CHAPTER 3: QUANTITATIVE ANALYSIS

This chapter uses original cross-sectional data to test the hypotheses about military

recruitment preferences that I generated in the previous chapter: specifically, that the presence of

foreign military intervention and threat environments predict whether states design militaries

based on conscripts or volunteers. The quantitative analysis in this chapter tests this theory by

isolating cases in which states make military recruitment decisions after their independence or

other major changes in their domestic political regimes—what I refer to for shorthand as new

states. These are cases in which military design is likely to be least constrained by existing

practices and states are most free to adopt new recruitment policies. Thus, this chapter presents a

plausibility test: the cases analyzed here are the ones that my theory is most likely to be able to

explain. Foreign actors tend to have the most influence in new states, and their effect on military

design may be drowned out over time by institutional inertia or domestic practices in more

developed or well-established states.

Formally, my hypotheses state that:

H1: New states influenced by conscript-patrons should be more likely to recruit

conscripts than volunteers.

H2: New states influenced by volunteer-patrons should be more likely to recruit

volunteers than conscripts.

H3: Threat environment should have a greater effect on states without a foreign

patron than on states that have either a volunteer-patron or a conscript-patron.

H4: New states without a foreign patron should be more likely to recruit

conscripts than to recruit volunteers if they face a dangerous (high external) threat

environment than if they face a permissive (low external) threat environment.

The results presented in this chapter demonstrate that, as predicted, the influence of foreign actors *after* independence has an important effect on new state military design that is exerted through pathways of professional emulation. First, the results show that patron-state influence affects military design even when models account for a new state's colonial legacy. While external threat environments matter, their effect is felt most strongly in the absence of patron states to emulate. Second, despite changing technological and economic conditions that others have suggested should have a determinative effect on recruitment practices, the findings in this chapter show that the causes of recruitment do not statistically vary in the period under examination. Third, both internal and external threats affect military design under certain conditions. Finally, while existing research has pointed to unique characteristics of the British volunteer tradition as motivating states to adopt volunteer militaries, this chapter finds little support for this effect. Instead, conscript emulation drives the results.

3.1. Research Design

The unit of analysis in this chapter is universe of new states created since 1918. New states are states that have recently undergone major changes in their domestic political regimes; there is little or no continuity between new states and the political entities that controlled their territory the previous year. The most obvious example of new states are those that, having recently been a colony, recently gained independence and are entering the international system for the first time.

However, this is not the only situation in which states are likely to completely redesign their political institutions. Thus, my universe of cases includes two additional types of cases in which states' domestic politics should have changed substantially enough to demand and allow the redesign of military institutions. Such major changes in domestic politics makes these types

of cases comparable to new states that recently gained independence for the purpose of testing

my theory.[1] First, I included cases of social revolution based on Goodwin's description of a

social revolution as entailing "a significant change in the control and organization of state

power."[2] Second, civil war termination can constitute an important period for the reorganization

of security institutions.[3] Post-conflict reconstruction may include a formal process of security

sector reform, or bring new actors to power who want to use their own armies. Even if neither of

these is the case or the incumbent remains in power, internal conflict can create incentives to

restructure existing institutions and may lead to changes in military practices. Thus, I also

included cases of civil wars that ended in rebel victory or negotiated settlement, since these

forms of conflict termination are most likely to create similar conditions to those that define my

other observations.[4] These are the most drastic types of changes in domestic institutions and thus

are most comparable to new states.

       In total, the dataset includes 224 observations of new state creation since 1918. The

baseline criterion used to populate the dataset was the existence of an observation in the Issues

Correlates of War (ICOW) Colonial History dataset with an independence date of 1918 or later.

This constitutes 141 observations, which represent a state's first entrance into the international

system. This dataset defines and dates independence according to when a state gains de facto

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[1] My statistical results are significant regardless of whether I include the expanded variables (see Robustness Tests, later in this chapter).

[2] Jeff Goodwin, *No Other Way Out: States and Revolutionary Movements, 1945–1991* (Cambridge University Press, 2001), 11; Jeff Carter, Michael Bernhard, and Glenn Palmer, "Social Revolution, the States, and War: How Revolutions Affect War-Making Capacity and Interstate War Outcomes," *Journal of Conflict Resolution* 56 (2012): 439–466. The only case I excluded from Goodwin's list after 1918 was Vietnam, since its social revolution occurred before its independence and when France was still in control.

[3] Heiner Hänggi, "Conceptualising Security Sector Reform and Reconstruction," in *Reform and Reconstruction of the Security Sector,* edited by Alan Bryden and Heiner Hänggi, 1–11 (DCAF Yearly Books: 2004); Katherine Glassmyer and Nicholas Sambanis, "Rebel-Military Integration and Civil War Termination," *Journal of Peace Research* 45 (2008): 365–384.

[4] Different criteria for entering the dataset do not affect the results; see Robustness Checks section of this chapter.

control of its own foreign policy.[5] This definition better captures the assumption that

independence creates institutional freedom in military design compared to the Correlates of War

(COW) State Membership dataset, which adopts a more formal definition based on international

recognition and population size.

There are in fact few differences between these two datasets during the period under

examination, and the results described in this chapter are robust to variations in the universe of

cases. COW includes additional observations because it permits states to enter and exit the

system multiple times, in accordance with the loss of sovereignty due to conquest or occupation.

For example, France enters the COW dataset at the end of the period of German occupation, in

1944, while the Baltic countries each appear twice in the dataset, at their independence in 1918

and again after the collapse of the Soviet Union in 1991. To supplement the 141 cases in the

ICOW dataset, I added to the dataset 22 COW observations that were originally excluded from

ICOW on the basis of being the reentry of a prior state whose international system membership

was interrupted.[6] This adds new states as diverse as post-liberation France in 1944, Morocco in

1956, and reunified Germany in 1990. I also included Afghanistan (2001) and Iraq (2003) after

the US-led invasions as instances of state creation; although their institutions—including the

military—were built essentially from the ground up, they were not in the other datasets I used to

populate my own. Finally, there are 12 cases of Goodwin's social revolution that were not

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[5] Paul Hensel, 2014, "ICOW Colonial History Data Set, version 1.0" codebook. Available at
http://www.paulhensel.org/icowcol.html.
[6] See the Appendix for a list of these cases. After this addition, there are only 15 additional cases of state
creation included in COW that are excluded from ICOW. However, these appear to be cases in which
states already had independence and sovereignty before 1918 but that enter COW's dataset after this date
for idiosyncratic reasons. Therefore, I excluded them from my analysis. Of the 141 observations of state
creation that ICOW and COW share, the years of independence only differ in 19 instances, and only 13 of
these differ by more than one year. I adopted the ICOW independence date in all cases but two: For East
and West Germany, I used the COW independence dates of 1954 and 1955, rather than the ICOW dates
of 1949, because these reflect the formal end of their occupation and legal attainment of full sovereignty.

already in my dataset, as well as 47 cases from the COW Intra-State Wars dataset that ended in

rebel victory or negotiated settlements. Observations in the dataset are distinguished by the name

of the state and the year of its creation.

While in principle my argument should be able to explain recruitment decisions in a

given state at any point in time, I limited my empirical tests to new states starting in the year

1918 for both practical and methodological reasons. My use of novel independent variables made

data collection a time-consuming enterprise. Acquiring reliable measures for all country-years in

the period I examine was not a feasible undertaking and will have to wait to be completed in a

future project. Concerns about data availability, reliability, and comparability also led me to use

1918 as the cut-off point for my quantitative tests.

In addition, there are methodological reasons to focus on the initial period of military

design rather than recruitment at any point in time for a given state. Even if data were available

for all country-years, recruitment systems create institutional dependencies that make them

difficult to change once they are well established. As a result, the values for the dependent

variable would be serially correlated, resulting in severely suppressed standard errors. Other

studies have nonetheless attempted to explain recruitment choices in any country-year through

time-series analysis by using various strategies to address temporal dependence of their

dependent variable values, including lagged dependent variables, count variables to control for

the consecutive years a state has used the same recruitment system, time-period average values

for the dependent variable, extrapolating from or averaging across regression results from

individual years, or country-fixed effects.[7] However, because my theory is primarily about how

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[7] Lindsay P. Cohn and Nathan W. Toronto, "Markets and Manpower: The Political Economy of Compulsory Military Service," *Armed Forces and Society* (forthcoming); Asal et al, "I Want You!"; Joshua Hall and Danko Tarabar, "Explaining the Worldwide Decline in Military Conscription: 1970–2010,"*Public Choice* 168 (2016): 55–74; Hadass, "On the Causes of Military Conscription"; Mulligan

new states make decisions, none of these alternative approaches is appropriate. Given the

extensive findings about recruitment's path dependence, I am less interested in explaining how

states make decisions long after independence, which is more likely to be determined by factors

that enable military change more generally. My approach, while reducing the number of

observations, circumvents the problem of serial correlation by examining the factors that lead

states to adopt initial recruitment systems. Thus, my empirical strategy identifies the conditions

that lead states to start down certain self-reinforcing paths of military recruitment policies. It also

permits me to test an argument specific to new states, which make decisions in a distinct

institutional context compared to states with more developed institutions.

3.2. Dependent Variable

The dependent variable in this chapter measures whether a new state developed a military

that used conscripts or volunteers. I updated and revised existing data on conscription from

Horowitz, Simpson, and Stam (2011) and Nathan Toronto's Military Recruitment Dataset.[8] I

followed their coding rules, which treats conscription as a dummy variable that takes the value 1

when a state uses any form of a draft to recruit any quantity of its military personnel and zero

otherwise.

My revisions relied on three types of source material whenever possible to verify the

coding of these datasets. First, I referenced some of the sources that these datasets used for their

coding to verify their accuracy. This included John Keegan's *World Armies* (1983), as well as

documentation from War Resisters' International (WRI), an international non-profit organization

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and Shleifer, "Conscription as Regulation"; Adam, "Military Conscription as a Means of Stabilizing
Democratic Regimes"; Anderson et al, "Drafting the Competition"; Ross, "Raising an Army."
[8] Horowitz et al, "Domestic Institutions and Wartime Casualties"; Nathan Toronto (2005). Military
Recruitment Data Set, version 2005.1. Available from the author at nathan.toronto@us.army.mil. See
Chapter 1 of this dissertation for a discussion of the conceptualization of conscription and reasons for
using a dichotomous measure.

that has periodically published information about military recruitment policies, with a particular

focus on conscientious objection policies.[9] The WRI-published *Conscription: A World Survey:*

Compulsory Military Service and Resistance to It, by Devi Prasad and Tony Smythe (1968), as

well as a more recent survey of country conscription policies found on their website, are the two

sources that are most commonly referenced in the quantitative study of conscription.[10] Second, I

referred to the U.S. Library of Congress's Country Studies, whenever available. Finally, I often

resorted to additional secondary source case studies, especially when Toronto and Horowitz et

al.'s codings differed from each other.[11]

Because this chapter seeks to explain choices about military design, and it often takes

time to establish sufficient control to evaluate defense policies military needs, it is important to

make sure the dependent variable coding actually represents the recruitment policies that a new

state uses. Therefore, the coding allows for a grace period of two years after the year of

independence in which states could finalize their recruitment system. There was insufficient data

to code the value of the dependent variable in 19 cases, limiting the dataset to 205 observations.[12]

This coding scheme minimizes the risk of mischaracterizing a country, for example, as

using volunteers when strategic or ideological realignment in the first year of its independence

led it to institute conscription the following year and it never changed its recruitment policy after

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[9] John Keegan, *World Armies, second edition* (Macmillan Publishers, 1983); Devi Prasad and Tony Smythe, editors, *Conscription: A World Survey: Compulsory Military Service and Resistance to it* (London: War Resisters' International: 1968); War Resisters' International, "World Survey of Conscription and Conscientious Objection to Military Service" (Quaker Council for European Affairs, 2005). Available at https://www.wri-irg.org/programmes/world_survey/.

[10] Toronto, "Military Recruitment Dataset; Choi and James, "No Professional Soldiers"; Pickering, "Dangerous Drafts.

[11] The vast majority of these differences were instances in which Toronto coded data as missing.

[12] Most of these lost observations are small island nations, with the exception of North Yemen (1918), Lebanon (1943), Bhutan (1947), Benin (1960), Equatorial Guinea (1968), and Guinea-Bissau (1974). For a complete list, see Table 3A.1, in the Appendix. While the recruitment decisions in individual micro-nations can seem puzzling and are interesting in and of themselves—what purpose might conscription serve in the Seychelles, for example?—they should offer little explanatory power in terms of the broader phenomenon of military design in states where the military has more than symbolic value.

that.[13] For example, West Germany is coded as using volunteers in its first year of independence. However, policymakers enacted conscription in 1956, the year after independence, and never changed its recruitment again. Characterizing West Germany as a volunteer state because of its original recruitment choice would have been highly misleading.

