. We draw on the economics of identity and

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[1]Estimated from the random sample that is the basis of our subsequent analysis.

of emotion. Identity, a concept common in both the pyschology and sociology literature, has recently entered economic models (Akerlof and Kranton 2000). In these models identity refers to a sense of self determined not just by the actor's own actions but also by the actions of other group members and of their perceptions of him. Emotions such as shame result from a violation of the group's norms of behavior. Group members may respond with economic sanctions or with such non-pecuniary sanctions as ostracism, which will be effective if the violater cares about social exclusion. While emotions are never directly observable, we argue that our empirical facts are consistent with the hypothesis that shame and ostracism played a key role in deserters' migration decisions. We examine in detail alternative explanations for the patterns we observe.

2   Veterans' Decisions

The Civil War directly touched all communities. In the Union 65 to 98 percent of the cohorts born between 1838 and 1845 were examined for military service, and 48 to 81 percent of these cohorts served, the remainder rejected for poor health. The war affected all social classes within a community because in this war soldiers were representative of the northern population of military age in terms of real estate and personal property wealth in 1860 (Fogel 2001) and in terms of literacy rates (Costa and Kahn 2003a). And in this war local communities had almost complete information on the daily lives of their men and boys in the military (McPherson 1997). Once the war was over the victorious soldiers returned home. Deserters were dishonorably discharged with forfeiture of pay and could return home without fear of legal sanctions (Lonn 1928: 202-207; United States War Department. 1880-1901. Series III, Vol. 5, 1900: 110).[2]

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[2]Although deserters were officially disenfranchised by the United States government, this disenfranchisement was ineffectual because states regulated voting requirements (United States War Department. 1880-1901. Series III, Vol. 5, 1900: 110). Only Kansas had a law, dating from 1859, specifying that a dishonorable discharge was grounds for exclusion from voting (Keyssar 2000: 328-390).

There was no legal reason for the deserters to run away from their home communities and if the past was forgotten both cowards and heroes should be equally likely to return home. But, cowards might be ashamed to face the community and the community might ostracize them. Identity theory, with its emphasis on the importance of self-image and the opinions and expectatations of one's reference group, formalizes this intuition (Akerlof and Kranton 2000; Tajfel 1974; Lynd 1958; Merton 1957). Utility depends upon a person's identity and identity in turn depends upon the degree to which a person's own actions and the actions of others correspond to the reference group's prescribed behavior. When a member violates the group's social norms this affects his own identity and also the identity of everyone within that group, leading to feelings of shame on the part of the individual and to social scorn and ostracism or public shaming on the part of the group. While norms are notoriously difficult to measure (Durlauf and Fafchamps 2003), we have a benchmark for community norms, namely their pro-war sentiment. Men from communities that were strongly in favor of the war, communities which we know produced a disproportionate share of heroes (Costa and Kahn 2003a), should be less likely to return home if they deserted. In contrast, men from anti-war communities who deserted may have been just as likely as non-deserters to return home. In such a setting, not only might deserters from pro-war communities be more likely to migrate they might also be more likely to change their names to hide their past.

This paper focuses on how Civil War veterans re-integrated into society after the war. All faced a locational choice. Should they return to their home communities or move? Consider first the migration decision of deserters and non-deserters once the war is over. Using Akerlof and Kranton's (2000) framework, both a deserter and a non-deserter will move if utility in the home community, h, is less than utility in the best alternative community he could move to, m,

$$U(C_{h,t}, I_h(d, a_h, P_h)) < U(C_{m,t} - F, I_m(d, a_m, P_m)), \tag{1}$$

where C is his consumption, d is an indicator of deserter status, F is a fixed cost to moving, and I is identity which in turn depends upon desertion status, the actions (a) of community members (including other soldiers' desertion status and citizens' pro- or anti-war actions), and community prescriptions, P, i.e. how pro-war the community is. In a world of costly information transfer there will be an asymmetry of information across communities. A coward's home town may ostracize and scorn him, and even if it forgave him, he might be too ashamed to face his friends. But, in a new community a deserter can escape from his past and re-invent himself because the new town will not know of his war record. In addition, a type of Tiebout sorting can occur such that deserters seek out more sympathetic (anti-war) communities. A non-deserter's migration decision has the familiar economic push and pull factors.[3] But, the non-deserter will face no shame. Shame can therefore be thought of as either a cost to deserters to staying in the home community or as affecting deserters' expectations of future life in the community (Elster 1998).

A coward who feels no shame may still face community ostracism and this creates an incentive to migrate away. Although choosing heroism or cowardice during the war is a one-shot game, making strategic sanctioning ineffective, sanctioning could still be motivated by revenge, by a sense that deserters had not done their fair share, or by the sense that deserters had personally harmed men who served honorably or the cause they had sacrificed for (Kandel and Lazear 1992; Fehr and Schmidt 1999; Levine 1998; Rabin 1993).[4] Even if deserters felt no connection to their home communities and therefore no shame (the identity part of the utility function drops out), their consumption would be lower in a community that imposed economic sanctions. A pro-war

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[3]He may also Tiebout sort because a non-deserter who started life in an anti-war county might feel mismatched. In states where soldier and sailor votes were tabulated separately, McClellan received 45 percent of the civilian vote, but only 22 percent of the military vote in the 1864 presidential election (calculated from Long 1994: 285).

[4]Dynastic linkage could induce compliance even in short-term interactions. In developing countries today in an overlapping generation setting potential punishment of children leads to good behavior of the current generation (La Ferrara 2003). In our setting there is nothing that children of deserters can do to "atone" for their father's actions.

community would be more likely to impose such sanctions. A pro-war community would also be more likely to impose non-pecuniary sanctions and these would be effective as long as the deserter identified with the home community, in which case he would feel shame. While we will not be able to explicitly distinguish between shame and ostracism, we will be able to distinguish between shame and ostracism and economic sanctions.

The desertion and migration choice are sequential, separated by several years, but the expectation of shame and ostracism can bind them into one decision. Consider the case of a rational forward looking soldier who is deciding whether or not to desert.[5] If this soldier believes that by deserting he will not be able to return home because of the shame and ostracism, he may never desert at all. While we acknowledge the possibility that the migration and desertion decision are bundled we discount this.

A more realistic scenario is that soldiers myopically base their desertion decision on ideology, their risk of death, and on social capital within their fighting units.[6] A reduced form representation of the soldier's desertion decision might be written as

$$D = \gamma_1 \text{HC} + \gamma_2 \text{SC} + \gamma_3 \text{Horror} + U \tag{2}$$

where a soldier deserts if D > 0. Those highly committed to the cause (HC) are less likely to desert, but even highly committed men will desert if social capital within their company (SC) is low enough and if the horrors of war that the company is exposed to are high enough. Soldiers

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[5]There is a similarity between this decision and the decision to go on welfare. A forward looking agent would realize the short run benefits and the possible long-run stigma costs of going on welfare. Bertrand et al. 2000 find evidence for social network effects on welfare take-up rates and also on marriage and fertility, but cannot determine whether the mechanism is information or culture.

[6]The decision was unlikely to be based upon penalties for desertion. Executions of deserters were rare. Out of roughly 200,000 men who deserted from the Union Army, 80,000 were caught and returned to the army and 147 were executed for desertion (Linderman 1987: 174, 176). In our random sample of Union Army soldiers roughly 15 percent of men died while in the army either from wounds or disease.

could also succumb to extreme fear (which can be thought of as temporarily lowering their discount factor or raising their perceived probability of death), as embodied in the identically independently distributed error term, U. Equation 2 highlights three sets of possible instrumental variables that we discuss later in greater detail – company proxies for war exposure and proxies for company social capital and own ideology.

Figure 1 illustrates the sequential decision. A soldier can either desert or not desert. If he deserts he can either remain a deserter or he can return to fight again, either willingly or under duress.[7] We expect that there would be much less shame in being a returned deserter than in being a deserter because returned deserters returned to fight until the end of the war. We observe these decisions for everyone in the sample. Once the war is over a soldier can either move or remain in the home community. Forward looking men who forsaw future ostracism in their community might adopt an "option value" approach of deserting and then returning home and seeing how they were treated in their communities.[8] Because soldiers had never had the experience of deserting and then returning to their home communities, they could not predict the consequences of their action. As this uncertainty was resolved, they could then migrate based upon Equation 1. Soldiers who move then pick a new community. We observe these migration decisions for the individuals we are able to link to the 1880 census, a census which provides us with locational and occupational information on veterans when their expected median age was 41

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[7]Roughly 25 percent of returned deserters surrendered voluntarily, including those under presidential amnesty proclamations. The remainder were arrested (Lonn 1928: 179).

[8]Official war records support our sequential framework. Lonn (1928: 198-208) reports that during the war bands of deserters from both sides would roam the territory in or adjacent to the Confederacy where fighting had taken place and that northern deserters were also particularly likely to be found in Canada, the Territory of Wyoming, and the mountainous, wooded, and sparsely settled regions of Pennsylvania. Very few deserters went to the Confederacy. Prior to late 1863, before the federal government actively pursued deserters, deserters would also simply go home. After 1863, deserters fled their home communities for less populated areas. Once the war was over local officials complained that their communities were overrun with deserters who had returned home (Lonn 1928: 198-208). We acknowledge the possibility that a deserter may be more likely to avoid detection in an anti-war home community and thus that self-interest, independent of identity, would push a soldier to such a community. However, as we discuss in the Results section, we find no evidence for this.

and thus when most of their life-cycle migration was complete.

