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**NAVAL  
POSTGRADUATE  
SCHOOL**

**MONTEREY, CALIFORNIA**

**THESIS**

**THE PROFESSIONAL MILITARY AND WAR  
TOLERATION**

by

Laszlo Tar

December 2014

Thesis Advisor:  
Second Reader:

T. Camber Warren  
Douglas A. Borer

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**THE PROFESSIONAL MILITARY AND WAR TOLERATION**

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Submitted in partial fulfillment of the  
requirements for the degree of

**MASTER OF SCIENCE IN DEFENSE ANALYSIS**

from the

**NAVAL POSTGRADUATE SCHOOL  
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## **ABSTRACT**

Since the end of the Second World War, low intensity conflicts have become real issues for democratic countries. Small wars are usually low in intensity but long in duration, where not only democracies but other nation states have to face largely invisible insurgent groups, terrorist organizations, criminal networks, or rebellious bands while also facing institutional, legal, and ethical constraints. A real challenge is how long a democracy can deploy its military forces in low intensity conflict and operate in sufficient time to achieve victory. This research argues that having a professional military extends war toleration and maintains legitimacy longer than in a country with a conscript military. In order to understand the relationship between military systems and war toleration, this thesis suggests a quantitative method, including descriptive statistical comparison, survival analyses, and regression analyses. The evidence supports the hypothesis that professional military systems have higher “survival probability” over time, while the impact of other important variables, such as national power, military strength, regime type, and casualties, are also measured in the models.

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## I. INTRODUCTION

This thesis will examine the relationship between war toleration and military systems in democracies while they are involved in low intensity conflicts. In this context, war toleration is measured as the duration of the war. This historical quantitative research analyzes a specific period of time between 1945 and 2013, and focuses on the challenges of democratic states in small wars and the impact of the manpower system on war toleration. This investigation hypothesizes that the presence of a professional military system has a significant, positive effect on war toleration and also seeks to answer why this might be the case.

There is a widespread perception that democratic countries have glass jaws built from time and casualties. The American military leader and statesman General George Catlett Marshall stated that “a democracy cannot fight a Seven Years War”<sup>1</sup> and also added that “You know, I know, all of us know that the time factor is the vital consideration—and vital is the correct meaning of the term—of our national defense program.”<sup>2</sup> The time factor has been recognized as a crucial domain for democratic countries in addition to the rate of combat casualties. A rich and detailed body of literature deals with democracies in war, but there are very few works about the specific difficulties faced by democracies in small wars and also little quantitative analysis concerning the relationship between small wars and military manpower systems. This thesis analyzes the relationship among war toleration, wartime casualties, military manpower systems, and other important domains related to low intensity conflicts by using modern regression analysis and dynamic survival models in order to understand these factors and circumstances.

Some would argue that today, when most of the democratic countries have all-volunteer forces, it is unnecessary to talk about the conscription system and that any

---

<sup>1</sup> Maurice Matloff, *U.S. Army in WW2: War Department, Strategic Planning Warfare*, citation of interview with General George C. Marshall, July 25, 1949 (Washington, DC: Government Printing Office, 1959), 5.

<sup>2</sup> George C. Marshall, “Speech to the Army Ordnance Association” (Washington, DC, October 11, 1939), <http://marshallfoundation.org/library/digital-archive/speech-to-the-army-ordnance-association/>.