As can be seen in Table 3.1, new states' choice of recruitment system after two years is split almost exactly equally between conscription (105, or 51% of cases) and volunteer (100, or 49% of cases) across all instances of state creation in my dataset. This proportion is similar regardless of whether I allow no grace period for military reorganization in new regimes (106 states chose volunteer versus 99 that chose conscript) or a five-year grace period (100 chose volunteer versus 105 chose conscript). The same is true among cases that meet different definitions of state creation, as can be seen in Table 3.2. Among those cases that that meet the ICOW definition for initial state independence, 55 percent (67 cases) adopted volunteer recruitment compared to 45 percent (55) that adopted conscription.[14] This gap narrows even further to 50 percent each, or 72 out of 144 total, when COW's states that reentered the system after membership interruptions are included. The 47 post-civil war states included in the sample also exhibit nearly equal variation, with 23 of them electing to use only volunteers compared to 24 that employed conscription. The distribution of values for the dependent variable is roughly

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[13] Decisions regarding the timing of such a cutoff inevitably entail some degree of arbitrariness. However, robustness checks show that alternative cutoff periods do not change my results. While my analyses included multiple dependent variable codings for different assumed grace periods, the exact length of time is ultimately not important, as changes in recruitment policy are uncommon overall. Of the 54 observations of state creation in my dataset that change recruitment practices, 11 of these make changes in the first two years after their independence, and 7 more change in the first five. Moreover, recruitment changes that happen early—in the first five years after independence—seem to result in more stable recruitment compared to changes that happen later. Only one state that changed in its first two years changed its recruitment again after that, and only three of the 18 states that changed in their first five years made further changes. This is in comparison to 9 states that made multiple changes out of 36 that changed their recruitment for the first time after the first five years.

[14] 19 observations are missing.

the same when I expand the dataset to include these cases. Therefore, we should not expect the

post-civil war or post-revolution cases to change the results.[15]

Table 3.1 Variation in Recruitment Policies at Different Times after Independence (percent)

	Year of Independence	2 Years After Independence	5 Years After Independence
Volunteer	106 (51.7%)	100 (48.8%)	100 (48.8%)
Conscription	99 (48.3%)	105 (51.2%)	105 (51.2%)
Total	**205% (100)**	**205 (100)**	**205 (100)**

Table 3.2 Variation in Recruitment Policies Among Different Types of New States (percent)

	All New States	Post-Independence States	Post-Civil War States
Volunteer	100 (48.8%)	67 (54.9%)	23 (48.9%)
Conscription	105 (51.2%)	55 (45.1%)	24 (51.1%)
Total	**205 (100)**	**122 (100%)**	**47 (100%)**

3.3. Independent Variables

Given the theoretical focus on how foreign intervention influences state design of

militaries, a key task involves capturing whether a foreign state controls or exerts a determinative

effect on security policies in new states. There are many challenges to identifying the actor (or

set of actors) who has the greatest influence on policy decisions.[16] For example, it may not be

necessary for a patron state to overtly pressure the emulation of certain military policies because

the client knows its patron's support is contingent on its adopting the right practices. Thus, in

many cases identifying whether there is in fact a foreign influence on military practices is best

left to in-depth qualitative analysis, as undertaken in the coming case study chapters. The key

obstacle to obtaining a definitive indicator of foreign control over military design is that the level

of intervention needed to affect a new state's security policies depends on a variety of

circumstances in both the patron and client state. How important is the client to the patron's

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[15] Confirmation can be seen in the Robustness Checks section later in chapter.

[16] Peter Bachrach and Morton S. Baratz, "Two Faces of Power," *American Political Science Review* 56 (1962): 947–952.

interests? How much do their interests overlap? What are the competing domestic and international agendas that may limit available resources for projecting power?

Patrons must consider these questions when they weigh the likelihood of successfully influencing policy against the potential strategic payoffs or losses given limited resources. Thus, patrons may be able to achieve strategic goals with minimal resources—for example, a small military advisory mission or weapons transfers—in particularly weak new states with friendly domestic populations. However, patrons may require a more resource-intensive strategy involving forward-deployed troops and extensive training operations if a new state is viewed as strategically vital but resistant to outside interference in its affairs. In some cases, patrons may view the potential security payoffs of contributing such costly military design interventions as necessary. In other situations, potential patrons may decide the level of intervention necessary for policy success is not worth the trouble it could cause at home or in the new state. This could be because the security payoff is not high enough, the risks are too high, or there are alternative client states that offer similar security advantages in the vicinity. The effects of these considerations on the likelihood of patronage can be seen in Table 3.3, below.

Table 3.3 Patterns of Patronage

	Not Strategically Important	Strategically Important
Not Receptive to Influence	No Foreign Patronage	Low/Medium Levels of Patronage if costs sufficiently low
Receptive to Influence	Low/Medium Levels of Patronage if costs sufficiently low	High Levels of Patronage

The preceding discussion demonstrates plausible variation in strategies of patron-client control. Preferred methods of influence change depending on preferred goals and available resources both across patrons and for individual patrons over time. In his study of U.S. military assistance, for example, William Mott describes how US preferences for securing its interests throughout the Cold War emphasized arms sales, military training, and military guarantees at

varying times and in varying regions.[17] Similarly, patrons often "develop strategies of force projection and crisis response" outside of "purely military solutions" such as troop deployments to minimize risks of escalation.[18]

3.3.1. *Foreign Influence*

While control is difficult to measure, it is possible to identify policy practices that are highly likely to be correlated with or indicate control. Therefore, I collected original data that measure the tools foreign powers may use to influence military design in new states. Patrons use a variety of methods to influence defense and military policy in client states. I identified the presence of military advisory missions, seconded or contract officers, and troop deployments as the three factors that suggest a foreign power is influencing a new state's military. Below, I explain why I chose each of these factors. I coded each of these factors based on publicly available government assessments, official background documents, and historical accounts focusing on new states' independence and the history of their armed forces.

The first method of military control I looked for, and arguably the most obvious or effective method, is the presence of troop deployments. This can have a particularly powerful influence through the implicit or explicit threat of withdrawal or aggression, because external forces are often helpful for helping regimes stay in power in the face of internal or external threats. Consequently, overseas troop deployments are frequently used as an indicator of hierarchical, patron-client relations.[19] David Lake, for example, uses deployments as an indicator

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[17] William H. Mott, IV, *United States Military Assistance: An Empirical Perspective* (Westport, CT: Greenwood Press, 2002); William H. Mott, IV, *Military Assistance: An Operational Perspective* (Westport, CT: Greenwood Press, 1999).

[18] William H. Mott, IV, *Soviet Military Assistance: An Empirical Perspective* (Westport, CT: Greenwood Press, 2001).

[19] Lake, *Hierarchy*; Carol Atkinson, "Constructivist Implications of Material Power: Military Engagement and the Socialization of States, 1972–2000, *International Studies Quarterly* 50 (2006): 509–537; See also

of hierarchy, arguing that American troop deployments in South Korea, West Germany, and

Japan in the early years of the Cold War gave the United States some control over those

countries' security policies.[20]

These troops can affect an array of policies in both combat and noncombat situations,

including economic development, human rights, and foreign policy.[21] While troop deployments

are important tools for influencing policy, it would be insufficient to rely solely on this as an

indicator. Not only would this limit military influence to those great powers with sufficiently

global force projection capabilities, but it is also the case that patrons may view troop

deployment as overkill: sufficient influence might be achieved with tools that are cheaper and

less likely to risk unnecessary escalation.

Therefore, I also looked for additional indicators of foreign military influence. The

second indicator that the existing literature identifies is the presence of foreign military training

missions. These missions allow great powers to reach a large proportion of the target country's

troops—as opposed to military exchange or education programs that provide for smaller numbers

of officers to travel to a patron state for training—and thus have a greater influence on whether

states successfully adopt new military doctrines.[22] While often difficult to identify and highly

secretive by nature, there is a nascent literature exploring the role of American military education

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Idean Salehyan, "No Shelter Here: Rebel Sanctuaries and International Conflict," *The Journal of International Politics* 70 (2008): 54–66 for a discussion of troop deployments in civil wars.

[20] Lake, *Hierarchy,* 68.

[21] Sam R. Bell, K. Chad Clay, and Carla Martinez Machain, "The Effect of US Troop Deployments on Human Rights, *Journal of Conflict Resolution* (2016); Carla Martinez Machain and T. Clifton Morgan, "The Effect of US Troop Deployment on Host States' Foreign Policy, *Armed Forces and Society* 39 (2013): 101–123; Tim Kane, "Development and US Troop Deployments," *Foreign Policy Analysis* 8 (2012): 255–273.

[22] Grauer, "Moderating Diffusion." See also Farrell 2002 on the role of military-to-military ties in military emulation and diffusion. Theo Farrell, "World Culture and the Irish Army, 1922-1942," In *The Sources of Military Change,* edited by Theo Farrell and Terry Terriff (Boulder, CO: Lynne Rienner Publishers, Inc., 2002): 69–90. Michael Eisenstadt and Kenneth M. Pollack, "Armies of Snow and Armies of Sand: The Impact of Soviet Military Doctrine on Arab Militaries," *Middle East Journal* 55 (2001): 549–578; Atkinson, "Constructivist Implications."

and advisory programs on politics in other beneficiary states.[23] Much of this emphasizes the most

public of these programs, the American International Military Education and Training (IMET)

program. However, IMET brings foreign military officers to the United States for training—and

thus would not be expansive enough based on my coding rules, following Ryan Grauer's

definition of a foreign military mission, in which a state sends:

> "a group of officers to serve as trainers, instructors, and advisors….well versed in
>
> the military state of the art, [and] are then afforded varying levels of power and
>
> influence in the contracting state's armed forces. Often, members of the mission
>
> are assigned to faculty and administrative posts in military educational
>
> institutions. Others advise field- and high-level commanders. Still others may act
>
> as consultants to the political elite and suggest national-level reforms that might
>
> bolster the state's military capability."[24]

Modern examples are common in post-conflict construction and security sector reform, include

the United Kingdom-led IMATT effort in Sierra Leone. Similarly, military missions like that

under British Major General Stephen Butler following Ethiopia's independence in 1941

demonstrated an important commitment from the United Kingdom by providing finance,

training, and equipment for the Ethiopian army and placing British officers in all battalions.[25]

I also code influence along this dimension as a 1 if a private military corporation (PMC)

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[23] Jesse Dillon Savage and Jonathan D. Caverley, "Human Capital Against the Capitol: Foreign Aid in the Form of Training and Military-Backed Coups" (2016). Available at http://www.jonathancaverley.com/uploads/2/9/7/2/29726853/caverleysavagecoups.pdf; Tomislav Z. Ruby and Douglas Gibler, "US Professional Military Education and Democratization Abroad," *European Journal of International Relations* 16 (2010) 339–364; Stephen Biddle, Julia Macdonald, and Ryan Baker, "Small Footprint, Small Payoff: The military effect of security force assistance," *Journal of Strategic Studies* (2017).

[24] Grauer, "Moderating Diffusion," 277

[25] Fantahun Ayele, *The Ethiopian Army: From Victory to Collapse, 1977–1991* (Evanston, IL: Northwestern University Press, 2014).

based in another country plays a significant role in the new state's security sector reform. This

makes sense given the importance of emulation as a potential avenue of indirect influence for my

argument. Members of a PMC are often veterans of the country in which the company is based.

Therefore they are likely to have internalized many of the same military practices as would

trainers who are still active in a patron country's military. The only case where this coding

decision changes the outcome of the variable is Liberia's post-conflict security sector reform

project in 2003, in which the predominantly U.S.-veteran manned DynCorp mission provided

both trainers and the American contingent of peacekeepers—though the United States had a role

in determining the vetting process for recruits.[26] The influence of the PMC in this case is

comparable to that of the ex-British soldiers and officers who took on contracts as private

individuals in Jordan's army in the 1940s and 1950s, whose relationship to British policy

preferences can only be described as independent in the most technical sense of the word.[27]

      Another case in which PMCs mattered was during the security sector reform process that

followed the Bicesse Accords in Angola. Executive Outcomes provided advising and training for

the newly united Angolan Armed Forces beginning in early 1993.[28] However, because veterans

came from multiple countries—South Africa, Namibia, and Angola—the influence from

Executive Outcomes does not clearly reflect the experience of a single country's military

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[26] International Crisis Group, *Liberia: Uneven Progress in Security Sector Reform.* Africa Report No.148 (January 13, 2009); Sean McFate, *Building Better Armies: An Insider's Account of Liberia* (Carlisle Barracks, PA: Strategic Study Institute and US Army War College Press, 2013), 43–45; Adedeji Ebo, "Local Ownership and Emerging Trends in SSR: A Case Study of Outsourcing in Liberia, in *Local Ownership and Security Sector Reform,* edited by Timothy Donais, *149 –168* (Geneva: DCAF 2008), 155. While it is possible that there are other cases in which foreign influence primarily be exerted through private individuals due to the lack of transparency that characterizes many countries' relationships with PMCs, Liberia in 2003 is the only case in which it was clear that a primary patron relied almost exclusively on PMCs. See Singer, *Corporate Warriors.*
[27] See Chapter 4.
[28] Stephen L. Weigert, *Angola: A Modern Military History, 1961–2002* (New York: Palgrave Macmillan 2011), 114.

tradition.