3   Empirical Framework

While emotion and identity are never directly observed, the social interactions triggered by shame and ostracism can be detected through estimation of discrete choice models. One prediction is that, conditional on being found, deserters are more likely to leave home, particularly if they are from a pro-war community. We test this by running probit regressions of the form

$$\Pr(m_i = 1) \quad = \quad \Phi(\beta_0 + \beta_{RD}RD_i + \beta_D D_i + \beta_P P_h + \beta_X X_i) \tag{3}$$

$$\Pr(m_i = 1) \quad = \quad \Phi(\beta_0 + \beta_{RD}RD_i + \beta_D D_i + \beta_P P_h + \beta_{PD}(D_i \times P_h) + \beta_X X_i) \tag{4}$$

where m is an indicator variable equal to one if the soldier moved, RD is a dummy variable equal to one if the soldier was a returned deserter (one who later returned to fight) and D is a dummy variable equal to one if the soldier was a deserter (non-deserter is the omitted category), P_h is a measure of the home community's pro-war identity, and X is a vector of individual characteristics and of state fixed effects. We predict that both β_D and β_{PD} should be greater than zero. (Since we will be using a measure of anti-war sentiment the coefficient on our interaction term will have a negative sign.)

A comparison of migration propensities for deserters and non-deserters may not yield a valid test for the impact of shame because desertion status is not randomly assigned. While desertion could cause migration, it could also proxy for other attributes. Deserters may be highly mobile people who cannot commit to either the military or to a specific community. In terms of observable characteristics deserters were more likely to be married, to be foreign-born, to have low wealth, and to be illiterate (Costa and Kahn 2003a). Thus differences in human capital are

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an alternative explanation for differential migration rates.

We have two approaches for recovering the causal effect of desertion on mobility. We use returned deserters as a control group for deserters in the above equations. While returned deserters resemble deserters along key observable characteristics such as wealth and illiteracy rates, they returned to fight and were honorably discharged. We also have a plausible set of instruments for deserter status in measures of company specific likelihood of death or injury (under the assumption that either war horror and post-war shell shock are not related or that war horror does not affect post-war migration), in measures of company specific social capital, and in measures of ideological committment (see Equation 2). While companies were drawn locally, company characteristics are not highly correlated with county characteristics (county heterogeneity can explain only about 3 to 9 percent of the variance in company heterogeneity) and county characteristics did not predict desertion. Companies consisted of roughly 100 men and desertion rates were lower in more homogeneous companies suggesting that social capital in companies reduced shirking. In addition, desertion rates were higher when death rates were higher (Costa and Kahn 2003a). We therefore run a probit equation of the form

$$\Pr(m_i = 1) \quad = \quad \Phi(\beta_0 + \beta_D D_i + \beta_P P_h + \beta_X X_i) \tag{5}$$

in which we instrument for deserter status using different sets of instrumental variables: war horror, ideological committment, and company characteristics. These allow us to recover the treatment effect of being a deserter as distinct from an un-instrumented probit where deserter status may reflect both treatment and selection effects. We investigate different sets of instrumental variables out of concern that our measures of ideological committment and company characteristics may capture community characteristics. If desertion proxies for an unobservable tendency toward high mobility then the coefficient on desertion in the instrumental variables regression should be

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smaller than in the simple probit specification. Alternatively, the instrumental variable results may yield a larger estimated coefficient on deserter status than in the ordinary probit. Suppose that there is a set of soldiers who greatly enjoy living in their pro-war community or whose families are prominent in the community. The anticipation of shame, including that directed against the entire family, increases the probability that they will not desert in the first place. In this case, our set of deserters is less likely to include men from the most pro-war communities. The ordinary probit would therefore underestimate whether a random soldier assigned "deserter" status would move away.

Shame and ostracism also predict that deserters might be more likely to change their names and re-invent themselves, again particuly if they are from a pro-war community. We therefore examine what determines the probability that we find a soldier in the 1880 census,

$$\Pr(f_i = 1) \quad = \quad \Phi(\beta_0 + \beta_{RD}RD_i + \beta_D D_i + \beta_P P_h + \beta_X X_i + \beta_U U_i) \tag{6}$$

$$\Pr(f_i = 1) \quad = \quad \Phi(\beta_0 + \beta_{RD}RD_i + \beta_D D_i + \beta_P P_h + \beta_{PD}(D_i \times P_h) + \beta_X X_i + \beta_U U_i), \tag{7}$$

where f is an indicator equal to one if we found the soldier and U is an indicator equal to one if the soldier had an uncommon name. Our finding equations convey both information about who is likely to hide from the past and they allow us to re-estimate the probability of a move, controlling for selection (the correlation between our finding equation and our moving equation).

Where do migrants go? Deserters may seek out sympathetic communities controlling for such state characteristics as distance moved. We estimate the effect of pull factors on the locational decisions of movers as a function of deserter status using conditional logit models.[9]

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[9]We do not estimate a nested logit model in which the decision is first whether to stay or to move to another state and then, for movers, the decision is what state to move to, because the inclusive value would barely differ among men. For example, it would be the same for any two men who enlisted in the same state.

We use our conditional logit models to determine if returned deserters have the same preferences as deserters or non-deserters. We run two different specification, one in which we interact the characteristics of the potential destinations with a dummy for returned deserter (excluding deserters from the sample) and one in which we interact these characteristics with a dummy for deserter,

$$\Pr(s_{ij} = 1 | m_i = 1) \ = \ F(\alpha_0 + \beta_P P_j + \beta_X X_j + \beta_{D,P} D_i P_j + \beta_{D,X} D_i P_j) \tag{8}$$

$$\Pr(s_{ij} = 1 | m_i = 1) \ = \ F(\alpha_0 + \beta_P P_j + \beta_X X_j + \beta_{RD,P} RD_i P_j + \beta_{RD,X} RD_i P_j) \tag{9}$$

where s is the potential state the soldier could move to, i indexes the individual, j indexes the state, P_j measures how pro-war the state was, X_j is a vector of other state characteristics, D is a dummy equal to one if the individual was a deserter, and RD is a dummy equal to one if the individual was a returned deserter.

While both shame and ostracism and sanctions yield similar migration predictions, we can test whether communities imposed economic sanctions on deserters. If communities impose economic sanctions on deserters then we expect that there will be a monetary penalty to being a deserter. We test this by examining the occupational transitions of non-deserters, returned deserters, and deserters.

4 Data

Our data are based upon the military service records of enlisted Union Army soldiers linked backwards to the 1860 census.[10] The military service records provide information on age at

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[10]The full set of military service records and of the 1860 census records are available from the Center for Population Economics, http://www.cpe.uchicago.edu, and were compiled by a team of researchers led by Robert Fogel.

enlistment, year of enlistment, place of enlistment and also all military service events such as death, injury, illness, desertion, arrest, AWOL, and discharge. The census records provide information on wealth and illiteracy and allow us to infer marital status in 1860. As detailed in the Appendix, our sample is based upon 20,301 men, known to have survived the war, known not to be dead by 1880, and with full information on military service dates and on basic demographic characteristics. We searched for these men in the 1880 census using only name, place of birth, and expected age in 1880 and found 7,224 (36 percent) of them.[11] Compared to our initial sample these 7,224 men were more likely to be native-born, were from richer households, and were less likely to be from the rapidly growing urban counties. Because we do not know if the individuals we were searching for were still alive, we cannot determine whether our sample differences are due to mortality attrition or to the meticulousness of the census enumerators or the respondents. However, in both samples, we have the full range of socioeconomic and demographic variation.

We restrict our sample to men for whom we can identify county of enlistment, leaving us with a sample of 18,820 men, 6,549 of whom are linked to the 1880 census with an idenfiable 1880 county. Further restricting the sample to men with more complete information on observable characteristics leaves us with 18,274 men, 6,479 of whom are linked to the 1880 census. We examine both moves across states and moves of at least 350km (a distance larger than the median within state cross-county move but smaller than the median state move) to control for differences in state sizes. However, we prefer to focus on state moves because we can then examine how state characteristics affect where migrants go. We classify all men as either non-deserters, returned deserters, or deserters. Table 1 lists by deserter status the variables we created describing recruits' individual characteristics and some of their home community characteristics. In addition to these variables we also created state fixed effects, dummies for missing individual information, variables

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[11]Our finding rate compares favorably with linkage rates done with samples that are not in machine-readable form. For example, in linking from the 1850 to 1860 censuses, Ferrie (1996) had a finding rate of 9 percent.

describing company characteristics (which we use as instrumental variables for deserter), and variables describing the characteristics of the states that were potential destinations for veterans. (See the Data Appendix for details.)

Table 1 shows that, compared to non-deserters, deserters were poorer, were more likely to be foreign-born, particularly Irish, were less likely to be farmers and more likely to be laborers, were less likely to be volunteers, were more likely to be married, were more likely to be illiterate, were less likely to have enlisted early, and were more likely to be from a large town. Returned deserters resembled non-deserters in terms of birth place and volunteer status and they resembled deserters in terms of wealth, illiteracy, marital status, and size of city of residence. Returned deserters were less likely to be farmers than non-deserters but more likely to be farmers than deserters.

Recall that we predicted that deserters from anti-war communities would be less likely to leave home than deserters from pro-war communities (see Equation 4). As our measure of how anti-war a community was, we use the share of the vote for McClellan in the 1864 presidential election. The 1864 Democratic platform was one of peace without victory, resolving that "immediate efforts be made for a cessation of hostilities" (Long 1994: 283). Secret societies which actively helped northern soldiers desert, which discouraged enlistments, and which resisted the draft were active in such Democratic strongholds as the east north central region (Waugh 1997: 211). While a vote for McClellan was a vote against war, an ideological vote, and a vote for economic self-interest (see the Voting Appendix), we will later argue that the interaction term between McClellan's share of the vote and deserter status primarily reflects anti-war sentiment.