comparison is just a waste of time. However, we should not forget that sometimes the chosen military system—whether all-volunteer or conscription—is not just a matter of choice but of necessity, especially in a difficult, hostile situation.<sup>3</sup> Recently a fake article on social media platforms received incredible attention in Hungary. To summarize, the article said that conscription would be reintroduced again soon in the country. The news was false, but it generated thousands of comments and a widespread conversation among the people of Hungary. Even the Minister of Defense and the Deputy Chief of Staff<sup>4</sup> had to go on national TV to explain the official standpoint about this issue. It seemed that everybody had an opinion about military service. Although these comments were more emotionally driven than academic, it proved that the conscription versus all-volunteer military system debate is still an important topic. Some people argued that conscription is just an obsolete system without any logical, commonsense reason to maintain it. Others stated that the young generation needs to be educated with discipline and responsibility and they should know how to defend the country.<sup>5</sup> These types of conversations regularly turn up in democratic societies, especially before or after an armed conflict, but it is also an interesting topic in peacetime. For example there was a non-binding referendum on ending conscription in Austria on January 20, 2013, and “nearly 60 percent of voters rejected any change to the traditional system of compulsory military service for all 18-year-old men.”<sup>6</sup> Israel and Turkey still have conscription-based military services and both countries have been involved in low-intensity conflicts. In the United States, with its all-volunteer military system, there are also conversations about the manpower system. As retired Army General Stanley McChrystal stated at the Aspen Ideas festival, “it’s time to consider a draft, and [it has] sparked a conversation in the media on the merits of the

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<sup>3</sup> David Stout, “Embattled Ukraine Brings Back the Draft,” *TIME*, August 29, 2014, <http://time.com/3218181/ukraine-russia-conscription-invasion-un-security-council/>.

<sup>4</sup> “2014 Februártól Újra Sorkatonaság,” [approximately, “Conscription again from February 2014”] YouTube video. 5:30, from an interview with the Hungarian Deputy Chief of Staff televised by TV2 on December 04, 2013, posted by “smarko17,” [http://www.youtube.com/watch?v=vDMA6T4Kza4&feature=youtube\\_gdata\\_player](http://www.youtube.com/watch?v=vDMA6T4Kza4&feature=youtube_gdata_player).

<sup>5</sup> Gamestar, “Visszajön a Sorkatonaság - Rémhír Terjed a Facebookon,” [approximately, “Conscription is coming back - Rumor spreading on Facebook”] November 28, 2013, <http://www.gamestar.hu/visszajon-a-sorkatonasag-remhir-terjed-a-facebookon-fake-alhir-hircsarda.html>.

<sup>6</sup> Melissa Eddy, “Austrians Appear to Reject Changes to Conscript Army,” *New York Times*, January 20, 2013.

draft and why it would be good for our military and America.”<sup>7</sup> McChrystal argues that a conscripted military would be more representative of the United States population, and citizens should equally carry the weight of the nation’s war.<sup>8</sup> Paul Yingling, a retired army officer, joined the conversation in the *Small Wars Journal* and also argues that the United States should go back to the traditionally successful conscription system which allows citizens to participate in national security and provide equality in “the burdens of war.”<sup>9</sup>

The relationship between military systems, casualties, and time does not just shape public opinion and support, but also helps us understand our enemies’ behaviors and strategies. Milosevic, Bin Laden, Kaddafi, and others tried to tangle with democratic countries because they felt that democracies were vulnerable to casualties and could not maintain long military commitments. In a December 1990 interview with German television, Saddam Hussein publicly emphasized this point, stating that, “We are sure that if President Bush pushes things toward war once 5,000 of his troops die, he will not be able to continue the war.”<sup>10</sup> Enemies are aware of the constraints of democracies in war and seem to be ready to take advantage of them. Somali political leader Mohamed Farah-Aideed followed this theme and bluntly told Ambassador Robert Oakley, the U.S. special envoy to Somalia, “We have studied Vietnam and Lebanon and know how to get rid of Americans, by killing them so that public opinion will put an end to things.”<sup>11</sup> However, the wars in Iraq (8 years with 4,804 dead and 30K wounded) and Afghanistan (13 years with 3,417 casualties) have demonstrated that democracies also have toleration over both time and casualties; more importantly, as this thesis hypothesizes, the military manpower system appears to have a significant impact on war toleration.

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<sup>7</sup> Don Gomez, July 20, 2012, (3:51 a.m.), “Why Bringing Back the Draft Makes No Sense,” *Small Wars Journal Blog Post*, <http://smallwarsjournal.com/blog/why-bringing-back-the-draft-makes-no-sense>.

<sup>8</sup> Ibid.