Third, numerous case studies demonstrate that the presence of seconded or independently

contracted officers can also permit foreign powers extensive influence, since they may have

formal or informal loyalties to their home state. Such forms of control are often part and parcel

of larger military advisory missions, as in the above example of the British mission to Ethiopia.

In these cases, it may be difficult to distinguish between whether foreign officers are acting in an

advisory or leadership role. For example, after Chad's independence, hundreds of French troops

stayed in the country as advisors, but many also served as commissioned and noncommissioned

officers in the small Chadian armed forces.[29] Military missions can also be so large and so

important to the client state that their leader effectively—or occasionally, even *de jure*—assumes

command of all the new states armed forces. Conversely, a single military figure contracted to

lead the development of a new state's army may be all that is necessary to establish effective

control. Some combination of these different methods of assigning foreigners to combat

leadership roles—as opposed to merely a training capacity—has been used frequently in post-

colonial settings to continue patterns of dominance.[30] Allan Millett, for example, lists the

following foreign figures who led military reform efforts, many of which are included in my

dataset's scope conditions:

> "William Carr Beresford in Portugal, Charles George Gordon in China, Ivor
>
> Herbert in Canada, H.H. Kitchner in Egypt, Orde Wingate in Jewish Palestine,
>
> John Bagot Glubb in Jordan, Joseph-Simon Gallieni in Indochina,
>
> Huburt Louis Lyautey in Morocco, Colmar von der Goltz and Liman von Sanders
>
> in Turkey, Emil Körner in Chile, Hans Kundt in Bolivia, and Max Bauer and

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[29] A.F. Mullins, *Born Arming: Development and Militry Power in New States* (Stanford University Press, 1987); David Wood, *Armed Forces of African States* (London: Institute for Strategic Studies, 1966).
[30] Wood, *Armed Forces of African States*.

> Hans von Seeckt in China….Charles P. Stone in Egypt, William McEntyre in the
>
> Kingdom of Choson (Korea), Herbert J. Slocum in Cuba, Charles Young in
>
> Liberia, Smedley D. Butler in Haiti, Henry T. Allen and Edward G. Lansdale in
>
> the Philippines, and Joseph W. Stilwell in China."[31]

Whether through taking command positions in combat units or developing militaries from scratch, the presence of foreigners in new states' militaries is an important indicator of outside control. Often it is difficult from historical records, especially of smaller states, to distinguish the activities with which military figures were primarily tasked. In either case, though, these advisors and officers likely brought their own biases, preferences, and organizational practices with them to their new roles and the institutions to which they were assigned.

As described above, no single measure can adequately capture a foreign power's intervention in domestic policy in all cases. Therefore, I coded foreign influence as a 1 wherever one of these factors was present, and zero otherwise.[32] Data on these measures of foreign influence in the first few years after independence was available in 205 observations, with some form of foreign influence present in 71 percent of cases (n=146). Of these, 115 new states had either foreign trainers or seconded officers—only nine cases had seconded officers but no trainers. 87 new states were created with foreign troops on their soil, and in 34 of these cases no foreign military advisory or training mission accompanied those troops. The constituent elements of the foreign influence variable and the frequency of their use over the period analyzed by this dissertation can be seen in Tables 3.4 and 3.5.

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[31] Allan R. Millett, "Captain James H. Hausman and the Formation of the Korean Army, 1945–1950," *Armed Forces and Society* 23 (1997), 503–504.

[32] Results are similar when this variable uses only at troop deployments or only foreign trainers/seconded officers together. In models without the interaction terms, the foreign influence variables are not statistically significant at the .05 level, though the substantive effect is still in the predicted direction. Interestingly, volunteer influence is closer to statistical significance in some specifications.

Table 3.4 Percent of New States Experiencing Different Types of Foreign Influence
(number in parentheses)

	Foreign Trainers	Seconded Officers	Deployed Troops	Any Foreign Influence
Pre-Cold War	39.4% (13)	9.1% (3)	39.4% (13)	63.6% (21)
Cold War	59.7% (71)	32.4% (36)	33.6% (40)	65.9% (89)
Post-Cold War	41.5% (22)	15.1% (8)	64.2% (34)	64.3% (36)
Total	**47.3% (106)**	**21.0% (47)**	**38.8% (87)**	**65.2% (146)**

Table 3.5 Number and Type of Foreign Influence Strategies Across States
Number of States (Rounded Percent in Parentheses)

			Only One Type
Only One Type	Only Trainers	37 (17%)	
	Only Officers	6 (3%)	74 (33%)
	Only Troops	31 (14%)	
			Only Two Types
Two Types	Trainers and Officers	16 (7%)	
	Trainers and Troops	31 (14%)	50 (22%)
	Officers and Troops	3 (1%)	
			All Three Types
All Three Types	Trainers, Officers, and Troops	22 (10%)	22 (10%)
Any Influence			146 (65%)

The next step to creating the independent variable was identifying the patron country for each instance of foreign influence and whether that country used volunteers or conscripts at the time of the new state's independence. Thus, new states influenced by the United Kingdom were coded as having been influenced by a conscript state during the period of the United Kingdom's National Service, from 1939–1957, as were states influenced by the United States when it used conscription.[33] In most cases identifying the primary military influence on a new state was straightforward: one country was the sole or clearly lead influence on all dimensions of foreign

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[33] The UK continued to conscript in small numbers through 1960, though the number sharply dropped off after the 1957 formal decision to end conscription. It makes most sense to code preferences as changing when formal decisions made, although policy implementation often lags by several years. In this case, it only affects the coding of Ghana (1957), Malaysia (1957), and Nigeria (1960). For more on UK National Service, see Richard Vinen, *National Service: A Generation in Uniform, 1945–1963* (United Kingdom: Penguin Books, 2015).

influence. However, coding was more complex when there was more than one patron country

exerting military influence. Such efforts by multiple patrons were noticeable in 14 cases. For

these cases, I was guided in my coding by the logic used in datasets that code colonial influence:

I looked for evidence of which potential patron had the largest and most influential effect on

military design.[34]

For example, Uganda was influenced by both Israel and the United Kingdom at the time

of its 1962 independence. Deciding which of these potential patrons had the greatest effect on

Ugandan military design is particularly important because their organizational preferences were

opposite: while Israelis used conscripts, the United Kingdom had decided to return to its

traditional system of volunteers several years earlier. Available sources show that the post-

independence army was still largely under British command—including the position of army

commander—during a period in which there were only two native lieutenants. Meanwhile,

Israeli influence seemed secondary—while Israel seconded fifty instructors to Uganda, they

appear to have focused on pilots, artillery, and paratroopers, rather than the main forces. Thus, I

coded Uganda as experiencing influence primarily from a volunteer-recruiting patron—the

United Kingdom—at independence.

Conversely, Lithuania had a strong Russian influence in the first two years after its

independence in 1991, but by August 1993 Russian troops had withdrawn and Lithuania had

replaced them with more NATO contacts, including a small American military advisory team. In

this case, the early Russian influence seemed most formative. Training courses continued to be

taught primarily by former Soviet officers, and many former Soviet officers joined Lithuania's

armed forces. The small size of the American mission (four members) seemed intended to

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[34] See for example, Paul Hensel, 2014, "ICOW Colonial History Data Set, version 1.0" codebook.

reinforce a local preference for the existing conscript-influence on Lithuanian military design, as it consisted of selective service specialists. Thus, I coded Lithuania's 1991 experience of state creation as occurring under influence of a patron using conscription.[35]

Similarly, I coded cases in which the only foreign influence on any of the three constituent influence measures was from an international organization like the UN or NATO as having no foreign influence, because it is unlikely that such diverse multinational actors would be able to exert unified pressures on military design. As Michel Doyle and Nicholas Sambanis write, "multilateral peacebuilding, because of its impartial character will not be the choice that states that seek unilateral advantages will choose. It is not the favored means to impose neo-imperial clients, acquire military bases or garner economic concessions."[36] The competing interests within multilateral missions makes it more difficult for the client state to emulate a single set of practices.

For example, the UN peacekeeping mission in Burundi after the settlement of its civil war in 2003 was tasked with creating an integrated national defense force. Ethiopia, Mozambique, and South Africa were all key contributing nations, and it is not immediately clear that the experience of one country would dominate military reform. In many such missions, the contributors also frequently change, further complicating the identification of a primary influencer. The 1992 UNPROFOR deployment in Macedonia, for example, was first supplied a dispatch of 500 Canadians—a volunteer country—in January 1993. They were withdrawn in February to be replaced by a 700-strong Nordic battalion, which was in turn supplemented by

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[35] Non-interactive hypothesis results are robust to coding Lithuania as volunteer, while the conscript influence and threat interaction is significant at a 0.1 level.

[36] Michael Doyle and Nicholas Sambanis, *Making War and Building Peace: United Nations Peace Operations* (Princeton University Press, 2006): 2.

several hundred American infantrymen in July.[37] One case I examine in detail, Bosnia and

Herzegovina, is coded as having no foreign military influence at independence, despite extensive

international involvement in statebuilding there. This is an issue I address further in Chapter 6.

However, the diverse interests of actors that were involved as a result of the international nature

of military patronage in this case reflects my broader logic for not coding international

organizations as having a clear influence on recruitment practices. In total, there were only 15

cases in which a multinational institution was the primary influencer on one of the dimensions of

foreign influence. However, as can be seen in the Appendix, tests using alternative codings for

cases of multinational institution influence do not change the results.

The coding process above resulted in a trichotomous, categorical independent variable

that coded separate categories if a new state had a primary patron that used volunteers, if it used

conscripts, and if there was no military patron or no clear influence. This captures the fact that

volunteer influence is expected to decrease the likelihood of conscription (and increase the

likelihood of using volunteers) to the same extent as conscript influence is likely to increase the

probability that a new state will use conscripts. The absence of foreign influence serves as a

reference category for which there is no expected effect on a new state's military recruitment

practices. However, to aid with the interpretation of interactive hypotheses I transformed this

variable into two dichotomous variables, coded 1 in the presence of volunteer influence or

conscript influence, respectively.

Of the 205 cases for which I was able to gather data on foreign military influences,

roughly 20 percent have volunteer influence, 36 percent have no influence, and 44 percent have

conscript influence, for a total of 131 foreign-influenced new states. This variation is nearly

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[37] United Nations Department of Public Information, "United Nations Protection Force," September 1996.
Available at http://www.un.org/en/peacekeeping/missions/past/unprof_b.htm.

identical if post-civil war state creation is dropped from the sample, with a breakdown of 20 percent volunteer, 31 percent no influence, and 49 percent conscript influence. The four most common influencers constituting the patron state in 85 percent of states experiencing foreign influence: the United Kingdom (34), Russia (28), the United States (27) and France (22).

3.3.2. *Threat Variables*

According to my theory, another key variable is the extent to which policymakers in the new state perceive major external threats. Threat perception is inherently subjective. Leaders prioritize threats differently depending on their ideology and cognitive biases, so that something that is perceived as highly threatening to the leaders of one state may be benign to others. Fortunately, my theory expects only certain types of threats to have a clear effect on conscription. It is only necessary to distinguish major, external, land-based threats from other types of threat, since these are the only types of threat that should create clear and overriding incentives to conscript their military personnel. Furthermore, there are many existing variables that political scientists use to identify such major threats for cross-national analysis. I employ several of these variables to proxy for potentially-existential threats that are likely to create pressures toward conscription.

First, one way to directly measure a new state's threat perceptions is its number of contiguous land borders. This measure captures a broader, more accurate conceptualization of external threats compared to the actual existence of conflict at independence. However, it has also repeatedly been linked to interstate conflict, and so also constitutes an appropriate proxy variable.[38] This variable represents a similar argument to Eliot Cohen's speculation that land

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[38] For a summary, see: Douglas Gibler, *The Territorial Peace: Borders, State Development, and International Conflict* (Cambridge, UK: Cambridge University Press, 2012): 1-12. The variable I use is coded from the COW Contiguity dataset, taking integer values ranging from 0–14. Correlates of War Project. Direct Contiguity Data, 1816-2016. Version 3.2.

border length is "perhaps the best (if crudest) predictor" of whether [states] will use

conscription."[39] In other words, the more land neighbors a state has, the more likely it is to have

territorial disputes that can escalate or enemies that may threaten it.