5 Results: Migration

Deserters were more likely to move across states between enlistment and 1880 than non-deserters or returned deserters. (see Table 2). Sixty-four percent of deserters moved across states whereas only 44 percent of non-deserters and 42 percent of returned deserters moved across states.[12] Deserters were also more likely to move further away than non-deserters or returned deserters (see Figure 2), but deserters who stayed within state were less likely to move across counties (see Table 2), suggesting that deserters substituted distant moves for close moves. Note that returned deserters and non-deserters had almost identical migration propensities. Moving probabilities differed by the percentage of the vote in the home county for McClellan (see Table 3). In counties where McClellan received less than 40 percent of the vote, 68 percent of deserters moved across state compared to 47 percent of non-deserters. But in counties where McClellan received more than 60 percent of the vote, 58 percent of deserters moved across state compared to 52 percent of non-deserters. We also observe such differences for the probability of moving at least 350km.

Table 4 shows the calculated differences in the moving propensities of non-deserters, returned deserters, and deserters by the percentage of the vote cast for McClellan in the 1860 home county. Being in a county where McClellan received less than 40 percent of the vote increases deserters' probability of moving across states by 0.16 relative to non-deserters and by 0.08 relative to returned deserters. Deserters' probability of moving at least 350km increases by 0.13 relative to non-deserters and by 0.14 relative to returned deserters. When deserters did move the state that they moved to was more pro-McClellan than the state non-deserters moved to and it was also more distant in terms of miles and in terms of latitude (not shown).

As shown in Table 1, non-deserters, returned deserters, and deserters differed in terms

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[12]This was a period of high migration rates. In a random sample of men who enlisted in the Union Army we find that 44 percent of the native-born moved between their state of birth and their state of enlistment.

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of observable characteristics. We therefore estimate migration models controlling for these differences. Table 5, which presents the results from our probit regressions of the probability of moving on deserter status (Equations 3 and 4), shows that deserters' probability of moving across states was higher by a statistically significant 0.135 compared to both non-deserters and returned deserters. We find the comparison of deserters with returned deserters quite compelling. Deserters' probability of moving at least 350km was higher by 0.115.[13] A tobit model shows that, controlling for all other characteristics, movers who were deserters moved 172.367km ($\hat{\sigma}$=52.439) compared to non-deserters whereas movers who were returned deserters moved only 1.482km ($\hat{\sigma}$=56.028) compared to non-deserters. When we interact deserter with the logarithm of the percent of the county vote cast for McClellan we find that a standard deviation increase in the percentage of the vote cast for McClellan would lower the state migration probability of a deserter by 0.053. Although the interaction between deserter and the percent of the vote cast for McClellan is only a marginally statistically significant predictor of moves of at least 350km, the interaction term and deserter status are highly jointly statistically significant.[14] When we restrict the sample to men for whom we had a higher quality link to the 1880 census, we find that the magnitude of the coefficients is similar, but the standard error is much larger because of the considerable reduction in sample size.

Deserter status may be correlated with unobserved factors that influence migration (see Equation 2). We therefore instrument for deserter status using 1) such indicators of war horror as the overall company death rate, the company death rate from disease, the company death rate at specific times, and dummy indicators of battles and 2) our indicators of war horror plus such

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[13]We obtain coefficients of similar magnitude when we run linear probability models with county fixed effects, suggesting that we are not simply measuring county group effects.

[14]Note that the coefficient on the percentage of the vote case for McClellan is not statistically significant, suggesting that non-deserters (who overwhelmingly voted for Lincoln in 1864) were not alienated from communities that favored McClellan.

company characteristics as birth place fragmentation, occupational fragmentation, the fraction of a company of a specific occupation, and the company Gini coefficient for 1860 personal property wealth, and ideological characteristics such as the percent of the vote received by Lincoln in the 1860 election in the recruit's county of enlistment (see the footnote to Table 6 for the full set of instrumental variables). Our identifying assumption is that war horror, company social capital, and ideology in 1860 affect desertion but not migration. While war horror which leads to shell shock could affect the migration decision, we find no evidence that it does. In more homogeneous companies desertion rates were lower and when company death rates were high desertion rates were higher too (Costa and Kahn 2003a). Recall that county heterogeneity can explain only 3 to 9 percent of the variance in company heterogeneity and that companies no longer existed after the war. Table 6 compares probit and IV probit marginals derived from Equation 5 using non-deserters as a control group for the combined category of deserters and returned deserters (our instrumental variables predict whether a soldier deserted, but not whether he returned to fight). Because our instruments are weak, with a first stage pseudo R^2 below 0.1, we prefer the simple probit estimates (Bollen, Guilkey, and Mroz 1995) and view our instrumental variables estimates mainly as a test of the direction of the bias in using a standard probit.[15] The IV marginals on deserter are bigger than the probit marginals in all cases. Consider the case of moves across state and of moves of at least 350km without controls for county characteristics. In the simple probits the coefficients on deserter status are 0.10 and 0.09, respectively. When we instrument using our war horror instruments alone the coefficients increase to 0.40 and 0.31, respectively. Using the Smith and Blundell (1986) exogeneity test, we reject the hypothesis that desertion status is exogeneous ($\chi_1^2 = 5.169$) for state moves but cannot reject the hypothesis that desertion status is

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[15]When we regress desertion status on our war horror instruments alone the pseudo R^2 is 0.05 and when we use the full set of insturements the pseudo R^2 is 0.07. We began with a larger set of instruments but excluded some of them as invalid.

exogeneous for moves of at least 350km ($\chi_1^2 = 1.846$). When we use the full set of instruments we can reject the hypothesis that our instruments are invalid for state moves in which we control for county heterogeneity, a proxy for community social capital (Costa and Kahn 2003b), but we cannot reject the hypothesis for our other specifications.[16] Note, however, that none of our coefficients shrink, suggesting that our simple probit results probably underestimate the effect of deserter status on the probability of migration.

We are less likely to find deserters compared both to non-deserters and returned deserters, suggesting that deserters may have sought to hide their past by changing their names (see Table 7). Running the regression specified in Equation 6 show that compared to non-deserters, a deserter's probability of being found is lower by 0.095. Compared to a returned deserter, a deserter's probability of being found is lower by 0.057. When we interact deserter status with the proportion of the vote for McClellan (see Equation 7) we find that when we control for county characteristics (or alternatively when we used county fixed effects in a linear probability model), deserters from counties where McClellan received a larger share of the vote are more likely to be found, but the effect is small and statistically insignificant. However, deserter status and the interaction of deserter status with McClellan's proportion of the vote is jointly statistically significant.

Our results are robust to controlling for selection. A potential concern is that we can only measure migration for those we can find. Our finding equation allows us to re-estimate our probit Equations 3 and 4 controlling for selection using a dummy indicator for uncommon name as the exclusion restriction. Table 8 shows that the selection correction slightly increases the magnitude of the coefficient on deserter and on the interaction between deserter and the percentage of the county voting for McClellan. Returned deserters remained indistinguishable from non-deserters.

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[16]When we include company characteristics and ideology as exogeneous regressors in the IV probit and test for the joint significance of these potential instruments we obtain a χ_{10}^2 of 15.81, implying that we can reject the hypothesis that our instruments are invalid at the 10 percent level.

When we do not interact deserter with the percentage of the county vote for McClellan we find that a deserter's probability of moving across state is 0.142 compared to a non-deserter and that his probability of moving at least 350km is 0.116 compared to a non-deserter. A standard deviation increase in the percentage of county vote for McClellan raised a deserter's probability of a state move by 0.054.

When deserters did move they sought out a state that was more pro-McClellan compared to those picked by non-deserters or returned deserters. Table 9, which presents estimates of Equations 8 and 9, shows that controlling for distance from state of enlistment as measured in miles and in minutes from the enlistment state's latitude, the odds that a deserter would move to a state were higher the greater that state's share of the vote for McClellan. A deserter was also more likely to pick a state of a different latitude, because fewer deserters were farmers and therefore did not have skills that were best used along the same latitude.[17] When we restricted the sample to men who were farmers at enlistment we found no difference in the latitude attributes of the states picked by deserters and non-deserters. However, deserters continued to pick more pro-McClellan states. When we examined locational choices by region we found that deserters were not more likely to go to the states of the former Confederacy, but they were more likely to move to a middle atlantic or east north central state. In contrast, compared to non-deserters returned deserters were no more likely to pick a pro-McClellan state.

We find some evidence that deserters from large cities were less likely to move, perhaps because of the anonymity provided by large cities. When we interact deserter status with a dummy variable that is equal to one if the deserter enlisted in a city whose population was 50,000 or more in 1860 (one of the 13 largest cities in the US), we find that in our state move regression the coefficient on deserter is 0.184 ($\hat{\sigma} = 0.035$) and that the coefficient on the interaction

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[17]Steckel (1983) documents that migration in the US had traditionally been along the same latitude because farmers could grow the same crops along the same latitude.

term between deserter and our city dummy is -0.111 ($\hat{\sigma} = 0.069$), which barely misses being significantly different from 0 at the 10 percent level. However, the coefficients on deserter and on the interaction term are jointly significantly different from 0 ($\chi^2 = 29.88$). In our long distance regression we find that the coefficient on deserter was 0.136 ($\hat{\sigma} = 0.042$) and that the coefficient on the interaction term is -0.076 ($\hat{\sigma} = 0.080$), which while insignificant is suggestive in terms of magnitude. Both coefficients are jointly significantly different from 0 ($\chi^2 = 31.71$). We suspect that our sample size is too small to precisely identify a city size effect.

6 Shame or Economic Sanctions?

Both shame and economic sanctions predict that deserters from strongly pro-war communities should leave home. But, only economic sanctions make strong predictions concerning the economic outcomes of deserters. Fortunately, the 1880 Census offers a few clues for testing the extent of economic sanctions through studying the occupational dynamics of deserters and non-deserters. A successful economic boycott of deserters might lead them to fall down the occupational ladder.