<sup>9</sup> Paul Yingling, “The All-Volunteer Force: The Debate,” *Small Wars Journal*, July 9, 2010. <http://smallwarsjournal.com/jrnl/art/the-all-volunteer-force-the-debate>.

<sup>10</sup> Dan Reiter and Allan C. Stam, *Democracies at War* (Princeton, NJ: Princeton University Press, 2002), 177.

<sup>11</sup> Reiter and Stam, *Democracies at War*, 22.

This thesis uses several different quantitative research methods for analyzing variables, ranging from simple correlations to more sophisticated regression models. The first chapter introduces the most significant theories on this topic and provides a literature review in order to describe where this research sits within existing academic debates. The second chapter presents the main hypothesis, data, and research design, which is followed by the analyses and results of the research. The last chapter presents the summation and conclusion, as well as recommended future research based on the results of this thesis.

This research is not meant to be a persuasive argument for all-volunteer forces over conscription, but rather to provide a better understanding about the nature of professional military organizations with all of its advantages and limitations. As Jeff Shear argues in “America in the Hands of Professional Military,” a professional military has a significant impact on domestic policy, foreign policy, the nation’s primary military strategy and type of warfare. The relationship between citizens and soldiers can define the approach and the outcome of low intensity conflicts. Shear also notices the “growing distance between the military and the civilian population, or the percentage of Americans who have relatives in the services. Still, the consequences have been profound, making it easier for the United States to go to war with little public scrutiny.”<sup>12</sup>

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<sup>12</sup> Jeff Shear, “The Rise of the Professional Military,” *Pacific Standard*, April 15, 2011, <http://www.psmag.com/culture/america-in-the-hands-of-a-professional-military-30240/>.

## II. FRAME AND LITERATURE REVIEW

### A. DEMOCRACIES IN SMALL WARS

Nuclear war and large-scale conventional conflicts have become an increasingly unlikely course of action not just for democracies but all types of nation states since the collapse of the “Iron Curtain.” Small wars,<sup>13</sup> limited wars, and low intensity conflicts have been the real security challenges in the 21st century. Network-based terrorist organizations and mature, sophisticated insurgencies provide hardly understandable and nearly unsolvable puzzles for democracies with seemingly strong, conventional military powers. Efraim Inbar argues that “these conflicts are asymmetric, due to the gap in the discernible power of the opponents. Such engagements fall into the category of limited war, since at least one side of the armed conflict employs only a part of its military power.”<sup>14</sup> Small wars are also often asymmetric according to the goals and the implied strategies of the parties. In “Why Big Nations Lose Small Wars: The Politics of Asymmetric Conflict,” Andrew Mack argues that insurgents could “defeat” the military superiority of a metropolitan power if they manage to undermine the external power’s political capability to wage war. This political effort to fight fails when domestic opinion no longer supports the loss of money, human lives, and economic resources needed to continue the war. A metropolitan power can lose despite the fact that it did not lose in a conventional military sense. Sometimes massive, conventional military capabilities with significant firepower and a dominant number of troops can become irrelevant or even counterproductive. Although military victory is not achievable for insurgents, it is still possible to provoke the external power to invest more resources in the struggle in order to affect domestic policy. From the insurgents’ point of view, direct costs (troops killed, material destroyed) should be translated to indirect costs (psychological, political, “contradiction in the enemy camp”) in order to achieve a desired end state.<sup>15</sup> As Henry

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<sup>13</sup> Colonel C. E. Callwell, *Small Wars: Their Principles and Practice*, 3rd edition (Champaign, IL: Book Jungle, 2009).

<sup>14</sup> Efraim Inbar, *Democracies and Small Wars*, annotated edition (London: Routledge, 2003), 1.

<sup>15</sup> Andrew Mack, “Why Big Nations Lose Small Wars: The Politics of Asymmetric Conflict,” *World Politics* 27, no. 2 (January 1975): 175–200, doi:10.2307/2009880.