Another way to measure threat is the number of militarized interstate disputes it is

involved in at the time of its independence. MIDs data codes any instance in which states

threaten or use military force against each other. Because MIDs include shows of force that fall

short of war, it provides a more complete conceptualization of threat environments than a

variable that only counts major open war—a relatively rare occurrence. In addition, MIDs data

includes descriptions of the severity of individual disputes, ranging from "no militarized action"

to "war." This allows for the coding of alternative measures of threat environments that only

count disputes that are the most likely to require the type of major military preparations provided

by conscription.

I created a threat measure that is coded 1 if any MIDs occurred in the first two years after

a state's independence—to match the threshold I used for identifying finalized recruitment

policies—and zero otherwise.[40] The inclusion of MIDs after the year of independence means my

threat variables may include disputes that occur after some states made their initial military

decisions. However, post-independence MIDs should still lead to accurate threat codings for two

reasons. First, militarized interstate disputes do not arise from nowhere, and so will generally be

the culmination of prior conflictual and threatening relationships. Second, the alternative—

attempting to calculate regional disputes in the period before independence—is impractical.

However, the longer the post-independence time period for which my threat variables count

MIDs, the more likely it is that the variables will include disputes that are unforeseeable at the

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[39] Cohen, *Citizens and Soldiers,* 25
[40] Results are robust to using alternative MIDs time periods (see the Appendix).

time of independence and military design. While I also examine alternative codings that allow for longer time-horizons, I assume that new states will be most concerned with—and better able to predict—threats the closer they are to the year of independence.

3.3.3. *Alternative Hypotheses*

The main hypothesis competing with my theory is that domestic politics, through local culture, ideology or previous experiences, has the biggest effect on recruitment practices. In other words, critics would contend that foreign influence after independence should have no effect on recruitment after controlling for historical experiences favoring or disfavoring conscription. I control for these arguments in two ways. First, following previous studies of conscription I include dichotomous variables of a new state's colonial legacy based on Paul Hensel's Colonial History dataset.[41] This approach uses dummy variables to identify whether a state's primary colonial/pre-independence power was either the United Kingdom, France, Russia, or Turkey/the Ottoman Empire.

While including these dummy variables allows me to test the effects of specific colonizers, I also created and tested models using a separate dichotomous colonial history variable. This second approach measures whether a new state's most important prior colonial power traditionally used volunteers, with a coding of one indicating that it did and zero indicating that it did not have this colonial legacy. In practice, this captures whether the state was colonized by the UK (the Pearson R coefficient for the correlation between conscript tradition and UK colonization is -0.87). Specific colonizer dummies are advantageous because models using the colonial conscription control variable drops observations of new states that had no previous colonizer, However, using all of these dummies also substantially reduces my degrees

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[41] See Douglas Lemke and Jeff Carter, "Birth Legacies, State Making, and War," *Journal of Politics* 78 (2016), 497–511.

of freedom, which should be avoided due to my small sample size. As a result, I adopt the

dichotomous variable that measures whether there is a history of colonial volunteer recruitment

in most models, though the results using specific country dummies can be seen in the robustness

checks section.

4. Descriptive Statistics

A broad overview of my dataset supports the patterns described by my theory. Overall,

states that have no land borders—and thus are more secure against land invasions—are more

likely to adopt a volunteer system. As Table 3.6 shows, 76 percent of states with no borders rely

on volunteers, while only 43 percent of new states that have land borders do. However, all seven

states that are both unconstrained by foreign patrons and have no borders use volunteers.[42] Table

3.7 shows that the percentage of patron-less states that use volunteers when they have borders

remains roughly the same, at 46 percent. This shows that when states face threats and have no

patron, they are more likely to use conscription than to use volunteers, but not by much. New

states facing threats also become much more likely to use conscription or volunteers if they are

influenced by a conscript or volunteer patron, respectively.[43] States with volunteer patrons have a

75 percent chance of responding to the condition of having land borders using volunteer

recruitment, while states with conscript patrons have a 71 percent chance of doing so using

conscripts. This suggests that the effect of threat environment is drowned out by the influence of

patron states.

Table 3.6 Frequency of Recruitment System by Threat Environment

	No Borders	Any Borders	No MIDs	Any MIDs
Volunteer	76% (26)	43% (74)	52% (64)	44% (36)
Conscript	24% (8)	57% (97)	48% (59)	56% (46)
Total	**100% (34)**	**100% (171)**	**100% (123)**	**100% (82)**

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[42] These states are: Dominican Republic (1924), Indonesia (1949), Cuba (1959), Trinidad and Tobago (1962), Mauritius (1968), Solomon Islands (1978), and St. Lucia (1979).
[43] See the Appendix for tables.

Table 3.7 Patron Influence in States with Borders/MIDs

	No Influence		Volunteer Influence		Conscript Influence	
	Borders	MIDs	Borders	MIDs	Borders	MIDs
Volunteer	46% (30)	40% (12)	75% (18)	73% (8)	29% (23)	36% (14)
Conscript	54% (35)	60% (18)	25% (6)	27% (3)	71% (56)	64% (25)
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The data looks similar when we used MIDs as a measure of threat. States without a patron and that also experience any MIDs are more likely to use conscripts than volunteers, by 60 to 40 percent. The likelihood of adopting conscription for states facing any threats is similar when states have a patron that uses conscription (64 percent). Unsurprisingly, and consistent with Hypothesis 2, volunteer patrons again manage to drown out the effects of threat, with 73 percent of states with volunteer patrons and facing high threats using volunteer recruitment.

We can compare these frequencies to the frequency of conscription for states with different cultural legacies. Out of 61 new states that were colonized by a state that has a history of using volunteers, 80 percent use volunteers—roughly the same as the 82 percent of the 38 new states that experience post-independence volunteer influence that choose to use volunteers. Similarly, nearly 69 percent of 89 new states influenced by conscript patrons design conscript militaries, compared to 66 percent of those that have been influenced by a conscript colonizer in the past. This demonstrates that influence by patron states after independence is at least as plausible a predictor of recruitment policies as historical practices.

The distribution of patron influences over different threat level in the new state is also notable (see the Appendix). In particular, patrons that use volunteers appear less likely to get involved in military design in states that experience high levels of threat. Only 28 percent of states with volunteer patrons experience any MIDs, while roughly 40 percent of states with either

a conscript patron or no patron experience at least one MID.[44] This amounts to only 11 states in the sample that experience MIDs and have a volunteer patron, compared to 70 other states that face high threat levels. This should not necessarily be surprising. A reasonable explanation is that volunteer patrons are less likely to devote resources to states experiencing higher levels of major conflict, because they realize it increases the chance that their own forces will get dragged into it. In fact, this is consistent with my theory: volunteer states recognize both that volunteer recruitment is less-suited to high risk environments and that it is difficult to change recruitment systems, and thus they try to avoid scenarios that might require conscription.

Overall, patron states are more likely to influence states that have a low threat environment, with nearly two-third of states with patrons experiencing no MIDs. Additional summary statistics for the dataset can be seen in Table 3.8. Just over a third of the observations (36 percent, n=74) have no foreign patron, while 19 percent have a volunteer patron (n=39) and 45 percent (n=91) have a conscript patron. However, 33 percent (n=74) have a history of colonization by a state that used volunteers, while 65 percent (n=141) have a history of colonization by a state that used conscription. Nearly 40 percent of observations exhibit a high threat environment as measured by MIDs, and nearly 80 percent have at least one contiguous land border. No variables are highly correlated with each other, with the highest Pearson's R correlation statistic (Table 3.9) for any two variables that would be included in the same model being -0.46, for the relationship between having an historical legacy of volunteer usage and being influenced by a state that uses volunteers after independence.

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[44] However, the p-value for the associated difference in means test is 0.11, suggesting that the null hypothesis that the two mean threat values are not statistically different cannot be rejected at conventional levels. The difference between the mean value of threat based on whether a state has any borders for volunteer and non-volunteer patrons is statistically significant at a 0.0003 level.

Table 3.8 Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min.	Max.	Years Available
Conscription	205	0.51	0.50	0	1	1918–2008
Land Borders	223	2.80	2.26	0	14	1918–2008
MIDs	224	0.83	1.44	0	7	1918–2008
Hostile MIDs	224	0.55	1.07	0	5	1918–2008
Volunteer Legacy	224	0.33	0.47	0	1	1918–2008
Volunteer Influence	204	0.19	0.39	0	1	1918–2008
Conscript Influence	204	0.45	0.50	0	1	1918–2008

Table 3.9 Pearson's R Correlation Matrix

Variables	Conscription	Land Borders	MIDs	Hostile MIDs	Volunteer Legacy	Volunteer Influence	Conscript Influence
Conscription	1.00						
Land Borders	0.3163	1.00					
MIDs	0.0990	0.3698	1.00				
Hostile MIDs	0.1535	0.3030	0.8861	1.00			
Volunteer Legacy	-0.4176	-0.2830	-0.1448	-0.1205	1.00		
Volunteer Influence	-0.3241	-0.2045	-0.0660	-0.0683	-0.4609	1.00	
Conscript Influence	0.3021	0.0884	-0.0699	-0.0152	0.3267	-0.4370	1.00

5. Model Testing

Having found support for my theory in the raw data, I turn to regression analysis. In my

main models, I use logistic regression because the dependent variable is binary. I also use

clustered standard errors to address the possibility that observations of the same country at

different times are correlated with each other. Additional models using OLS regression are

available in the Appendix, though results are the same.

5.1 *Base Models*

I begin by testing models designed to reveal the impact of foreign influence and threat on

military recruitment choice, controlling for recruitment legacy. All models test Hypotheses 1 and

2 by including two dichotomous variables measuring the type of foreign patron influence in a

new state during the period of military design. The included variables measure the presence of a

volunteer patron and of a conscript patron, so that having no patron is the excluded reference

category. I would expect the volunteer influence variable to be negatively correlated with the

dependent variable: new states influenced by volunteer-recruiting patrons should emulate their

patron and therefore be more likely to have a volunteer army, and vice versa. Hypotheses 3 and 4

are tested in models that include interaction terms (see Table 3.11).

The first set of models test my non-interactive hypotheses, H1 and H2 (see Table 3.10).

In Model 1, I regress conscription on only my patron influence variables and an indicator that

captures the primary alternative hypothesis, a dichotomous variable that takes the value of 1 if

the state's primary colonizer has a history of using volunteers and zero otherwise. The conscript

and volunteer influence variables are statistically significant at a .10 level. Both variables have

substantive effects in the predicted directions, with conscript influence having a beta coefficient

of 0.67 and volunteer influence having a beta coefficient of -0.82. This translates into odds ratios

that predict that states with a conscript patron are almost twice as likely as states without a

conscript patron to use conscription. Similarly, states with volunteer patrons are 0.44 times less

likely to use conscription, though the effect is not significant at conventional levels. The results

are shown in Figure 3.1, below.

Fig. 3.1: Effect of Patron Influence on Recruitment
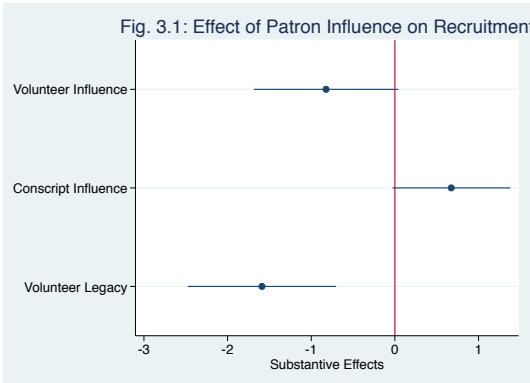
Table 3.10: The Effect of Patron Influence on the Probability of Conscription in New States[45]

Variables	Logit Model 1	Logit Model 2	Logit Model 3	Logit Model 4	Logit Model 5	Logit Model 6	Logit Model 7
Volunteer Influence	-0.823*	-0.640	-0.820*	-0.817*	-0.772	-0.817*	-0.819*
	(0.441)	(0.461)	(0.443)	(0.446)	(0.486)	(0.452)	(0.472)
Conscript Influence	0.674*	0.738**	0.674*	0.672*	0.731**	0.719**	0.723**
	(0.360)	(0.361)	(0.359)	(0.360)	(0.362)	(0.365)	(0.363)
Volunteer Legacy	-1.589***	-1.487***	-1.576***	-1.581***	-1.388***	-1.545***	-1.540***
	(0.453)	(0.465)	(0.464)	(0.456)	(0.484)	(0.462)	(0.455)
Any Land Borders		1.343**					
		(0.532)					
Any MIDs			0.0844				
			(0.344)				
Any Forceful MIDs				0.123			
				(0.362)			
Total Land Borders					0.253***		
					(0.0832)		
Total MIDs						0.0996	
						(0.106)	
Total Forceful MIDs							0.274*
							(0.148)
Constant	0.350	-0.904	0.311	0.307	-0.516	0.222	0.149
	(0.283)	(0.551)	(0.316)	(0.303)	(0.395)	(0.318)	(0.302)
Observations	199	199	199	199	199	199	199
Pseudo R-squared	0.1838	0.196	0.184	0.184	0.211	0.187	0.195

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Models 2–7 offer further tests for Hypotheses 1 and 2 by including another potentially

important variable that is omitted from the previous model: threat environment. Models 2–4

assume that threat environment is dichotomous. A state may either perceive that its primary

threat is a major territorial invasion, or it does not. Thus the first of these models is a general

measure of threat based on whether a state has any land borders, while Models 3 and 4 measure

threat using the presence of any MIDs and any high hostility MIDs, respectively. Models 5–7

measure threat as a continuum. This is consistent with the way states balance the various types of

threats they often face at the same time: the greater the likelihood of a major territorial threat, the

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[45] Standard errors are in parentheses below the coefficient in each regression table.

more likely that this will dominate the state's military design process. Therefore, these three models use continuous measures of the threat variables from Models 2–4. In Model 5, more land borders equates to more potential adversaries and therefore to a greater likelihood of perceiving a high threat environment, while more MIDs and more hostile MIDs should similarly make states more wary of potential threats in Models 6 and 7, respectively.