Did deserters face a monetary penalty? We find no evidence that they did. Conditional on being a farmer, an artisan, or a laborer upon enlistment χ^2 tests indicate that the occupational transitions of non-deserters, returned deserters, and deserters between enlistment and 1880 were the same (see Table 10). Either communities did not impose economic sanctions on deserters or by moving to a pro-McClellan state deserters avoided economic penalties. However, among the small group of men who were professionals or proprietors at enlistment deserters were less likely to remain professionals or proprietors and were more likely to become artisans and less likely to become farmers. The data also suggest that the occupational transitions of returned deserters resemble those of deserters, but relative to deserters fewer returned deserters were laborers and

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more of them remained professionals or proprietors. When we examined the data by state mover status we found that only for state movers did the 1880 occupational distribution of former professionals or proprietors differ between deserters and non-deserters, suggesting that a move motivated by shame may have differentially hurt professionals or proprietors because their human and social capital may not have been as easily transferable across states.

We find no evidence that strongly pro-war communities imposed economic sanctions upon the deserters who did stay. When we examine men who did not move across state and who were from counties where McClellan received less than 40 percent of the vote, then, conditional upon occupational class at enlistment, the occupational distributions of non-deserters and deserters were statistically indistinguishable. Although evidence from the select group of men who remained in the home state can only be suggestive, it is consistent with the hypothesis that personal shame may have played a larger role than explicit community ostracism in the migration decision. Professionals and proprietors are most likely to have been hurt by social exclusion even with no economic sanctions, but we find no evidence that deserters who were professionals and proprietors were affected. We also do not find any evidence that social exclusion extended to marriage markets – there were no differences in marital status in 1880 between deserters, returned deserters, and non-deserters.

Men who remained in their home communities may have been more eager to regain their honor. Long after the war was over and the Union Army pension system was firmly entrenched, many soldiers sought to expunge the charge of desertion from their records. In 1889 Congress stipulated that desertion charges could be expunged if the deserter had been absent because of illness or injury contracted in the line of duty and in subsequent Congresses thousands of private bills were introduced to correct a specific soldier's record and consider him honorably discharged (Lonn 1928: 215-218). Deserters thus became eligible for pensions. When we restricted the sample to deserters and examined who ever applied for a pension we found that those who had

not moved across state were statistically significantly more likely to apply for a pension. Those who had not moved across county were more likely to apply for a pension, but the effect was not statistically significant. Our results suggest either that those who did not leave home were more eager to correct their records or that they had extenuating circumstances for deserting.

7 Alternatives for the Emotion Hypothesis

Must such emotions as shame and ostracism be introduced to explain our facts? Could more conventional models of migration focusing on consumption opportunities, crime and punishment models of war-time detection of deserters, or unobserved heterogeneity rationalize our findings? Deserters might simply be highly mobile people. We tested for this by restricting the sample to the native-born and controlled for whether the veterans had migrated between state of birth and state of enlistment (a proxy for mobility), we found that, compared to non-deserters, deserters' probability of migrating out of state was 0.111 ($\hat{\sigma} = 0.034$) and that returned deserters' probability of migrating out of state was -0.019 ($\hat{\sigma} = 0.041$), coefficients virtually identical to those obtained without controlling for our mobility proxy. Deserters' greater mobility could not be explained by their better health capital. When we controlled for whether or not the soldier was wounded or for length of time served, our coefficients remained virtually unchanged. Also recall that deserters and returned deserters behaved differently and when we instrument for desertion status the effect of desertion on migration becomes much larger. We also find that men who arguably had the same "bad" unobservable characteristics as both deserters and returned deserters, namely those who had committed various disciplinary infractions in the Army, such as being absent without leave or an unrelated offense leading to their arrest, looked like non-deserters in terms of their mobility patterns.

Deserters' greater mobility does not reflect conditions in the states or counties they were

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from. All of our regressions included state fixed effects. We also ran linear probability models in which we included county fixed effects. Deserters' probability of migrating out of state relative to non-deserters rose to 0.163 ($\hat{\sigma}$ =0.028). When we included an interaction term between the logarithm of the percentage voting for McClellan and deserter status the coefficient on deserter status rose to 0.553 ($\hat{\sigma}$ =0.220) and the coefficient on the interaction term was -0.102 ($\hat{\sigma}$ =0.057). Deserters' probability of moving does not reflect the characteristics of their companies either. When we ran linear probability models that included company fixed effects we found that in the state mover specification with no interactions the coefficient on deserter was 0.140 ($\hat{\sigma}$ =0.031). When we included an interaction term of deserter with the logarithm of the percentage voting for McClellan we found that the coefficient on deserter was 0.496 ($\hat{\sigma}$ =0.134) and that the coefficient on the interaction term was -0.093 ($\hat{\sigma}$ =0.036).

Deserters' locational choice in 1880 may reflect efforts to avoid detection during the war. During the war a rational deserter might seek out safe havens with a low detection probability. If citizens in areas where McClellan received a high proportion of the vote successfully aided and abetted deserters then deserters might move to such areas, particularly if these were their home communities, and remain there until we sample them in 1880. We can test whether detection rates were lower in counties where McClellan received a high proportion of the vote by restricting our sample to deserters and returned deserters and running a probit in which the dependent variable is a dummy equal to one if the soldier was a returned deserter and in which we control for the logarithm of McClellan's share of the vote, individual characteristics, and for region.[18] Because roughly 75 percent of returned deserters were arrested, if the coefficient on the proportion of the vote for McClellan is negative and statistically significant then this suggests that detection

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[18]Relative to deserters returned deserters were less likely to be foreign-born and were more likely to have enlisted in the first year. Those who deserted early should be at greater risk of being caught. If foreign-born deserters were more likely to leave the country than native-born deserters we will underestimate the effect of deserter status on migration.

rates were lower in pro-McClellan counties. However, we find that this coefficient is small and statistically insignificant. When we exclude region fixed effects we find that it is larger, but positive.

Deserters' moving to pro-McClellan states may reflect economic opportunity, not ideology. We reject this for two reasons. First, pro-McClellan counties had a smaller proportion of the labor force in manufacturing, a sector that began to boom after the Civil War, and had less valuable farm land (see Table 1 in the Appendix). Second, if economic opportunity were the main motivator non-deserters should be moving there as well. While deserters were less likely to be farmers than non-deserters and therefore faced different labor market demand, we found that among both farmers and non-farmers deserters were more likely to move to a pro-McClellan state than non-deserters.

We also tested whether a vote for McClellan was a vote against war, an ideological vote, or a vote for economic self-interest by using 1860 voting. Voters in 1860 could not have predicted war and the economic and ideological coalitions voting for Lincoln in 1860 were the same coalitions voting for Lincoln in 1864. When we ran Equation 3 controlling for the logarithm of the share of the vote received by Lincoln in 1860, our coefficient on deserter status did not change. When we ran Equation 4 controlling for the share of the vote received by Lincoln in 1860 and an interaction term between Lincoln's share of the vote and deserter status, the interaction term was insignificant but our coefficients on deserter status and on the interaction between McClellan's share of the vote and deserter status remained unchanged.

8 Conclusion

Although the Civil War ended in 1865, memories of the war left their marks on all communities and on all veterans. Northern communities began to observe Decoration Day with ceremonies

honoring the patriotic dead. Union veterans were viewed by themselves and by Northern civilians as the country's saviors who had "preserved for humanity the Republican form of government" and "elevated the country to a high dignity" (General Daniel Sickles, quoted in McConnell 1992). Their deeds were commemorated in magazines and newspapers, in generals' best-selling memoirs, in regimental histories, in songs, and in public monuments. Union veterans satisfied Victorian ideals of manhood and self-control and the classical republican ideal of a virtuous citizenry willing to sacrifice for self-government. They were also God's chosen instruments for saving the Union and sweeping away the curse of slavery, permitting the inauguration of a new era (Clarke 2002). Such a culture could only exacerbate deserters' personal feelings of shame.

Our study is one of the few empirical investigations of the effects of emotion on economic decisions. Diaries, letters, and newspaper accounts from the antebellum era have not left a paper trail of how deserters fared after the war. Our unique panel data set allowed us to discover that faced with the choice of returning home or of moving and re-inventing themselves, deserters moved. Compared to a non-deserter, a deserter's probability of leaving his state by 1880 was higher by at least 0.135 and his probability of moving at least 350km was higher by 0.115. Deserters from pro-war communities were more likely to move than deserters from anti-war communities and when deserters moved they were more likely to move to anti-war states. Perhaps it is no accident that the fate of deserters is not mentioned in contemporary accounts. As we observe in countries making a transition to democratic rule, there is a desire to avoid painful confrontations after traumatic national events, particularly if a sizable proportion of the population behaved shamefully (Barahona de Brito et al. 2001; Paxton 1998). National myths may persist for a long time. Lonn's (1928) study of desertion in the Civil War pointed out that "the knowledge of any desertion in the brave ranks of the armies ... will come as a distinct shock" and that "the average reader will question the worth-whileness of an exhaustive study of that which seems to record a nation's shame" (p. v).

The pervasiveness of reports of shame across different cultures has led scholars to argue that shame is partially crafted by natural selection to ensure conformation to the social norms that are necessary for cooperation (e.g. Fessler and Haley 2003). Thus the anticipation of shame affects behavior. But, relatively little has been written about how the emotion of shame, rather than its anticipation, generates behavior and affects decisions (Elster 1998).

In the modern day there are attempts to harness shame to improve behavior, whether of polluting firms or of criminals (Braithwaite 1989). In developing countries such as Indonesia the Proper Prokasih program seeks to reduce future pollution by having the polluters suffer a "Day of Shame." Such firms play a repeated game. In contrast, deserters who never returned to fight could do nothing to atone for their past actions. Such one-shot games are not limited to the Civil War. They have been played by men who compromised themselves in fascist, communist, or other dictatorial regimes. They have also been played by men who fought in unpopular wars. We leave for future researchers to study whether returning Vietnam War soldiers, men who were publicly denigrated as "baby-killers," would be more likely to move to a pro-war community.