Kissinger stated at the end of the Vietnam War, “We fought a military war; our opponents fought a political one. We sought physical attrition; our opponents aimed for our psychological exhaustion. In the process we lost sight of one of the cardinal maxims of guerrilla war: the guerrilla wins if he does not lose. The conventional army loses if it does not win.”<sup>16</sup>

In small wars, insurgents, guerrillas, and terrorists use this type of long-term, indirect strategy<sup>17</sup> in order to weary democratic states’ willingness to keep fighting. Inbar argues that “on the part of the state, too, the typical form of fighting is characterized by the use of small military units, often in a low-profile mode in terms of the media coverage, due to topographical and political circumstances. Therefore, wars of attrition take more time and are often termed protracted conflict.”<sup>18</sup> With all of the special characteristics of small wars, long-term military deployments are inevitable, and persistent domestic support and toleration is also strategically necessary.

Democracies have to face the challenge that in low intensity conflicts, quick, cheap, decisive victory is rarely achievable through conventional means. Considering all of the abovementioned factors, the main question is: How can a democracy maintain legitimacy over time without clear military victory or defeat? Which is the best strategy and best military system when the most important military goal is not to win the war, but to win the peace?

Edward Luttwak states in “Notes on Low Intensity Warfare” that “public support cannot be demanded up front, it must be earned.”<sup>19</sup> Public support and war toleration are key domains and crucial variables in democracies when they are in a low-intensity conflict, but they also face other challenges. Inbar argues that “by their nature, democracies clearly have greater constraints than autocratic regimes on their freedom of

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<sup>16</sup> Henry A. Kissinger, “The Vietnam Negotiations,” *Survival* 11, no. 2 (February 1969): 38–50, doi: 10.1080/00396336908440951.

<sup>17</sup> Ivan Arreguín-Toft, *How the Weak Win Wars: A Theory of Asymmetric Conflict* (New York: Cambridge University Press, 2005).

<sup>18</sup> Inbar, *Democracies and Small Wars*, 1.

<sup>19</sup> Edward N. Luttwak, *Notes on Low-Intensity Warfare* (Washington, DC: Parameters, December 1983), 334.

action as they have to meet constitutional, legal, and moral criteria in their use of force, and particularly so regarding the management of small wars.”<sup>20</sup> Democratic political processes, like waiting for a UN resolution or a parliamentary mandate to engage in war, sometimes undermine military needs such as secrecy, surprise, deception, force projection, and maneuver. Basic democratic values like large-scale public attention, transparency, and uncontrolled free media also create challenges for political leaders and military commanders. However, “large public consensus is a necessary condition for developing the staying power in protracted armed conflicts.”<sup>21</sup>

In “How Democracies Lose Small Wars,” Gil Merom argues that modern democracies fail in small wars because they are unable to find a winning balance between necessity and moral tolerance of the costs of war, like brutality and casualties.<sup>22</sup> Avi Kober in “Western Democracies in Low Intensity Conflict: Some Postmodern Aspect” states that democracies have more constraints in small wars when they have to maintain the conflicts “morally and in a less costly manner. Democracies can mobilize its technological edge to conduct low-intensity conflicts both effectively and with less cost, thus sustaining such conflicts despite their protracted nature.”<sup>23</sup>

There is a widely accepted view that “casualties” are probably the key variable in democracies’ wars and have a huge impact on war toleration and policy. However, a former Naval Postgraduate School student Brian Anthony in “On Public Opinion in Time of War” argues that “it seems that changes in presidential policy are influenced by public opinion, but further research indicates that presidents’ concerns about public opinion and approval do not always cause changes in their policies. This is due to continued public support for sustained war efforts, despite increasing casualties and other costs of war”<sup>24</sup>

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<sup>20</sup> Inbar, *Democracies and Small Wars*, 2.

<sup>21</sup> *Ibid.*, 3.

<sup>22</sup> Gil Merom, *How Democracies Lose Small Wars: State, Society, and the Failures of France in Algeria, Israel in Lebanon, and the United States in Vietnam* (New York: Cambridge University Press, 2003), 15.

<sup>23</sup> Avi Kober, “Western Democracies in Low Intensity Conflict: Some Postmodern Aspects,” in *Democracies and Small Wars*, ed. Efraim Inbar (London ; Portland, OR: Routledge, 2003), 4.