While volunteer influence is statistically significant at a 0.10 level in all but two of these models, conscript influence remains statistically significant at a 0.05 level in Model 2 and all models where threat is measured as a continuum. It is significant at a 0.10 level in the other models. Furthermore, no form of MIDs threat measurement is statistically significantly associated with military recruitment at the conventional 0.05 level. Having any land borders, however, is associated with an increase in the likelihood of conscription at a .05 level. The number of forceful MIDs a state experiences is significant at a 0.10 level. Furthermore, the results show that the more land borders that a state has, the more likely it is to use conscription, with statistical significance at a 0.01 level. These somewhat conflicting results are likely due to two things. First, states with no land borders are islands and so may have much less to fear in the way of territorial invasion than other states, regardless of the number of their MIDs. Second, consistent with the theory, the emulation effect of foreign patrons may be sufficiently strong and common as to drown out the effect of MIDs. Therefore it is difficult to get a sense of the effect of threat unless we only look at those cases that do not have foreign patrons, as suggested by Hypotheses 3 and 4.

These results suggest that conscript influencers have the predicted effects on military recruitment, though there may not be an effect of volunteer influencers.[46] This absence of an

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[46] Volunteer influencers is statistically significant at a 0.1 level in all the models except the one measuring threat as land borders when an alternative coding of recruitment legacy is used.

effect of volunteer influencers is in contrast to existing arguments that emphasize the unique

characteristics of the British volunteer recruitment culture, instead suggesting that conscript

militaries drive the emulation effect. In addition, threat environments likely have some effect on

military recruitment, and continuous measures of threat may have more explanatory power than

dichotomous ones. However, in order to test the hypotheses about threat, it is necessary to use

interactive statistical models.

Model 8 is the first of my interactive hypotheses. Each of the Models 8 through 13

regress the use of conscription on variables that interact threat environment with both conscript

influence and volunteer influence from a patron (Table 3.11). This allows me to evaluate

Hypotheses 3 and 4. To test Hypothesis 3, which says that threat does not matter when there is a

patron, it is necessary to perform a two-tailed difference in means test. This evaluates the

difference between the volunteer patron-threat and conscript patron-threat interaction terms by

testing whether the coefficients for the two influence-threat interaction terms are jointly

equivalent to zero. In other words, when this t-test fails to reject the null hypothesis that the

coefficients for these two interaction terms are jointly equally to zero, there is support for the

hypothesis that threat has no effect on conscription when there is a patron state. If there is

support for Hypothesis 4, the coefficient for the threat variable will be statistically significant in

models that include variables that interact threat and patron influence. In these models, the threat

variable captures the effect of threat when there is no patron, while each of the interaction terms

captures of the effect of threat when there is a patron. As in Table 3.10, the first three of these

models (8–10) measure threat dichotomously, as the presence of any borders, any MIDs, and any

forceful MIDs, respectively.[47] Models 11–13 employ continuous measures of these threat

variables and their interactions.

Table 3.11: The Effect of Influence and Threat on the Probability of Conscription in New States

Variables	Logit Model 8	Logit Model 9	Logit Model 10	Logit Model 11	Logit Model 12	Logit Model 13
Any Land Borders	15.56*** (0.485)					
Any MIDs		0.574 (0.495)				
Any Forceful MIDs			0.773 (0.523)			
Total Land Borders				0.352*** (0.126)		
Total MIDs					0.300** (0.147)	
Total Forceful MIDs						0.619*** (0.217)
Volunteer Influence	13.60*** (1.104)	-0.725 (0.586)	-0.305 (0.536)	-0.0415 (0.754)	-0.316 (0.545)	-0.306 (0.564)
Conscript Influence	15.44*** (0.901)	1.110** (0.479)	0.990** (0.432)	1.133 (0.700)	1.084** (0.428)	1.009** (0.408)
Volunteer Influence*Threat	-14.35*** (1.157)	-0.219 (1.110)	-1.938 (1.466)	-0.236 (0.178)	-0.497 (0.318)	-0.877 (0.672)
Conscript Influence*Threat	-14.89*** (0.984)	-0.987 (0.657)	-0.936 (0.694)	-0.130 (0.200)	-0.384* (0.211)	-0.523* (0.293)
Volunteer Legacy	-1.52*** (0.470)	-1.533*** (0.471)	-1.629*** (0.491)	-1.453*** (0.519)	-1.592*** (0.494)	-1.583*** (0.498)
Constant	-15.01*** (0.441)	0.0930 (0.350)	0.100 (0.325)	-0.817* (0.467)	0.0100 (0.331)	-0.0402 (0.322)
Observations	199	199	199	199	199	199

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The threat variable is statistically significant at least at a 0.05 level in Models 8, 11, 12,

and 13. The only models in which threat is not statistically significant are those that include the

presence of any MIDs or any forceful MIDs as threatening. However, it makes sense that the

presence of any MIDs would not necessarily be statistically significant. The presence of a single

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[47] Due to the perfect prediction of outcomes for several variables, the results from logistic analysis cannot be interpreted reliably in Model 8. OLS regression results for Model 8 are available in the Appendix and should be used instead. The results from linear regression models are still valid when the dependent variable is dichotomous.

MID does not necessarily reach a threat threshold large enough to affect the design of security

institutions, since MIDs can include not only violent conflicts, but also disputes in which there

was no militarized action, or in which there were only threats to use force. Indeed, the effect of

threats seem to be strongest when they are violent and cumulative. The continuous forceful

MIDs variable is correlated with an increase in the probability of conscription at a 0.01 level.

Each additional high-level MID that a state has is associated with a 1.9 increase in the

probability of conscription, when there is no patron state. Substantive effects and odds ratios for

Model 13 can be seen in Figures 3.2a and 3.2b, below. Thus, there is support for Hypothesis 4,

that states without a patron are more likely to conscript when they face high threats compared to

when they face low threats.

Fig. 3.2a: Substantive Effects for Model 13 — Fig. 3.2b: Odds Ratios for Model 13
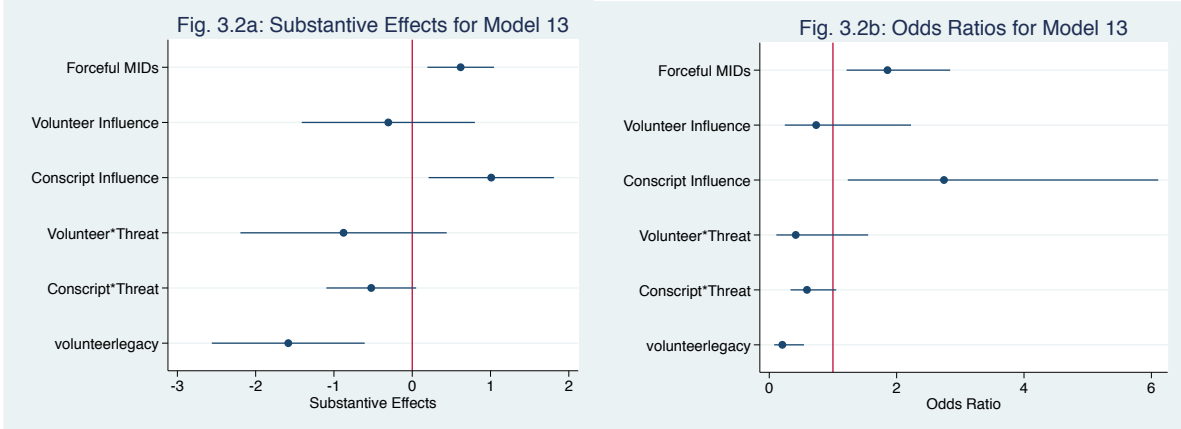
There is also support for Hypothesis 3, which says that threat only has an effect when

there is no patron. If threat only has an effect on recruitment when states have no patron and has

no effect when there is a patron, then each of the interactions between threat and conscript

influence and threat and volunteer influence should be equal to zero. As can be seen in Table

3.12, we fail to reject the null hypothesis that these variables are jointly equal to zero at a 0.05

level in Models 9–13. This suggests that the effect of threat on military recruitment is greater for

states without a patron than for states that have either volunteer or conscript patrons.[48]

Figures 3.3 and 3.4 shows the substantive effects of threat—measured as both the number

of land borders and the number of forceful MIDs—given no military patron. Among states with

no patrons, the predicted probability of using conscription increases from 30 percent for those

with no land borders, to 65 percent for those with five land borders, like the post-Soviet states

Azerbaijan, Uzbekistan, and Kazakhstan, and 97 percent for Russia, which has 14 land borders.

Similarly, states with no forceful MIDs have less than a 45 percent chance of adopting

conscription. States with one forceful MID, however, are more likely to conscript by 12

percentage points, while those with three have a 77 percent likelihood of adopting conscription.

China, which is one of five states with the most forceful MIDs at 5, had only a 10 percent

probability of adopting a volunteer military.

Table 3.12: Hypothesis Testing for Hypothesis 3

	Hypothesis Tested	χ^2 Statistic	P-value
Model 8	$\beta_{volunteerinfluence*anyborders} = \beta_{conscriptinfluence*anyborders} = 0$	328.34	0.00
Model 9	$\beta_{volunteerinfluence*anymids} = \beta_{conscriptinfluence*anymids} = 0$	2.37	0.31
Model 10	$\beta_{volunteerinfluence*anyhostmids} = \beta_{conscriptinfluence*anyhostmids} = 0$	2.95	0.22
Model 11	$\beta_{volunteerinfluence*totalborders} = \beta_{conscriptinfluence*totalborders} = 0$	1.80	0.41
Model 12	$\beta_{volunteerinfluence*totalmids} = \beta_{conscriptinfluence*totalmids} = 0$	4.62	0.10
Model 13	$\beta_{volunteerinfluence*totalhostilemids} = \beta_{conscriptinfluence*totalhostilemids} = 0$	3.93	0.14

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[48] Splitting the sample into states that have patrons and those that do not provides similar results. As can
be seen in the Appendix, none of interactions between threat and volunteer influence is statistically
significant in any of the models that are limited to states that patrons, while the two stronger indicators of
threat are statistically significant at a 0.05 level in the models that are limited to those states without
patrons.

Fig. 3.3: Marginal Effects of Land Borders on Probability of Conscription   Fig. 3.4: Marginal Effects of Threat on Probability of Conscription
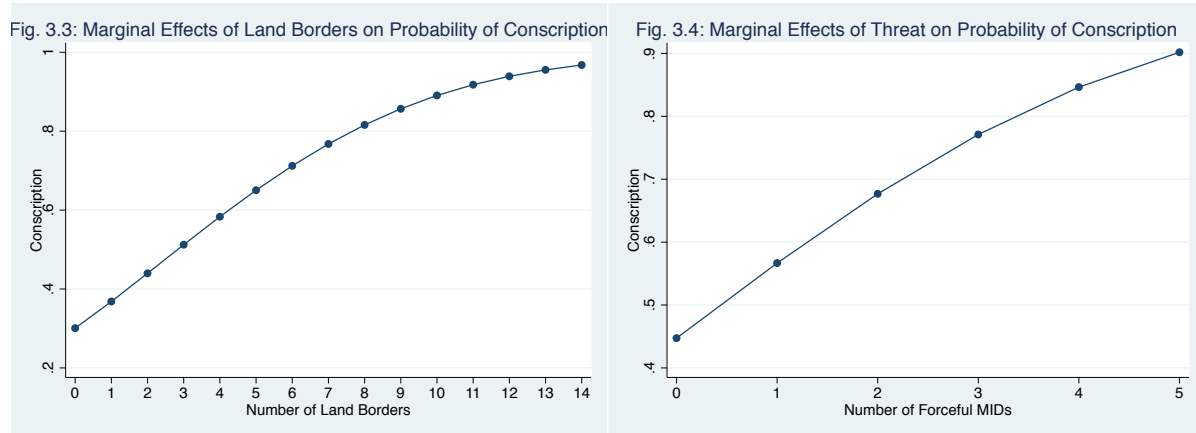
5.2. *Additional Control Variables*

While any model must include some measure for each of the variables described above,

existing literature on the determinants of recruitment practices is sufficiently scarce and

inconclusive as to leave open for interpretation the necessary additional control variables. Below

I discuss the available possibilities and reasons for the inclusion or exclusion of various control

variables from my final models. Additional variables that are said to affect military recruitment

fall into two broad categories, depending on whether they describe political institutions or

economic factors and resource availability.