Voting Appendix

Even solidly Republican counties in 1860 became McClellan counties in 1864, particularly once the Emancipation Proclamation turned the Civil War into a war against slavery (e.g. see the case study by Reardon (2002)). Economic interest played a role as well. In the east north central region the Civil War severed western-Southern trade along the Ohio and Mississippi Rivers and local banks, with their holdings of Southern bonds, collapsed, further aggravating existing tensions between Midwestern farmers and the Northeast over protective tariffs and high freight rates (Klement 1999: 43-52). Confederate agents dreamed of an uprising leading to a western Confederacy (Waugh 1997: 210). In addition, because the Republican party was associated with

the anti-immigrant and anti-Catholic Know-Nothings, McClellan received the immigrant vote (Klement 1999: 93). Our regression analysis of county characterstics on McClellan's share of the vote (see Appendix Table 1) bears this out, but also emphasizes that slave-holding counties were more pro-McClellan and that religious divisions, even controlling for ethnic composition, played a large role. When we divided religions into pietist (Methodist, Baptist, Congregationalist, Presbyterian, and Unitarian), a group containing many abolitionists who viewed the war as God's wrath over the curse of slavery (Fogel 1989), liturgical (Catholic, Lutheran, and Episcopalian), and other we found that the pro-McClellan counties were much less likely to be pietist relative to other and much more likely to be liturgical relative to other. In addition, counties where McClellan received a high proportion of the vote were poorer, had a lower percentage of their labor force in manufacturing, and had larger foreign-born populations, particularly Irish and German. Even controlling for all of these observable characteristics we found that counties in the Middle Atlantic and in the East North Central regions were much more likely to be pro-McClellan relative to New England whereas counties in the West North Central region were even more anti-McClellan. Compared to the coalition voting for Douglas in the 1860 presidential election (results not shown), the coalition voting for McClellan was even more divided on religious lines.

Data Appendix

Our sample is drawn from a dataset of 35,570 white, enlisted men in 303 Union Army infantry companies, representing roughly 1.3 percent of all whites mustered into the Union Army and 8 percent of all regiments that comprised the Union Army.[19] The primary data source consists of

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[19]The data were collected by Robert Fogel and are available from http://www.cpe.uchicago.edu. The 303 companies are part of a sample of 331 companies, picked at random with one hundred percent sampling of all of the enlisted men. Our sample is limited to 303 companies because complete data have not yet been collected on all 331 companies. Among the original 331 companies, New England is under-represented and the Midwest over-represented

men's military service records. These records provide such basic information as year of muster, age, birthplace, and height in inches, and also information on what happened to the soldier during his military service such as death, injury, illness, desertion, arrest, or AWOL. These 35,570 men were linked to the manuscript schedules of the 1860 census which provides information on the value of personal property for all individuals in the household and on illiteracy and allows us to infer marital status.

Sample Construction

We take the sample of 35,570 men and restrict it to men who survived the war, men not known to have died before 1880, men with information on date of discharge, desertion, or other events that led them to leave the company (necessary for distinguishing between returned deserters and deserters), and men with consistent and non-missing information on such basic characteristics as birth place and age at enlistment or birth year. This leaves us with a sample of 20,301 men, 36 percent of whom (7,224) we can link to the 1880 census. (We later further restrict the sample to men with identifiable county information in 1860.) Our linkage procedure used a combination of computerized and manual procedures. We obtained computerized lists of potential census matches based upon a last name matching the soundex and a match of the first letter of either the first or middle name from the Center for Population Economics at the University of Chicago and restricted the lists to those whose age in 1880 was within ten years of the expected age of our veterans, to those who were born in the same state or foreign country, and to white males. If, after our restrictions, the list of potential matches was still greater than 40 we classified these men as not found and did not search any further for them. If the list of potential matches was less than 40

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relative to the army as a whole. The companies that have not yet been collected are from Indiana and Wisconsin, states that were very committed to the Union cause.

trained genealogists decided whether a name was a potential match. The genealogists classified all matches as 1) good, 2) possible, 3) possible plus, and 4) not found. A "good" match was one where there existed only a single match to a given name and surname. A "possible" match was one where either a) there were two or three possible matches to a given name and surname but only one match was within 2 years of the expected age of the veteran in 1880; b) there was a match to the surname, but the given name, while not exact, was a possible alternative name; or, c) there was match to the surname but instead of the given name, only the proper initial was listed. A "possible plus" match was one where the matched name fit the criteria for a possible match but because the name was significantly unusual or because of some other special consideration the possibility of a match was deemed better than possible but short of good. A "not found" match was one where either none of the choices was an acceptable match or when there were several possible matches, all equally good. Among the men who were found, 65 pecent of them were "good" matches, 30 percent of them were "possible" matches, and the remaining 5 percent were "possible plus" matches.

We were able to test the quality of our matches by comparing our matching with that done by the Center for Population Economics at the University of Chicago to the 1880 census using information from the pension records (and therefore excluding deserters). We found that among men who were both in their and in our linked dataset we had the same match in 97 percent of all cases and a different match in the remaining 3 percent of cases. Because our linkage procedure was based upon limited information, we could not find 33 percent of the men in the linked Center for Population Economics data.

The sample of 20,301 men whom we tried to link to the 1880 census was slightly richer than the original sample of 35,570 men who served in the Union Army. Median total household personal property wealth in 1860 was $150 dollars and controlling for age and region a median regression in which the logarithm of total household property wealth was the dependent variable

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revealed that total household personal property wealth was lower by a statistically significant $16 in our sample of 20,315. However, total household real estate wealth was the same in both samples.

Our sample of 7,224 men linked to the 1880 census differs from our initial sample in several ways. A probit regression of the finding probability showed that the foreign born, particularly the Irish, were less likely to be found. Laborers were less likely to be found than farmers, professionals or proprietors, or artisans. Those who lived in households with higher total personal property wealth in 1860 were more likely to be found. Census enumerators may have been less meticulous in accurately recording the names, places of birth, and ages of the poor and foreign-born and in enumerating them and the foreign-born and the poor may have given census enumerators less accurate information. In addition, if mortality rates were higher among the foreign-born and the poor, we would be less likely to find them. To our surprise, men who enlisted in counties with higher percentages of the foreign-born and of workers in manufacturing and with a large city of at least 50,000 people in the county were less likely to be found. We suspect that in such counties either individuals or census enumerators in 1880 were less careful or that we are measuring an urban mortality penalty.

Variables

Dependent Variables

Our empirical work uses several dependent variables. We examine migration using a dummy variable equal to one if the veteran moved across states between 1860 and 1880 and a dummy variable equal to one if he moved at least 350km (as measured at the county centroid) between those years. We investigate the determinants of our finding a veteran in the 1880 census using a dummy equal to one if we find the veteran. We examine what state a veteran moves to conditional on his being a mover using an indicator variable for all 48 mainland states.

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Socio-economic and Demographic Characteristics

1. **Occupation**. Dummy variables indicating whether at enlistment the recruit reported his occupation as farmer, artisan, professional or proprietor, or laborer. Farmers' sons who were not yet farmers in their own right would generally report themselves as farmers.

2. **Birth place** Dummy variables indicating whether at enlistment the recruit reported his birth place as the US, Germany, Ireland, Great Britain, Canada, or other.

3. **Age at enlistment**. Age at first enlistment.

4. **Married in 1860**. This variable is inferred from family member order and age in the 1860 census. This variable was set equal to 0 if the recruit was not linked to the 1860 census.

5. **Log(total household personal property) in 1860**. This variable is the sum of personal property wealth of everyone in the recruits' 1860 household. This variable is set equal to 0 is the recruit was not linked to the 1860 census.

6. **Missing census information**. A dummy equal to one if the recruit was not linked to the 1860 census. Linkage rates from the military service records to the 1860 census were 57 percent. The main characteristic that predicted linkage failure was foreign birth.

7. **Illiterate**. This variable is from the 1860 census and provides illiteracy information only for those age 20 and older.

8. **Missing illiteracy information**. A dummy equal to one if we do not know whether the recruits was illiterate, either because he was not linked to the 1860 census or because he was less than age 20 in 1860.

9. **Year of muster**. Dummy variables indicating the year that the soldier was first mustered in.

10. **Volunteer**. A dummy equal to one if the recruit was a volunteer instead of a draftee or a substitute.

11. **Bounty**. We create a dummy variable equal to one if a recruit received a bounty upon enlistment and a dummy variable equal to one if a recruit was owed a bounty upon his return. Bounties for enlistment were offered by Congressional districts after mid-1862 when counties had difficulty meeting their recruiting quotas.

12. **Uncommon name**. A dummy equal to one if the soldier had an uncommon surname, that is one that appears less than four times in the 1880 integrated public use census sample, http://www.ipums.umn.edu. We thank the Center for Population Economics at the University of Chicago for this variable.

City, County, and State Characteristics

1. **Population in city of enlistment**. We obtained population in city of enlistment from *Union Army Recruits in White Regiments in the United States, 1861-1865 (ICPSR 9425)*, Robert W. Fogel, Stanley L. Engerman, Clayne Pope, and Larry Wimmer, Principal Investigators. Cities that could not be identified were assumed to be cities of population less than 2,500.