<sup>24</sup> Brian S. Anthony, “On Public Opinion in Time of War” (master’s thesis, Naval Postgraduate School, 2011).

Eliot A. Cohen goes further in *Citizens and Soldiers: The Dilemmas of Military Service* and states that only professional military system can fulfill the requirements of modern warfare. In the fourth chapter of that book, Cohen examines the challenges of the system of military service and small wars and argues:

The solution, it would seem, is to use from the very beginning an augmented professional army, that is, a professional army backed either by indigenous forces or specially raised corps of volunteers. During short, sharp, conflicts, of course, a completely professional force will likely be the most effective and politically usable tool of a World Power.<sup>25</sup>

## **B. LITERATURE REVIEW**

There have been long discussions among policymakers, military commanders, and academics about the effectiveness, suitability, and feasibility of conscription or the volunteer manpower system since the Second World War. Quantitative researchers and scientists have started to study not just manpower systems, but also regime type and military organizations with particular attention to democratic countries.

There are different approaches taken in order to understand the relationship between democracies and their militaries. In the literature there are important studies about the labor economics approach to military recruitment strategy, focusing on “efficiency” as an economic measure; that is, whether a conscription-based military manpower system is the most economically efficient and sufficient means of recruiting the appropriate and necessary numbers of military forces with the least economic cost.<sup>26</sup> Budget distribution, including military expenditure, always has been a central issue for democratic governments. The need for an economically efficient and sustainable military generates discussions and debates in every level of the society, especially when there are no imminent threats or security challenges. Former Deputy Secretary of Defense Paul Wolfowitz stated that “volunteers cost more than conscripts, manpower can no longer be regarded as abundant and cheap, but rather had to be treated as it should be, as scarce and

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<sup>25</sup> Eliot A. Cohen, *Citizens and Soldiers: The Dilemmas of Military Service* (Ithaca, NY: Cornell University Press, 1990), 115.

<sup>26</sup> Dwight R. Lee and Richard B. McKenzie, “Reexamination of the Relative Efficiency of the Draft and the All-Volunteer Army,” *Southern Economic Journal* 58, no. 3 (January 1992): 644, doi:10.2307/1059832.

expensive.”<sup>27</sup> In contrast with this argument, there are still arguments in Europe that conscription is more expensive and has higher economic costs than all-volunteer systems.<sup>28</sup>

Seung-Whan Choi and Patrick James analyze the relationship between conscription forces and militarized disputes. They argue that the maintenance of large peacetime conscript armies makes military aggression more likely by providing political leaders with relatively easy means, in the form of readily deployable military forces, to initiate militarized disputes. Choi and James conclude that the choice to adopt a volunteer recruiting strategy likely results from political pressure rather than the military itself.<sup>29</sup>

Joseph Paul Vasquez finds that democratic conscript armies, in militarized disputes, suffer fewer casualties on average than democratic volunteer armies. He argues that conscription-based armies constrain democratic institutions in two ways that make casualties less likely. First, conscription would guarantee that more soldiers from politically significant sectors of American society will join the military, increasing the lobbying power of groups seeking to constrain the military by making sure more powerful actors take notice. Second, a broad distribution of war costs in society causes politicians to fear a political backlash if high casualties occur, meaning democratic leaders will avoid strategies that make casualties more likely. Vasquez makes an implicit “audience cost” argument, arguing that because democratic conscript armies tend to be both larger and somewhat more representative than volunteer armies, governments relying on conscription face more pressure to minimize casualties than they would if volunteers were involved.<sup>30</sup> In contrast, Peter Feaver and Christopher Gelpi argue that public support for war in the United States depends less on casualties rather than clear

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<sup>27</sup> Paul Wolfowitz, “All-Volunteer Force” (speech, All-Volunteer Force Conference in Washington, DC, September 16, 2003), <http://www.defense.gov/Speeches/Speech.aspx?SpeechID=537>.