First, many scholars have argued that there should be a relationship between democracy

and military recruitment. However, the exact direction of this relationship, if any, is disputed.

Conscription may reflect egalitarian notions of citizenship or it may conflict with liberal notions

of individual rights—both of which are more likely to be associated with democratic regimes.[49]

While it is possible that democracies are more likely to use a particular recruitment system, the

fact that they have successfully used both conscript and volunteer recruitment systems—in war

and in peacetime—at various times over the last century should weaken the arguments that

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[49] See Asal et al., "I Want You!" for a review of the literature. See also Pfaffenzaller, "Conscription and Democracy." Asal et al find that democracy decreases the likelihood of conscription.

associate it with a particular system.[50] Similarly, we may also expect authoritarian regimes to be more likely to suppress individual rights in a way that allows them to use conscription more easily, though they equally could be hesitant to arm the public.

The most likely way political institutions can affect recruitment system is by giving voice or creating accountability to the public. The average citizen prefers to pay for a volunteer force over risking being conscripted.[51] Thus, regimes that are more responsive to the population may be more likely to use volunteers. Yet, states often impose conscription on unwilling populations. In her classic study, Margaret Levi argued that perceptions of fairness determined the extent of popular opposition and noncompliance with wartime drafts, though the draft was still enforced in each of the five democracies she studied, even when it was perceived as extremely unfair.[52]

I tested two version of variables that represent arguments that there should be a relationship between democracy or political accountability and conscription. First, I included a control variable from the Polity IV dataset to measure how democratic a new state is at independence. This variable was never statistically significant and did not change the results of the basic model, whether measured as a continuous variable or as a dichotomous variable with different cutoffs to define democracy. Second, I test the same models using the Ethnic Power Relations (EPR) dataset's measurements for the number of excluded groups and the size of the excluded population. Higher values on each value should indicate that a state's government is less responsive to the preferences of the population. These variables may also proxy not for regime type but for perceived threat environment, with states being less willing to take the many risks associated with conscription if their hold on power requires excluding large portions of the population. Although the EPR dataset's more limited timeframe—it begins in 1946—reduces my

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[50] Kier, *Imagining War*; Leander, "Drafting Community."
[51] Caverley, *Democratic Militarism*, 32
[52] Levi, *Consent, Dissent, and Patriotism*.

number of observations to 171, no specification of these domestic regime type variables is

statistically significant at a p=0.10 level (see Table 3.13).

Table 3.13 The Effect of Regime Type on Military Recruitment

Variables	Model 14	Model 15	Model 16	Model 17
Total Land Border	0.392*** (0.139)	0.393*** (0.141)	0.394*** (0.132)	0.336** (0.151)
Volunteer Influence	0.234 (0.855)	0.246 (0.846)	0.590 (0.836)	0.565 (0.859)
Conscript Influence	1.053 (0.761)	1.071 (0.763)	0.860 (0.757)	0.832 (0.789)
Volunteer Legacy	-1.660*** (0.569)	-1.649*** (0.567)	-1.677*** (0.588)	-1.722*** (0.598)
Volunteer Influence*Borders	-0.332* (0.194)	-0.333* (0.193)	-0.371* (0.194)	-0.343* (0.204)
Conscript Influence*Borders	-0.0967 (0.222)	-0.0940 (0.222)	-0.0658 (0.215)	-0.0506 (0.229)
Democracy (dichotomous)	0.170 (0.405)			
Democracy (continuous)		0.0120 (0.0284)		
Total Excluded Ethnic Groups			-0.0447 (0.0370)	
Total Excluded Population				0.378 (1.218)
Constant	-0.878* (0.506)	-0.986 (0.609)	-0.726 (0.506)	-0.733 (0.521)
Observations	175	175	171	171

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Economic factors may also affect recruitment decisions. These theories emphasize

supply-side constraints on or prerequisites for conscription. Rational, power-maximizing states

should not want to implement a military personnel system unless they have the tools to

implement it successfully. Conscription may require the state to have greater levels of

centralization, better-developed bureaucracy, or greater domestic stability compared to volunteer

systems.[53] States with lower capacity or fewer coercive resources may fear opposition too much, and therefore, on average, not even try to implement conscription. Conversely, states with greater economic or administrative capacity would equally be better able to provide sufficient compensation to attract volunteers without using coercion. Given the lower risks to stability volunteers entail, this option may be more appealing to states that have high levels of resources.

To test these competing hypotheses, I add different specifications of resource capacity to my base models (see Table 3.14). Models 18 includes a variable measuring the state's urban population percentage. This variable is often used in modernization literature to measure a state's level of economic development, and consequently its ability to control resources—which should aid in the implementation of conscription.[54] Urban population percentage is statistically significant at a .01 level, and does not change the other results. Substantively, this may offer support for the hypothesis that states are more likely to conscript where doing so is easier. Large urban populations may indicate greater state ability to control the population. Rural recruitment is often challenging, especially in new states that are still stablishing their authority, both because it is more difficult to extend control and legitimacy the further from the state's center and because cities offer a higher concentration of potential recruits. Thus, another interpretation of this variable is as a proxy for responses to certain threats: if states anticipate resistance to conscription among populations they have less control over, then they would only conscript when they perceive that resistance is manageable.

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[53] Mulligan and Shleifer, "Conscription as Regulation"; Barnett, *The Fragmentation of Afghanistan*; Wendt and Barnett, "Dependent State Formation"; Van Doorn, "The Decline of the Mass Army in the West."
[54] Toronto, "Why War is Not Enough."

Table 3.14: The Effect of State Capacity on Military Recruitment

Variables	Model 18	Model 19	Model 20
Total Land Borders	0.303** (0.145)	0.293** (0.136)	0.322** (0.145)
Volunteer Influence	-0.439 (0.834)	-1.319 (1.037)	-0.238 (0.952)
Conscript Influence	0.889 (0.722)	1.321 (1.029)	0.754 (0.812)
Volunteer Legacy	-1.376** (0.557)	-1.159* (0.595)	-1.941*** (0.631)
Volunteer Influence*Borders	-0.219 (0.197)	0.0217 (0.183)	-0.274 (0.196)
Conscript Influence*Borders	-0.0853 (0.210)	-0.191 (0.271)	-0.0848 (0.219)
Urban Pop. Perc	3.217** (1.468)		
Capacity Index		1.344** (0.604)	
GDP per capita			0.000103 (6.93e-05)
Constant	-1.017** (0.488)	-1.857** (0.916)	-0.775 (0.582)
Observations	194	110	162

Similarly, a composite measure from the Relative Political Capacity dataset measuring

"the ability of governments to appropriate portions of the national output to advance public

goals," is also statistically significant at a .05 level, as seen in Model 19.[55] This is a more direct

measure of governmental resources compared to GDP, which is usually used as a measure of

state capacity but is not statistically significant (Model 20). However, there is extensive missing

data for the RPC variable that reduces the sample size by nearly half. Moreover, the missing data

is likely not randomly distributed, as weaker and poorer countries are less likely to have the data

available that was used for coding. Importantly, the key independent variables—volunteer

influence and the interaction between threat perception and no influence—remain statistically

significant in all models, despite the precise specification of control variables.

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[55] Marina Arbetman-Rabinowitz, Ali Fisunoglu, Jacek Kugler, Mark Abdollahian, Kristin Johnson, Kungkook Kang, Zining Yang, "Replication Data for: Relative Political Capacity Dataset."

The statistical significance of some of these control variables suggests the need to test a single model including all control variables. Table 3.15 shows the results from this logistic regression. Model 21 and Model 22 include controls for level of democracy, number of excluded ethnic groups, and the urban population. In addition, I test whether internal ethnic exclusion may function as a pressure on recruitment in the same way as external threats do. This is important because many scholars have suggested that states are just as likely to design their security apparatuses in response to internal threats as in response to external threats.[56] Thus Model 21 tests whether Hypotheses 1 and 2 still find support when all additional control variables are accounted for, Model 22 does the same for Hypotheses 3 and 4, while Model 23 tests whether Hypotheses 3 and 4 also apply to states' perceptions of internal threats.

The model without interactions still provides support for Hypothesis 2, but not for Hypothesis 1. However, only the control variable for urban population is statistically significant at greater than a 0.1 level. Model 22 shows similar results, though unsurprisingly the patron influence variables are no longer significant when the interaction terms are included. We also fail to reject null hypothesis that the interaction terms are jointly equal to zero at a 0.35 level. Together this provides strong support for Hypotheses 3 and 4.

Interestingly, there is also support that the perception of internal threat, defined by the number of excluded ethnic groups, also affects military recruitment only in the absence of a patron state. When interactions between the number of excluded groups and patron influence are included in Model 23, a country with no patron has a lower likelihood of using conscription with each additional ethnic group that it excludes. Such a patron-less country with no excluded groups—like Yemen after reunification in 1990—is associated with a 63 percent probability of

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[56] Greitens, "Coercive Institutions"; Barnett, *Confronting the Costs of War*

using conscription. Meanwhile, one with ten excluded groups—for example, the Democratic

Republic of the Congo in 2002—would have only a 34 percent probability of using conscription.

Furthermore, the interaction terms between excluded groups and patron influence cannot be

statistically distinguished from each other and from zero at more than a 0.05 level. This

demonstrates, consistent with Hypotheses 3 and 4, that states are less likely to use conscription

when they exclude many groups from power, but not when there is patron influence to

overpower local threat perceptions.

Table 3.15 Full Regression Table

Variables	Model 21	Model 22	Model 23
Total Land Borders	0.298***	0.351**	0.527**
	(0.111)	(0.164)	(0.224)
Volunteer Influence	-1.355**	-0.153	0.836
	(0.668)	(1.111)	(1.351)
Conscript Influence	0.630	0.570	0.736
	(0.392)	(0.823)	(0.839)
Volunteer Legacy	-1.586**	-1.678**	-1.760**
	(0.626)	(0.677)	(0.734)
Volunteer Influence*Borders		-0.321	-0.456
		(0.243)	(0.384)
Conscript Influence*Borders		0.0227	-0.211
		(0.242)	(0.285)
Democracy (cont.)	-0.0110	-0.00786	-0.00578
	(0.0292)	(0.0291)	(0.0288)
Total Excluded Ethnic Groups	-0.0366	-0.0425	-0.179**
	(0.0360)	(0.0372)	(0.0849)
Urban Pop. Percent	3.780*	3.900*	3.930*
	(2.183)	(2.116)	(2.136)
Volunteer Influence*Excluded Groups			-0.701
			(0.477)
Conscript Influence*Excluded Groups			0.217*
			(0.118)
Constant	-0.826	-1.016	-1.201*
	(0.625)	(0.651)	(0.663)
Observations	157	157	157

6. Robustness Checks

Finally, it is important to check that alternate specifications of my key independent and dependent variables do not affect the model results. The results from the base models remain fairly robust when I account for the possibility that the process of military design may be different for some of the observations in my dataset. The dichotomous variable indicating whether the observation is a new regime that emerged after civil war is not statistically significant, suggesting that the heterogeneity of my sample is not a problem for my theory (Table 3.16a). However, the patron influence variables are also no longer significant at conventional levels.

Table 3.16a: Robustness Checks

Variables	Model 24	Model 25
Total Land Borders	0.258***	0.360***
	(0.0824)	(0.128)
Civil War State	-0.0936	-0.125
	(0.355)	(0.356)
Volunteer Influence	-0.782	-0.0433
	(0.490)	(0.751)
Conscript Influence	0.713*	1.116
	(0.373)	(0.700)
Volunteer Legacy	-1.383***	-1.447***
	(0.483)	(0.517)
Volunteer Influence*Borders		-0.240
		(0.179)
Conscript Influence*Borders		-0.133
		(0.201)
Constant	-0.499	-0.799*
	(0.400)	(0.465)
Observations	199	199

In Table 3.16b, models 26 and 27 tests an alternative measure of foreign influence on military design. I created an alternative variable that more directly measures the hypothesized process of professional emulation. This continuous variable measures the proportion of a new

state's formal allies that use conscription, using data from the ATOP dataset.[57] Values closer to 1

indicate that a higher proportion of a new state's allies use conscription, while 0 would represent

a case in which all allies use volunteers.[58] Frequent contact between allies should increase the

likelihood that norms of appropriateness regarding military recruitment practices diffuse between

them. Furthermore, because recruitment practices affect so many other aspects of military

design, allies may feel pressured to conform to the same military recruitment practices, which

may allow them to benefit from greater interoperability. Model 26 examines whether this

measure of foreign influence affects military recruitment. As expected, the ally recruitment

variable is statistically significant. It also has a large substantive effect—larger, in fact, than the

effect of having a colonial legacy of conscription: the predicted probability of adopting

conscription increases from 4 percent to 95 percent across the range of ally recruitment, while it

only decreases from 59 percent to 32 percent between states without and with a volunteer legacy.