2. **Percent of vote for McClellan in the 1864 Presidential election**. We obtained by county of enlistment the percent of the vote for McClellan from *Electoral Data for Counties in the United States: Presidential and Congressional Races, 1840-1972 (ICPSR 8611)*, Jerome M. Clubb, William H. Flanigan, and Nancy H. Zingale, Principal Investigators. If voting information is unavailable for a county, then for counties in the Confederacy we attributed a 90 percent share of the vote to McClellan and for other counties we attributed a 0 percent of the vote to McClellan. We therefore also include a dummy variable indicating that in these two cases the share of the vote for McClellan is unknown. We use our county data to obtain state-wide voting percentage for McClellan, weighted by the total number of votes cast in each county.

3. **County Characteristics** We obtain information on the share of the population that was foreign born, on the share of the population in manufacturing, and on average personal property and land wealth from *Historical, Demographic, Economic, and Social Data: The United States, 1790-1970 (ICPSR 3)*, Inter-University Consortium for Political and Social Research, Principal Investigator. We obtain information on county birth place and occupational fragmentation, on county birth place composition, and on whether a county contained a city whose population was at least 50,000 from the 1860 integrated public use census sample, http://www.ipums.umn.edu.

4. **State fixed effects**. We include state fixed effects in our regressions.

5. **Other state characteristics**. For every state the soldier could potentially move to, we estimate its distance from his home state in miles and in latitude minutes, calculated from the state centroid.

Company Characteristics

We use company characteristics and ideology as instrumental variables for whether an individual was a deserter. The company characteristics (estimated for the full sample of 35,570 men) that we use are birth place fragmentation (calculated for the categories New England, Middle Atlantic, East North Central, West North Central, Broder, South, West, Canada, Germany, Ireland, Great Britain, Scandinavia, northwestern Europe, other European, and other foreign); occupational fragmentation (calculated for the categories farmer, higher class professionals and proprietors, lower class professional and proprietors, artisans, upper working class laborer, lower class laborer,

and unknown); the coefficient of variation in age at enlistment; the percent of the company that died; the percent of the company that died from illness; the percent of the company that died within 6 month intervals; dummy indicators for battles (First Battle of Bull Run, Shiloh, Second Battle of Bull Run, Antietam, Fredricksburg, Chancellorville, Vicksburg, Gettysburg, Chickamauga, Chattanooga, Seven Days, Cold Harbor, Wilnderness, Spotsylvania, Stone River, Atlanta, Kennesaw Mountain, Petersburg, and the March to the Sea); the percent voting for Lincoln in 1860 in the soldier's county of enlistment; the occupational composition of the company (percent professional or proprietor, artisan, laborer, and farmer as the omitted category); and the Gini coefficient for total household personal property wealth in 1860. When the Gini coefficient was unavailable (because too few soldiers in the company were linked to the 1860 census), the Gini coefficient was set equal to 0 and a dummy variable indicating that the Gini coefficient was missing was used in the regression.

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Table 1: Characteristics of Non-Deserters, Returned Deserters, and Deserters in the Initial Sample
and in the Found Sample

	Initial Sample			Found Sample		
	Non-Deserters	Returned Deserters	Deserters	Non-Deserters	Returned Deserters	Deserters
Percent of sample	0.872	0.033	0.095	0.917	0.028	0.055
Dummy=1 if born in						
United States	0.679	0.680	0.430	0.764	0.759	0.638
Ireland	0.088	0.121	0.209	0.028	0.049	0.087
Britain	0.038	0.049	0.084	0.033	0.038	0.064
Germany	0.088	0.075	0.099	0.069	0.082	0.098
Canada	0.034	0.036	0.074	0.031	0.049	0.067
Other foreign country	0.073	0.039	0.104	0.075	0.023	0.046
Dummy=1 if occupation at enlistment						
Farmer	0.491	0.381	0.247	0.555	0.497	0.335
Professional or proprietor	0.082	0.085	0.097	0.075	0.066	0.103
Artisan	0.209	0.282	0.257	0.204	0.251	0.249
Laborer	0.210	0.249	0.392	0.157	0.186	0.310
Unknown	0.008	0.003	0.007	0.009	0.000	0.003
Dummy=1 if volunteer	0.894	0.892	0.788	0.916	0.896	0.852
Dummy=1 if received bounty	0.311	0.289	0.249	0.315	0.273	0.249
Dummy=1 if owed bounty	0.178	0.157	0.182	0.176	0.115	0.190
Household personal property wealth ($)	581	384	429	635	442	365
Dummy=1 if married in 1860	0.306	0.366	0.388	0.296	0.333	0.291
Dummy=1 if illiterate	0.034	0.063	0.070	0.032	0.053	0.035
Dummy=1 if enlisted in						
1861	0.205	0.298	0.127	0.196	0.300	0.132
1862	0.324	0.384	0.299	0.350	0.393	0.321
1863	0.060	0.067	0.170	0.047	0.066	0.148
1864	0.262	0.148	0.217	0.264	0.164	0.215
1865	0.149	0.103	0.187	0.143	0.077	0.184
Dummy=1 if uncommon name	0.472	0.434	0.391	0.539	0.574	0.461
1860 Population in city of enlistment	76,286	147,160	127,669	49,611	103,375	100,549
Percentage of county vote for McClellan	45.76	49.68	49.35	44.44	48.16	48.11

Table 2: Fraction of Movers by Desertion Status

	State Mover	Within State County Mover	County Stayer
Non-deserter	0.440	0.331	0.229
Returned deserter	0.422	0.353	0.225
Deserter	0.636	0.242	0.122

The columns give the fraction of non-deserters, returned deserters, and deserters who moved across states, who moved within state but across county, and who remained within the same county between enlistment and 1880.

Table 3: Fraction of State and Long Distance Movers by Desertion Status and Percentage of Home County Voting for McClellan

	McClellan's Percent of Vote		
	> 60%	40-60%	< 40%
Fraction of State Movers			
Non-deserter	0.524	0.410	0.466
Returned deserter	0.500	0.395	0.519
Deserter	0.575	0.618	0.676
Fraction Moving at least 350km			
Non-deserter	0.372	0.303	0.364
Returned deserter	0.375	0.322	0.357
Deserter	0.375	0.471	0.492

Home county is county of enlistment.

Table 4: Differences in the Fraction of State and Long Distance Movers by Desertion Status and the Percentage of the Home County Voting for McClellan

	State Mover	≥350km Mover
$F_{D,HI} - F_{ND,HI}$	0.051	0.003
$F_{D,MED} - F_{ND,MED}$	0.208	0.168
$F_{D,LOW} - F_{ND,LOW}$	0.210	0.128
$F_{D,HI} - F_{RD,HI}$	0.075	0.000
$F_{D,MED} - F_{RD,MED}$	0.223	0.149
$F_{D,LOW} - F_{RD,LOW}$	0.157	0.135
$F_{RD,HI} - F_{ND,HI}$	-0.024	0.003
$F_{RD,MED} - F_{ND,MED}$	-0.015	0.019
$F_{RD,LOW} - F_{ND,LOW}$	0.053	-0.007
$(F_{D,LOW} - F_{ND,LOW}) - (F_{D,HI} - F_{ND,HI})$	0.159	0.125
$(F_{D,LOW} - F_{RD,LOW}) - (F_{D,HI} - F_{RD,HI})$	0.082	0.135
$(F_{RD,LOW} - F_{ND,LOW}) - (F_{RD,HI} - F_{ND,HI})$	0.077	-0.010

F is the fraction of state movers or of movers who moved at least 350km, D indicates deserter, RD indicates returned deserter, ND indicates non-deserter, HI indicates that more than 60 percent of voters in the home county voted for McClellan, MED indicates that between 40 and 60 percent of voters in the home county voted for McClellan, and HI indicates that more than 60 percent of voters in the home county voted for McClellan. Estimated from Table 3.

Table 5: Effect of Deserter Status on the Probability of State and Long Distance Moves

	State Mover		≥350km Mover	
	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$
Non-deserter				
Returned deserter	-0.016	-0.017	0.006	0.007
	(0.035)	(0.036)	(0.028)	(0.030)
Deserter	0.135‡	0.409‡	0.115‡	0.379‡
	(0.034)	(0.118)	(0.037)	(0.149)
Log(% county vote for McClellan)	0.004	-0.003	-0.000	-0.023
	(0.018)	(0.027)	(0.017)	(0.028)
Deserter×Log(%county vote for McClellan)		-0.149‡		-0.107*
		(0.059)		(0.059)
$\chi^2(2)$ for test of joint significance of Deserter				
and Deserter×Log(%county vote for McClellan)		27.88		30.13
Prob $> \chi^2$		0.000		0.000
Pseudo R^2	0.074	0.075	0.075	0.075

Coefficients are the mean derivatives from a probit regression in which the dependent variable is equal to one if the soldier moved between states or at least 350km and 0 otherwise. Additional control variables include age at enlistment, dummy variables for place of birth (US, Ireland, Britain, Germany, Canada, and other), dummy variables for occupation at enlistment (farmer, professional or proprietor, artisan, laborer, and unknown), a dummy equal to one if the soldier volunteered, a dummy equal to one if the soldier received a bounty at enlistment, a dummy equal to one if the soldier was owed a bounty upon his return, the logarithm of personal property wealth in 1860, a dummy equal to one if the soldier was illiterate, a dummy equal to one if the soldier was married in 1860, the logarithm of population in the city of enlistment, dummies equal to one if information on county voting was missing, if information on literacy was missing, and if the soldier was not linked to the 1860 census, dummies for year of enlistment, and dummies for state of enlistment. Robust standard errors clustered on the county of enlistment are in parentheses. 6,479 observations. The symbols *, †, and ‡ indicate significance at the 10, 5, and 1 percent level, respectively.