<sup>28</sup> Farkas Henrik, “Hadjkotelezettsegrol-Elkotelezetten,” [approximately, “Military Commitment and Draft”] Szeged Biztonságpolitikai Központ, April 14, 2000, <http://scsp.hu/test/open.php?lang=hu&dir=20000414&doc=03>.

<sup>29</sup> Seung-Whan Choi and Patrick James, “No Professional Soldiers, No Militarized Interstate Disputes? A New Question for Neo-Kantianism,” *Journal of Conflict Resolution* 47, no. 6 (December 1, 2003): 796–816, doi:10.1177/0022002703258803.

<sup>30</sup> Joseph Paul Vasquez, “Shouldering the Soldiering,” *Journal of Conflict Resolution* 49, no. 6 (2005): 849–73.

progress toward victory. In their view, if a war is going poorly, casualty tolerance (relative to other similarly situated states) should drop dramatically.<sup>31</sup>

Within the literature on the impact of regime type on military performance, there is an ongoing debate about the ability of democratic states to sustain high casualties. Randolph Siverson found that democracies appear to have lower casualty rates as well as suffer lower aggregate casualties than their more authoritarian counterparts.<sup>32</sup> In an even more comprehensive study, Michael Horowitz, Erin Simpson, and Allan Stam evaluate the effects of military recruitment strategies and regime type associated with battlefield casualties in interstate wars from 1815 to 2001. They use battlefield casualty data from interstate wars to compare theories of property takings and domestic institutions. They find conscription, like other non-market-based property takings, to be an insufficient means of mobilizing military manpower, and that volunteer armies suffer far fewer casualties than their conscripted counterparts. They also find that this effect compounds when interacted with regime type: volunteer democratic armies suffer especially few casualties. Finally, they find that democratic societies are willing to bear the costs of large-scale commitments to maintain state sovereignty and survival when targeted by authoritarian states even in the face of certain defeat.<sup>33</sup> Horowitz, Alan, and Stam also argue that “volunteer armies are more highly motivated since they are made up of people who choose to serve. They also have lower turnover ratios. All of these things increase military readiness and effectiveness.”<sup>34</sup>

Reiter and Stam argue in “Democracies at War” that “democratic leaders are also quite fearful of fighting wars that may drag on for too long, as public support for war steadily and inevitably erodes as casualties mount. As a result, democracies also tend to

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<sup>31</sup> Peter D. Feaver and Christopher Gelpi, *Choosing Your Battles: American Civil-Military Relations and the Use of Force* (Princeton, NJ: Princeton University Press, 2005).

<sup>32</sup> Randolph M. Siverson, “Democracies and War Participation: In Defense of the Institutional Constraints Argument,” *European Journal of International Relations* 1, no. 4 (December 1, 1995): 481–89, doi:10.1177/1354066195001004004.

<sup>33</sup> Michael C. Horowitz, Erin M. Simpson, and Allan C. Stam. “Domestic Institutions and Wartime Casualties,” *International Studies Quarterly* 55, no. 4 (December 1, 2011): 909–36, doi:10.1111/j.1468-2478.2011.00679.x.

<sup>34</sup> Horowitz, Simpson, and Stam. “Domestic Institutions and Wartime Casualties,” 909–36.

fight wars that are both short and victorious, or they willingly compromise and accept bargain outcomes short of outright victory.”<sup>35</sup> They also state that “public support must be high when a war starts, it may decline as a war proceeds. When the promised quick victory does not materialize, and when the numbers of dead friends, neighbors, brothers and sons begins to mount, the people may reconsider their decision to consent to the war at hand and actively withdraw their support.”<sup>36</sup> Similarly, Kober argues that democratic societies are more supportive in short, easily winnable wars especially against aggressors but less enthusiastic about the involvement in internal political struggle within another country.<sup>37</sup>