Table 3.16b: Robustness Checks (continued)

Variables	Model 26	Model 27
Total Land Borders	0.221**	-0.219
	(0.0857)	(0.291)
Ally Conscription	7.145***	5.297***
	(1.423)	(1.778)
No Patron		-1.457**
		(0.686)
Ally Conscription*Land Borders		0.705
		(0.539)
No Patron*Land Borders		0.363*
		(0.219)
Volunteer Legacy	-1.622***	-1.675***
	(0.459)	(0.476)
Constant	-3.877***	-2.547**
	(0.852)	(1.019)
Observations	203	203

[57] Brett Ashley Leeds, Jeffrey M. Ritter, Sara McLaughlin Mitchell, and Andrew G. Long, "Alliance Treaty Obligations and Provisions, 1815-1944," *International Interactions* 28 (2002): 237-260.
[58] States with no allies are coded 0.5, to indicate that they have an equal chance of going either way.

Model 27 tests the interactive hypotheses 3 and 4 by including additional variables to account for the possibility that a state has allies but no direct military patron. It also includes interactions between these two influence variables and threat perception, as measured by the number of land borders. The ally recruitment variable remains statistically significant at a 0.01 level, providing support for Hypotheses 1 and 2. The interaction between states with no patron and threat environment is statistically significant at a 0.10 level, suggesting some support for Hypothesis 4. Moreover, the effect is in the predicted direction: states without a patron that experience high threat environments are more likely to use conscription. There is also support for Hypothesis 3, as the interaction between ally recruitment and threat is not statistically significant.

Four final models replace the dichotomous variable for whether a new state's principal colonizer predominantly used conscripts with four dummy variables indicating the specific identity of the colonizer as either the United Kingdom, France, Russia, or Turkey/the Ottoman Empire (Table 3.16c). This allows for an investigation of more specific, cultural influences of colonizers, and thus is also a direct test of my hypotheses against the common argument that British norms against using conscription led former British colonies to use volunteer systems. In Models 28 and 29, threat is measured as the number of land borders, and an Ottoman colonial legacy is statistically significant but a British one is not. This may cast some doubt on arguments that emphasize a British cultural heritage as affecting military recruitment. However, Models 30 and 31, which measures threat using the number of hostile MIDs that a new state experiences, show slightly different results. Here, British legacy is significant at a 0.1 level and Ottoman/Turkish legacy are both only significant at a 0.1 level. This suggests that colonial legacy may affect recruitment less through the ideological or cultural traits of a particular

colonizer being passed down to the colony, and more through the way different colonizers

interacted with threat environments or behaved after independence. It also suggests a

reexamination of other arguments that point to French or Russian origins as making conscription

more likely. Most importantly, however, there is stronger support for the effect of a conscript

colonizer—The Ottoman Empire/Turkey—than for the United Kingdom.

Table 3.16c: Robustness Checks (continued)

Variables	Model 28	Model 29	Model 30	Model 31
Total Land Borders	0.244*** (0.0827)	0.320** (0.135)		
Total Forceful MIDs			0.232 (0.148)	0.481** (0.190)
Volunteer Influence	-1.079** (0.502)	-0.515 (0.797)	-1.017** (0.509)	-0.634 (0.639)
Conscript Influence	0.983** (0.390)	1.293* (0.687)	0.931** (0.395)	1.178*** (0.446)
Volunteer Influence*Borders		-0.179 (0.210)		
Conscript Influence*Borders		-0.0991 (0.196)		
Volunteer Influence*MIDs				-0.626 (0.674)
Conscript Influence*MIDs				-0.424 (0.268)
British Colony	-0.721 (0.529)	-0.739 (0.541)	-0.987* (0.523)	-1.008* (0.565)
French Colony	-0.492 (0.472)	-0.486 (0.469)	-0.354 (0.503)	-0.382 (0.508)
Rusian Colony	0.773 (0.713)	0.777 (0.717)	0.990 (0.693)	0.908 (0.710)
Turkish Colony	1.310** (0.641)	1.320** (0.646)	1.222* (0.647)	1.180* (0.659)
Constant	-0.907** (0.419)	-1.147** (0.499)	-0.241 (0.350)	-0.377 (0.373)
Observations	195	195	195	195

6. Conclusion

This chapter has tested hypothesis that foreign influence after independence affects how

new states make military recruitment decisions. Importantly, the results suggest that, while

colonizer recruitment practices remains significant, so is foreign influence after independence. In particular, states that have patrons interested in their military design are likely to emulate the recruitment practices of their patron.

Threat environments play a role in military recruitment policies, but the relative effect of threat is highest when there is no foreign patron to dictate or otherwise influence policy. This makes sense, not only because states with patrons have actors that may directly guide their military design, but also because new states with foreign patrons can more readily count on foreign help in the event of a major conflict. Having a patron inevitably dampens the effect of threats, while patron-less states are more likely to need to rely on their own capabilities. It also seems that to the extent that threat perceptions affect military recruitment practices in new states, it is through broad evaluations of the state's geostrategic position. Having more borders may make a state's position more precarious, leading to a greater willingness to take on the risks of conscription as a way to increase security. More acute indicators of threat have a less consistent effect on military recruitment practices.

In sum, this chapter has demonstrated an association between the recruitment practices of new states and the recruitment practices of foreign states with influence in the new state in the years after its independence. However, the statistical methods used in this chapter leave several questions still in need of answers. For one, it is not yet clear what role recruitment plays in determining or creating this association. Do new states specifically look at and prioritize the recruitment practices of their patrons when designing their own, or does emulation of recruitment follow from other emulated practices? Does the interest in emulation originate in the new state, or does it occur through a top-down process of pressure from the patron? In addition, it is important to examine the particular logic motivating emulation: what purpose do states have in

mind when they adopt recruitment policies, and do these differ for patrons and their clients?

Finally, this chapter has only examined recruitment policies at a single moment in time—during

periods in which states are likely to be designing military institutions that they expect will last a

long time. It remains to be seen whether the initial effect of foreign patrons continues to

influence military recruitment policies after independence, as well.

　　　　To test these aspects of my theory, it is necessary to turn to case studies in the following

chapters. The case study chapters provide further evidence to support my argument that post-

independence patrons affect military design through a mechanism of emulation. While they

continue my emphasis on new states, they also tease out the role of my explanatory variables

beyond initial periods of military design.

Appendix to Chapter 3.

Table 3A.1 Universe of Cases

COW Code	Name	Year	Criterion for Entering Dataset
305	Austria	1918	ICOW
315	Czechoslovakia	1918	ICOW
366	Estonia	1918	ICOW
310	Hungary	1918	ICOW
367	Latvia	1918	ICOW
368	Lithuania	1918	ICOW
290	Poland	1918	ICOW
678	Yemen Arab Rep. (Sanaa/North)	1918	ICOW
700	Afghanistan	1919	ICOW
712	Mongolia	1921	ICOW
651	Egypt	1922	COW Interruption
205	Ireland	1922	ICOW
42	Dominican Republic	1924	COW Interruption
91	Honduras	1924	COW Civil War
670	Saudi Arabia	1926	ICOW
710	China	1928	COW Civil War
70	Mexico	1929	COW Civil War
645	Iraq	1932	ICOW
41	Haiti	1934	COW Interruption
230	Spain	1939	COW Civil War
530	Ethiopia	1941	COW Interruption
660	Lebanon	1943	ICOW
339	Albania	1944	COW Interruption
220	France	1944	COW Interruption
350	Greece	1944	COW Interruption
395	Iceland	1944	ICOW
212	Luxembourg	1944	COW Interruption
345	Yugoslavia	1944	COW Interruption and Goodwin
211	Belgium	1945	COW Interruption
315	Czechoslovakia	1945	COW Interruption
210	Netherlands	1945	COW Interruption
385	Norway	1945	COW Interruption
290	Poland	1945	COW Interruption
663	Jordan	1946	ICOW
840	Philippines	1946	ICOW
652	Syria	1946	ICOW

760	Bhutan	1947	ICOW
750	India	1947	ICOW
770	Pakistan	1947	ICOW
94	Costa Rica	1948	COW Civil War
666	Israel	1948	ICOW
775	Myanmar (Burma)	1948	ICOW
731	North Korea (DPRK)	1948	ICOW
732	South Korea (ROK)	1948	ICOW
780	Sri Lanka (Ceylon)	1948	ICOW
710	China	1949	Goodwin Revolution
850	Indonesia	1949	ICOW
713	Taiwan (ROC)	1949	ICOW
620	Libya	1951	ICOW
145	Bolivia	1952	Goodwin Revolution
740	Japan	1952	COW Interruption
811	Cambodia	1953	ICOW
812	Laos	1953	ICOW
265	German Dem. Rep. (East)	1954	ICOW
817	Rep. of Vietnam (South)	1954	ICOW
816	Vietnam/Dem.Rep.Vietnam (North)	1954	ICOW and Goodwin
160	Argentina	1955	COW Civil War
305	Austria	1955	COW Interruption
260	German Fed. Rep. (West)	1955	ICOW
600	Morocco	1956	COW Interruption
625	Sudan	1956	ICOW
616	Tunisia	1956	COW Interruption
452	Ghana	1957	ICOW
820	Malaysia	1957	ICOW
438	Guinea	1958	ICOW
40	Cuba	1959	Goodwin Revolution
434	Benin (Dahomey)	1960	ICOW
439	Burkina Faso (Upper Volta)	1960	ICOW
471	Cameroon	1960	ICOW
482	Central African Republic	1960	ICOW
483	Chad	1960	ICOW
484	Congo (Brazzaville)	1960	ICOW
437	Cote d'Ivoire (Ivory Coast)	1960	ICOW
352	Cyprus	1960	ICOW
490	Dem. Rep. Congo (Zaire; Kinshasa)	1960	ICOW
481	Gabon	1960	ICOW

580	Madagascar (Malagasy Rep.)	1960	ICOW
432	Mali	1960	ICOW
435	Mauritania	1960	ICOW
436	Niger	1960	ICOW
475	Nigeria	1960	ICOW
433	Senegal	1960	ICOW
520	Somalia	1960	ICOW
461	Togo	1960	ICOW
690	Kuwait	1961	ICOW
451	Sierra Leone	1961	ICOW
510	Tanzania (Tanganyika)	1961	ICOW
615	Algeria	1962	ICOW and Goodwin
516	Burundi	1962	ICOW
51	Jamaica	1962	ICOW
812	Laos	1962	COW Civil War
517	Rwanda	1962	ICOW
990	Samoa (Western Samoa)	1962	ICOW
52	Trinidad and Tobago	1962	ICOW
500	Uganda	1962	ICOW
501	Kenya	1963	ICOW
511	Zanzibar	1963	ICOW
553	Malawi	1964	ICOW
338	Malta	1964	ICOW
551	Zambia	1964	ICOW
420	Gambia	1965	ICOW
781	Maldive Islands	1965	ICOW
830	Singapore	1965	ICOW
552	Zimbabwe (Rhodesia)	1965	ICOW
53	Barbados	1966	ICOW
571	Botswana	1966	ICOW
110	Guyana	1966	ICOW
645	Iraq	1966	COW Civil War
570	Lesotho	1966	ICOW
680	Yemen People's Rep. (Aden/South)	1967	ICOW
411	Equatorial Guinea	1968	ICOW
590	Mauritius	1968	ICOW
970	Nauru	1968	ICOW
572	Swaziland	1968	ICOW
950	Fiji	1970	ICOW
645	Iraq	1970	COW Civil War

955	Tonga	1970	ICOW
692	Bahrain	1971	ICOW
771	Bangladesh	1971	ICOW
694	Qatar	1971	ICOW
696	United Arab Emirates	1971	ICOW
625	Sudan	1972	COW Civil War
31	Bahamas	1973	ICOW
155	Chile	1973	COW Civil War
530	Ethiopia	1974	Goodwin Revolution
55	Grenada	1974	ICOW
404	Guinea-Bissau	1974	ICOW
540	Angola	1975	ICOW and Goodwin
811	Cambodia	1975	Goodwin Revolution
402	Cape Verde	1975	ICOW
581	Comoros	1975	ICOW
541	Mozambique	1975	ICOW
910	Papua New Guinea	1975	ICOW
403	Sao Tome and Principe	1975	ICOW
115	Suriname	1975	ICOW
591	Seychelles	1976	ICOW
522	Djibouti	1977	ICOW
700	Afghanistan	1978	COW Civil War
54	Dominica	1978	ICOW
940	Solomon Islands	1978	ICOW
947	Tuvalu	1978	ICOW
630	Iran	1979	Goodwin Revolution
946	Kiribati	1979	ICOW
93	Nicaragua	1979	Goodwin Revolution
56	St. Lucia	1979	ICOW
57	St. Vincent and Grenadines	1979	ICOW
552	Zimbabwe (Rhodesia)	1979	COW Civil War
935	Vanuatu	1980	ICOW
58	Antigua and Barbuda	1981	ICOW
80	Belize	1981	ICOW
60	St. Kitts and Nevis	1983	ICOW
835	Brunei	1984	ICOW
483	Chad	1984	COW Civil War
660	Lebanon	1984	COW Civil War
987	Fed. States of Micronesia	1986	ICOW
983	Marshall Islands	1986	ICOW