Table 6: Effect of Deserter Status on the Probability of State and Long Distance Moves, Comparison of Probit and IV Probit Results

	State Mover			≥350km Mover		
		(1)	(2)		(1)	(2)
		IV	IV		IV	IV
	Probit	Probit	Probit	Probit	Probit	Probit
	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$
Without County Characteristics						
Deserter	0.097‡	0.398‡	0.409‡	0.089‡	0.315	0.161
	(0.024)	(0.125)	(0.121)	(0.023)	(0.214)	(0.178)
Pseudo R^2	0.072	0.072	0.071	0.073	0.074	0.072
With County Characteristics						
Deserter	0.095‡	0.479‡	0.438‡	0.088‡	0.292	0.170
	(0.024)	(0.117)	(0.117)	(0.023)	(0.214)	(0.188)
Pseudo R^2	0.076	0.071	0.076	0.074	0.075	0.074

Deserters include returned deserters. Probit estimates are the mean derivatives from a probit regression in which the dependent variable is equal to one if the soldier moved between states or moved at least 350km and 0 otherwise. Additional control variables include the percentage of the county voting for McClellan in 1864, age at enlistment, dummy variables for place of birth (US, Ireland, Britain, Germany, Canada, and other), dummy variables for occupation at enlistment (farmer, professional or proprietor, artisan, laborer, and unknown), a dummy equal to one if the soldier volunteered, a dummy equal to one if the soldier received a bounty at enlistment, a dummy equal to one if the soldier was owed a bounty upon his return, the logarithm of personal property wealth in 1860, a dummy equal to one if the soldier was illiterate, a dummy equal to one if the soldier was married in 1860, the logarithm of population in the city of enlistment, dummies equal to one if information on county voting was missing, if information on literacy was missing, and if the soldier was not linked to the 1860 census, dummies for year of enlistment, and dummies for state of enlistment. County characteristics are the share of the labor force in manufacturing, mean personal property wealth, mean land value, the coefficient of variation in age, birth place fragmentation, occupational fragmentation, and birth place composition. Instrumental variables for (1) are the percent of the company that died, the percent that died of disease, the percent dying within a 6 month period, and dummy variables indicating battles. Instrumental variables for (2) also include the percent voting for Lincoln in the 1860 election in the soldier's county of enlistment and the following company characteristics: birth place fragmentation, occupational fragmentation, the coefficient of variation in age, indicators of the occupational composition of the company, and the Gini coefficient for 1860 total household personal property wealth. Robust standard errors clustered on the county are in parentheses. 6,479 observations. The symbols ∗, †, and ‡ indicate significance at the 10, 5, and 1 percent level, respectively.

Table 7: Effect of Deserter Status on the Probability of Finding a Soldier in 1880

	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$
Non-deserter			
Returned deserter	-0.038*	-0.038*	-0.035*
	(0.020)	(0.020)	(0.019)
Deserter	-0.095‡	-0.057	-0.148
	(0.012)	(0.069)	(0.130)
Log(% county for McClellan)	-0.012	-0.011	-0.006
	(0.011)	(0.016)	(0.016)
Deserter×Log(% county vote for McClellan)		-0.010	0.013
		(0.017)	(0.031)
Regression includes 1860 county characteristics	N	N	Y
$\chi^2(2)$ for test of joint significance of Deserter			
and Deserter*Log(%county vote for McClellan)		58.60	61.52
Prob > χ^2		0.000	(0.000)
Pseudo R^2	0.064	0.064	0.064

Coefficients are the mean derivatives from a probit regression in which the dependent variable is equal to one if the soldier was found in the 1880 census. Additional control variables include a dummy indicating whether the soldier had an uncommon name, age at enlistment, dummy variables for place of birth (US, Ireland, Britain, Germany, Canada, and other), dummy variables for occupation at enlistment (farmer, professional or proprietor, artisan, laborer, and unknown), a dummy equal to one if the soldier volunteered, a dummy equal to one if the soldier received a bounty at enlistment, a dummy equal to one if the soldier was owed a bounty upon his return, the logarithm of personal property wealth in 1860, a dummy equal to one if the soldier was illiterate, a dummy equal to one if the soldier was married in 1860, the logarithm of population in the city of enlistment, dummies equal to one if information on county voting was missing, if information on literacy was missing, and if the soldier was not linked to the 1860 census, dummies for year of enlistment, and dummies for state of enlistment. County characteristics in 1860 are a dummy equal to one if the county contained a city whose population was at least 50,000, the logarithm of the share of the county labor force in manufacturing, and the logarithm of the percent foreign-born. Robust standard errors clustered on the county are in parentheses. 18,274 observations. The symbols *, †, and ‡ indicate significance at the 10, 5, and 1 percent level, respectively.

Table 8: Effect of Deserter Status on the Probability of State and Long Distance Moves, Corrected for Selection

	State Mover		≥350km Mover	
	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$
Non-deserter				
Returned deserter	-0.016	-0.017	0.006	0.006
	(0.036)	(0.035)	(0.028)	(0.028)
Deserter	0.142‡	0.510‡	0.116‡	0.480‡
	(0.037)	(0.054)	(0.047)	(0.141)
Log(% county vote for McClellan)	0.005	0.009	0.000	0.004
	(0.018)	(0.019)	(0.017)	(0.018)
Deserter×Log(%county vote for McClellan)		-0.152‡		-0.101*
		(0.061)		(0.056)
$\chi^2(2)$ for test of joint significance of Deserter				
and Deserter×Log(%county vote for McClellan)		52.63		54.13
Prob > χ^2		0.000		0.000
ρ	0.680‡	0.686‡	0.583‡	0.580‡
	(0.129)	(0.128)	(0.133)	(0.137)
Log pseudo-likelihood	-15254.46	-15250.34	-14835.71	-14834.17

Coefficients are the mean derivatives of the probability of a move conditional on being observed from a selection corrected probit regression in which the dependent variable in the main regression is equal to one if the soldier moved between states or moved at least 350km and 0 otherwise and the dependent variable in the selection regression is equal to one if the soldier was found in the 1880 census and 0 otherwise. The selection regresssion includes a dummy variable equal to one if the soldier had an uncommon name. Additional control variables in all four regressions include age at enlistment, dummy variables for place of birth (US, Ireland, Britain, Germany, Canada, and other), dummy variables for occupation at enlistment (farmer, professional or proprietor, artisan, laborer, and unknown), a dummy equal to one if the soldier volunteered, a dummy equal to one if the soldier received a bounty at enlistment, a dummy equal to one if the soldier was owed a bounty upon his return, the logarithm of personal property wealth in 1860, a dummy equal to one if the soldier was illiterate, a dummy equal to one if the soldier was married in 1860, the logarithm of population in the city of enlistment, dummies equal to one if information on county voting was missing, if information on literacy was missing, and if the soldier was not linked to the 1860 census, dummies for year of enlistment, and dummies for state of enlistment. Robust standard errors clustered on the county are in parentheses. 18,274 observations and 6,479 observations in which mover status is observed. The symbols ∗, †, and ‡ indicate significance at the 10, 5, and 1 percent level, respectively.

Table 9: Determinants of State Migrant Locational Choice

	Coef-icient	Odds Ratio	Coef-icient	Odds Ratio
Log(% of state voting for McClellan)	0.002	1.002	-0.014	0.987
	(0.032)	(0.032)	(0.033)	(0.033)
Distance from enlistment state (miles/100)	-0.056‡	0.945‡	-0.057‡	0.945‡
	(0.004)	(0.004)	(0.004)	(0.004)
Latitude difference from enlistment state (minutes)	-0.122‡	0.885‡	-0.121‡	0.886‡
(absolute value)	(0.010)	(0.010)	(0.010)	(0.010)
(Returned deserter)×Log(%of state voting for McCellan)			0.163	1.178
			(0.103)	(0.103)
(Returned deserter)×Distance			0.023	1.023
			(0.022)	(0.022)
(Returned deserter)×(Latitude difference)			-0.055	0.946
			(0.063)	(0.063)
Deserter×Log(%of state voting for McCellan)	0.202‡	1.224‡		
	(0.062)	(0.062)		
Deserter×Distance	0.022*	1.022*		
	(0.013)	(0.013)		
Deserter×(Latitude difference)	0.096†	1.101†		
	(0.036)	(0.036)		
$\chi^2(3)$ for test of joint significance of				
of all interactions	16.82		4.36	
Prob $> \chi^2$	0.001		0.225	
Pseudo R^2	0.088		0.088	

Coefficients and odds ratio are from a conditional logit model. Characteristics are the characteristics of the potential location (state). The soldier decides which state to move to based upon its characteristics, conditional on being a state mover. Each observation, s_{ij}, is person i's potential choice of state j. Robust standard errors, clustered on the individual, are in parentheses. The first specification uses non-deserters and returned deserters as the omitted category. 152,563 observations. The second specification excludes returned deserters and the omitted category is non-deserters. The regression also includes a dummy if information on the share voting for McClellan was missing. 141,330 observations. The symbols ∗, †, and ∗ indicate significance at the 10, 5, and 1 percent level, respectively.

Table 10: Transitions Across Occupational Categories, Conditional on Occupation at Enlistment, by Deserter Status

Occupation at Enlistment	Occupation in 1880					χ^3 for	
	Farmer	Professional or Proprietor	Artisan	Laborer	Obs.	ND vs	RD vs
Farmer							
Non-deserter (ND)	57.32	11.64	10.61	20.43	3,573		
Returned deserter (RD)	54.29	14.29	5.7	25.71	105	4.488	
Deserter (D)	59.68	8.87	8.87	22.58	124	1.526	2.753
Professional or proprietor							
Non-deserter (ND)	18.01	43.64	17.58	20.76	472		
Returned deserter (RD)	7.14	35.71	42.86	14.29	14	6.123	
Deserter (D)	8.57	25.71	40.00	25.71	35	13.076	0.977
Artisan							
Non-deserter (ND)	19.49	12.94	46.77	20.81	1,283		
Returned deserter (RD)	10.20	12.24	51.02	26.53	49	3.058	
Deserter (D)	22.73	14.77	38.64	23.86	88	2.194	4.061
Laborer							
Non-deserter (ND)	26.06	13.85	18.17	41.92	1,040		
Returned deserter (RD)	14.63	17.07	24.39	43.90	41	3.168	
Deserter (D)	20.17	14.29	20.17	45.38	119	2.003	0.927

The table lists percentage of non-deserters, returned deserters, and deserters who were in an 1880 occupational category, conditional on occupation at enlistment. 6,943 observations (observations include those without information on county at enlistment). χ^2 tests are for the difference in the occupational distribution of non-deserters (ND) and returned deserters, non-deserters and deserters, and returned deserters (RD) and deserters, conditional on occupation at enlistment. The only two occupational distributions that are significantly different at at least the 10 percent level are those for non-deserters and deserters conditional on being a professional or proprietor at enlistment.