500	Uganda	1986	COW Civil War
680	Yemen People's Republic	1986	COW Civil War
339	Albania	1989	Goodwin Revolution
355	Bulgaria	1989	Goodwin Revolution
310	Hungary	1989	Goodwin Revolution
290	Poland	1989	Goodwin Revolution
360	Romania	1989	Goodwin Revolution
483	Chad	1990	COW Civil War
255	Germany	1990	COW Interruption
660	Lebanon	1990	COW Civil War
565	Namibia	1990	ICOW
679	Yemen	1990	ICOW
540	Angola	1991	COW Civil War
371	Armenia	1991	ICOW
373	Azerbaijan	1991	ICOW
370	Belarus	1991	ICOW
811	Cambodia	1991	COW Civil War
344	Croatia	1991	ICOW
366	Estonia	1991	COW Interruption
530	Ethiopia	1991	COW Civil War
372	Georgia	1991	ICOW
705	Kazakhstan	1991	ICOW
703	Kyrgyzstan	1991	ICOW
367	Latvia	1991	COW Interruption
368	Lithuania	1991	COW Interruption
343	Macedonia	1991	ICOW
359	Moldova	1991	ICOW
349	Slovenia	1991	ICOW
702	Tajikistan	1991	ICOW
701	Turkmenistan	1991	ICOW
369	Ukraine	1991	ICOW
704	Uzbekistan	1991	ICOW
346	Bosnia and Herzegovina	1992	ICOW
92	El Salvador	1992	COW Civil War
359	Moldova	1992	COW Civil War
316	Czech Republic	1993	ICOW and Goodwin
531	Eritrea	1993	ICOW
317	Slovakia	1993	ICOW and Goodwin
540	Angola	1994	COW Civil War
372	Georgia	1994	COW Civil War

986	Palau	1994	ICOW
517	Rwanda	1994	COW Civil War
450	Liberia	1995	COW Civil War
450	Liberia	1996	COW Civil War
365	Russia	1996	COW Civil War
484	Congo (Brazzaville)	1997	COW Civil War
490	Dem. Rep. Congo (Zaire; Kinshasa)	1997	COW Civil War
520	Somalia	1997	COW Civil War
702	Tajikistan	1997	COW Civil War
615	Algeria	1999	COW Civil War
404	Guinea-Bissau	1999	COW Civil War
451	Sierra Leone	2000	COW Civil War
700	Afghanistan	2001	Author Addition
840	Philippines	2001	COW Civil War
490	Dem. Rep. Congo (Zaire; Kinshasa)	2002	Cow Civil War
860	East Timor (Timor-Leste)	2002	ICOW
850	Indonesia	2002	COW Civil War
780	Sri Lanka	2002	COW Civil War
516	Burundi	2003	COW Civil War
645	Iraq	2003	Author addition
450	Liberia	2003	COW Civil War
437	Cote d'Ivoire	2004	COW Civil War
625	Sudan	2005	COW Civil War
341	Montenegro	2006	ICOW
790	Nepal	2006	COW Civil War
770	Pakistan	2006	COW Civil War
347	Kosovo	2008	ICOW
626	South Sudan	2011	ICOW

Table 3A.2 Missing Observations on the Dependent Variable

Country	Year
Yemen Arab Republic	1918
Lebanon	1943
Bhutan	1947
Benin	1960
Samoa	1962
Maldive Islands	1965
Barbados	1966
Equatorial Guinea	1968
Nauru	1968
Tonga	1970
Guinea-Bissau	1974
Tuvalu	1978
St. Vincent and Grenadines	1979
Kiribati	1979
Vanuatu	1980
Marshall Islands	1986
Palau	1994
South Sudan	2011

Table 3A.3 Frequency of Foreign Influence by Threat Environment

	No Influence	Volunteer Influence	Conscript Influence
Any Land Borders	65 (87%)	25 (64%)	80 (87%)
Any MIDs	30 (41%)	11 (28%)	40 (43%)

Table 3A.4 OLS Results for Table 3.8, The Effect of Patron Influence on the Probability of Conscription in New States

Variables	OLS Model 1	OLS Model 2	OLS Model 3	OLS Model 4	OLS Model 5	OLS Model 6	OLS Model 7
Volunteer Influence	-0.144*	-0.0962	-0.143*	-0.142*	-0.115	-0.140*	-0.137*
	(0.0791)	(0.0828)	(0.0796)	(0.0799)	(0.0824)	(0.0806)	(0.0821)
Conscript Influence	0.150*	0.158**	0.150*	0.150*	0.158**	0.159**	0.158**
	(0.0793)	(0.0772)	(0.0794)	(0.0795)	(0.0765)	(0.0802)	(0.0788)
Volunteer Legacy	-0.345***	-0.314***	-0.342***	-0.343***	-0.289***	-0.334***	-0.330***
	(0.0918)	(0.0934)	(0.0943)	(0.0931)	(0.0959)	(0.0949)	(0.0932)
Any Land Borders		0.227***					
		(0.0832)					
Any MIDs			0.0150				
			(0.0709)				
Any Forceful MIDs				0.0220			
				(0.0753)			
Total Land Borders					0.0470***		
					(0.0139)		
Total MIDs						0.0194	
						(0.0218)	
Total Forceful MIDs							0.0506**
							(0.0253)
Constant	0.582***	0.368***	0.575***	0.574***	0.413***	0.556***	0.542***
	(0.0676)	(0.0996)	(0.0735)	(0.0715)	(0.0867)	(0.0749)	(0.0709)
Observations	199	199	199	199	199	199	199
R-squared	0.214	0.238	0.214	0.214	0.254	0.217	0.226

Table 3A.5 OLS Results for Table 3.9, The Effect of Influence and Threat on the Probability of Conscription in New States

Variables	Logit Model 8	Logit Model 9	Logit Model 10	Logit Model 11	Logit Model 12	Logit Model 13
Any Land Borders	0.486*** (0.0819)					
Any MIDs		0.132 (0.112)				
Any Forceful MIDs			0.172 (0.114)			
Total Land Borders				0.0643*** (0.0184)		
Total MIDs					0.0614** (0.0255)	
Total Forceful MIDs						0.112*** (0.0294)
Volunteer Influence	0.206** (0.0951)	-0.106 (0.0917)	-0.0481 (0.0938)	0.0133 (0.110)	-0.0454 (0.0933)	-0.0504 (0.0950)
Conscript Influence	0.459** 0.206**	0.244** (0.103)	0.219** (0.0943)	0.225 (0.136)	0.237** (0.0938)	0.221** (0.0901)
Volunteer Influence*Threat	-0.367*** (0.118)	-0.0967 (0.194)	-0.351* (0.199)	-0.0488 (0.0297)	-0.103** (0.0508)	-0.158 (0.0954)
Conscript Influence*Threat	-0.336 (0.205)	-0.215 (0.142)	-0.206 (0.147)	-0.0209 (0.0330)	-0.0791* (0.0428)	-0.0945** (0.0455)
Volunteer Legacy	-0.315*** (0.0937)	-0.330*** (0.0961)	-0.346*** (0.0958)	-0.301*** (0.0984)	-0.338*** (0.0994)	-0.331*** (0.0969)
Constant	0.135* (0.0722)	0.522*** (0.0835)	0.525*** (0.0780)	0.360*** (0.0923)	0.508*** (0.0790)	0.499*** (0.0768)
Observations	199	199	199	199	199	199
R-squared	0.250	0.223	0.228	0.260	0.235	0.243

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3A.6 The Determinants of Military Recruitment on Recently Independent States Only

Variables	(1) dvdummy	(2) dvdummy
Total Land Borders	0.249** (0.116)	0.498** (0.215)
Volunteer Influence	-1.312 (0.896)	-1.192 (1.072)
Conscript Influence	0.491 (0.465)	1.627* (0.843)
Volunteer Legacy	-1.020* (0.603)	-0.954 (0.597)
Volunteer Influence*Borders		0.00346 (0.327)
Conscript Influence*Borders		-0.397 (0.258)
Constant	-0.577 (0.502)	-1.287* (0.675)
Observations	118	118

Table 3A.7: Determinants of Military Recruitment when foreign influence is based on tradition, rather than contemporary system

Variables	(1) dvdummy	(2) dvdummy
Total Land Borders	0.234*** (0.0819)	0.354*** (0.127)
Volunteer Influence	-0.164 (0.364)	0.490 (0.595)
Conscript Influence	0.870** (0.418)	1.218* (0.719)
Volunteer Influence*Borders	-1.571*** (0.442)	-1.561*** (0.476)
Conscript Influence*Borders		-0.336** (0.165)
Volunteer Legacy		-0.109 (0.189)
Constant	-0.416 (0.385)	-0.798* (0.466)
Observations	199	199

Table 3A.8: The Effect of Recoding Cases of UN Influence

Variables	(1) dvdummy	(2) dvdummy	(3) dvdummy	(4) dvdummy
Total Land Borders	0.254*** (0.0840)	0.370*** (0.130)	0.262*** (0.0800)	0.440*** (0.131)
Volunteer Influence (including influence of US if it is involved in multilateral missions)	-0.498 (0.439)	0.316 (0.712)		
Conscript Influence (including influence of US if it is involved in multilateral missions)	0.760** (0.370)	1.221* (0.716)		
Volunteer Legacy	-1.453*** (0.476)	-1.533*** (0.516)	-1.289*** (0.488)	-1.395*** (0.539)
Volunteer Influence*Borders		-0.266 (0.174)		
Conscript Influence*Borders		-0.149 (0.204)		
Volunteer Influence (including influence of UN lead nations in multilateral missions)			-1.179** (0.508)	-0.0260 (0.779)
Conscript Influence (including influence of UN lead nations in multilateral missions)			0.675* (0.377)	1.325* (0.697)
Volunteer Influence*Borders				-0.359* (0.216)
Conscript Influence*Borders				-0.218 (0.204)
Constant	-0.538 (0.402)	-0.889* (0.483)	-0.456 (0.419)	-0.971** (0.493)
Observations	199	199	199	199

Table 3A.9 The Effect of Longer Threat Time Horizons on Military Recruitment

Variables	(1) dvdummy	(2) dvdummy	(3) dvdummy	(4) dvdummy
Total Forceful MIDs (within 3 years of independence)	0.147* (0.0851)	0.289** (0.133)		
Volunteer Influence	-0.784* (0.454)	-0.392 (0.655)	-0.770* (0.458)	-0.287 (0.619)
Conscript Influence	0.728** (0.365)	1.047** (0.432)	0.735** (0.364)	1.154*** (0.440)
Volunteer Legacy	-1.546*** (0.465)	-1.546*** (0.504)	-1.529*** (0.465)	-1.508*** (0.489)
Volunteer Influence*MIDs		-0.359 (0.453)		
Conscript Influence*MIDs		-0.282* (0.170)		
Total Forceful MIDs (within 5 years of independence)			0.123** (0.0577)	0.267** (0.105)
Volunteer Influence*MIDs				-0.309 (0.284)
Conscript Influence*MIDs				-0.249** (0.118)
Constant	0.137 (0.308)	-0.0368 (0.332)	0.0833 (0.307)	-0.173 (0.347)
Observations	199	199	199	199

Table 3A.10: The Effect of Foreign Influence and Threat on Recruitment at Different Times

Variables	Recruitment at Independence	Recruitment at Independence	Recruitment at Year 5	Recruitment at Year 5
Total Land Borders	0.198** (0.0827)	0.359*** (0.124)	0.191** (0.0782)	0.284** (0.116)
Volunteer Influence	-0.649 (0.467)	0.138 (0.771)	-0.727 (0.503)	-0.0694 (0.758)
Conscript Influence	0.622* (0.359)	1.500** (0.750)	0.704** (0.352)	1.125 (0.716)
Volunteer Legacy	-1.414*** (0.482)	-1.488*** (0.526)	-1.586*** (0.456)	-1.651*** (0.480)
Volunteer Influence*Borders		-0.245 (0.179)		-0.213 (0.167)
Conscript Influence*Borders		-0.277 (0.204)		-0.135 (0.190)
Constant	-0.463 (0.397)	-0.970** (0.472)	-0.274 (0.395)	-0.561 (0.468)
Observations	199	199	199	199