Appendix Table 1: Determinants of Vote for McClellan in 1864

	Coefi-cient	Std Err	Odds Ratio
% of church seats held by			
Pietist sects	-0.454‡	0.117	0.635
Liturgical sects	0.356†	0.183	1.428
Other sects			
% of labor force in manufacturing	-0.700‡	0.269	0.497
Dummy=1 if county above county mean for			
Personal property wealth	-0.024	0.040	0.976
Real estate wealth	-0.082†	0.039	0.921
% of free population slave-owners	0.159‡	0.025	1.172
% of free population born in			
United States			
Ireland	0.009†	0.004	1.010
Britain	-0.025‡	0.006	0.975
Germany	0.013‡	0.003	1.013
Other foreign	-0.011‡	0.004	0.989
Logarithm of county population	-0.053†	0.026	0.948
Dummy=1 if region			
New England			
Middle Atlantic	0.506‡	0.062	1.659
East North Central	0.304‡	0.074	1.355
West North Central	-0.199‡	0.097	0.820
Border	0.115	0.133	1.122
West	0.110	0.126	1.116
Constant	0.374	0.269	

Results are from a weighted generalized least squares regression in which the dependent variable is $\log\left(M_i/\left(100-M_i\right)\right)$, where M_i is the percentage of the vote cast for McClellan. County characteristics are county characteristics in 1860. 941 observations. Adjusted $R^2 =0.223$. Our electoral data come from *Electoral Data for Counties in the United States: Presidential and Congressional Races, 1840-1972 (ICPSR 8611)*, Jerome M. Clubb, William H. Flanigan, and Nancy H. Zingale, Principal Investigators. Our county characteristics are from *Historical, Demographic, Economic, and Social Data: The United States, 1790-1970 (ICPSR 3)*, Inter-University Consortium for Political and Social Research, Principal Investigator, with the exception of the percent born in a particular birthplace which we estimated from the 1860 integrated public use census sample, http://www.ipums.umn.edu. The symbols $*$, $\dagger$, and $\ddagger$ indicate significance at the 10, 5, and 1 percent level, respectively.
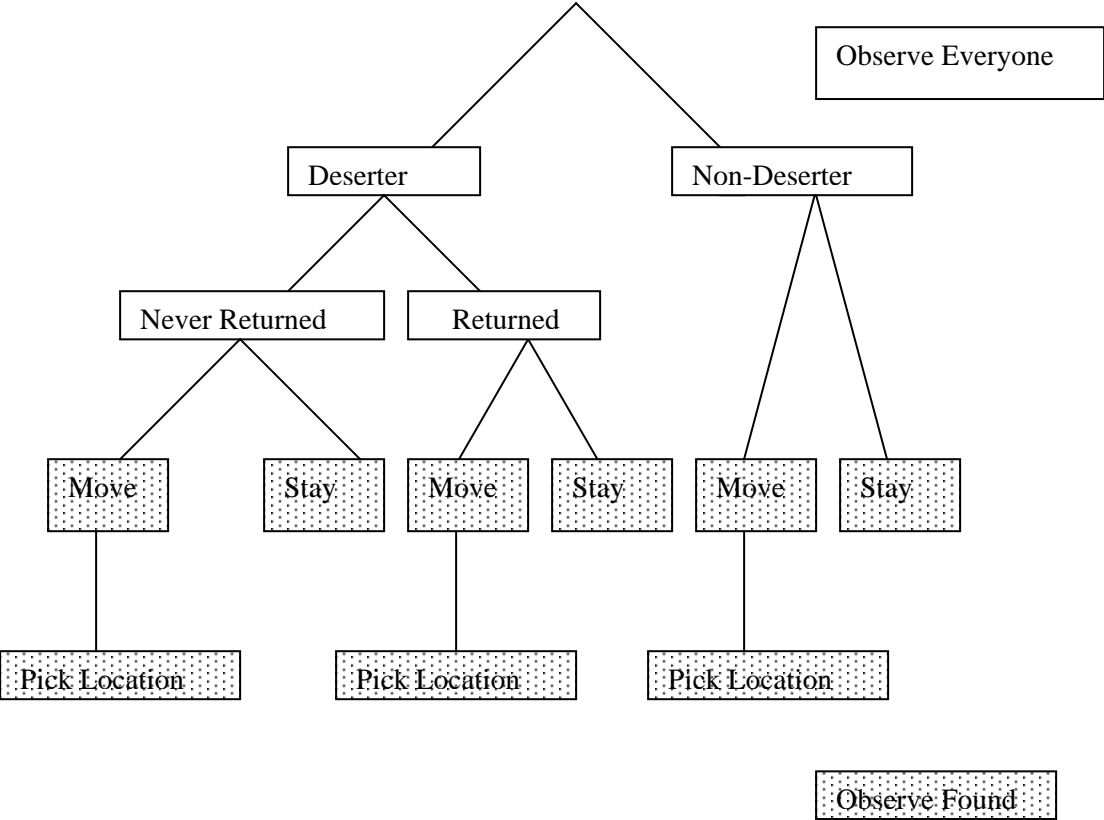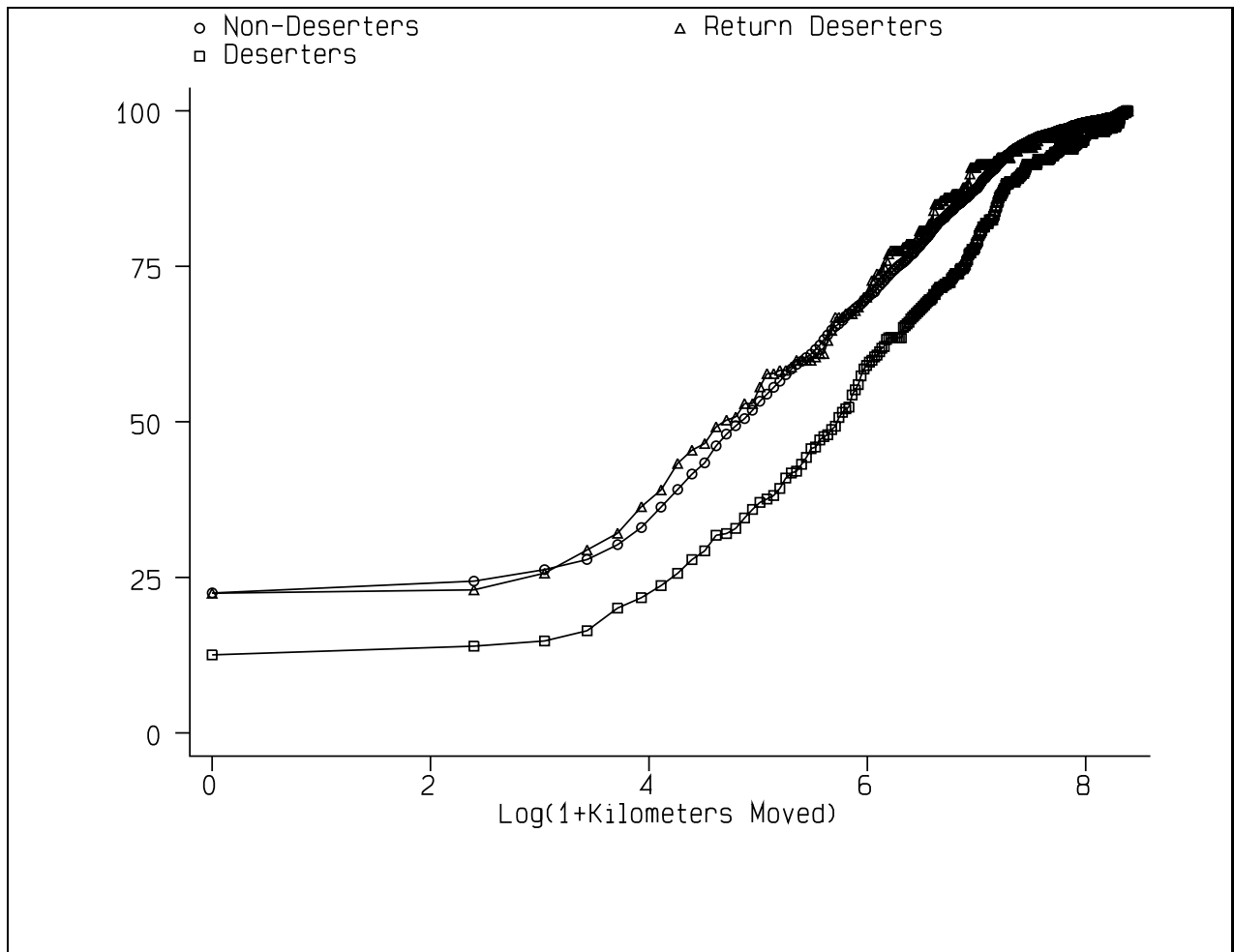
Figure 1: Schematic of Events

Figure 2: Migration Distance Cumulative Distibution Function by Deserter Status

Note: Migration distance is measured between enlistment and 1880 county centroids.