### C. LITERATURE SHORTFALLS

In the literature of international relations, there are many books and articles about democracies at war, yet western democracies fighting low intensity conflicts have attracted much less attention, even though this type of conflict significantly affects the number of casualties and the duration of the war. Therefore, by analyzing these theories, it is possible to identify some visible gaps in the literature. First, sometimes the historical timeframe used and the given data set are not appropriate for presenting general conclusions about the relationship between military systems, the duration of the war, and casualties. Vasquez, for example, analyzes his dataset in 2005 for the period between 1950 and 1985. In this 35-year period during the “Cold War” most of the countries had conscription military systems. Vasquez ignores the fact that today most democracies have volunteer military organizations. Although Horowitz and Simpson provide comprehensive analyses about domestic institutions and wartime casualties, they mainly focus on militarized interstate disputes and pay less attention to internal conflicts. In addition, they do not directly evaluate time and casualties as important factors in domestic opinion and war toleration.

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<sup>35</sup> Reiter and Stam, *Democracies at War*, 4.

<sup>36</sup> *Ibid.*, 164.

<sup>37</sup> Kober, “Western Democracies in Low Intensity Conflict: Some Postmodern Aspects,” 10.

This thesis argues that the nature of manpower systems has a significant effect on the toleration of war. In his book, Cohen states in that

the Falkland war of 1982 showed the tremendous advantage of highly professional volunteer forces in fighting sudden small campaigns in remote parts of the world. Nor were the advantages solely military: the professional and volunteer nature of the British forces lowered public resistance to use of force, and helped the nation absorb the inevitable losses.<sup>38</sup>

This indicates that democracies with primarily volunteer, professional military organizations may be more tolerant of small wars than countries with conscription manpower systems.

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<sup>38</sup> Cohen, *Citizens and Soldiers*, 112.

### III. RESEARCH DESIGN

This chapter outlines the analytic strategy of the thesis, which consists of two parts: methodology and variable measurement. The methodology section gives a detailed description about the analytical approach for this quantitative research and also provides a better understanding about the selected datasets. The main hypothesis is that professional military systems have a significant impact on war toleration. This argument predicts that democratic countries with primarily all-volunteer, professional military organizations will be more able to maintain long, credible commitments, which are decisive and crucial domains in low-intensity conflicts. In order to support this main argument, this research uses statistical correlations and survival analyses, including Kaplan Meier non-parametric analyses<sup>39</sup> and Cox proportional hazard regression analyses<sup>40</sup> on the basis of a large-scale historical dataset, using open-source analytical software.<sup>41</sup>

The second part of the research design is variable measurement. In a quantitative investigation it is especially important to determine the appropriate dependent, independent, and control variables in order to support the argument. In the following section, this research analyzes the dependent, independent and control variables, as well as their relationship with the hypothesis and with each other.

#### A. METHODOLOGY

This hypothesis is tested by using descriptive statistical comparison, data analyses, and survival analyses with categorical and continuous variables. The data represent a nonrandom pooled cross-sectional sample of states involved in military disputes for the period between 1945 and 2013. The author constructs data sets with one

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<sup>39</sup> Elisa T. Lee and John Wenyu Wang, *Statistical Methods for Survival Data Analysis* (Hoboken, NJ: Wiley, 2013).

<sup>40</sup> David G. Garson, *Cox Regression: 2013 Edition* (Asheboro, NC: Statistical Associates Publishers, 2013).

<sup>41</sup> R Development Core Team (2008), *R: A Language and Environment for Statistical Computing* (Vienna, Austria: R Foundation for Statistical Computing), <http://www.r-project.org>.

observation per country, per armed conflict. In this analysis, four large, significant, and popular datasets, Uppsala Conflict Data Program (UCDP),<sup>42</sup> including the Conflict Termination data set,<sup>43</sup> the Polity-IV project,<sup>44</sup> the Toronto Nathan Military Recruitment dataset,<sup>45</sup> and the Correlates of War (COW) National Material Capabilities Data Documentation Version 4.0,<sup>46</sup> are used and merged together into one data set.<sup>47</sup>

This research primarily relies on the UCDP, which records all conflicts with at least 25 battle-related deaths. This data set could provide a more detailed picture for this thesis because others, like the COW data set, only record wars with at least over 1,000 casualties.

This thesis analyzes the military systems of democratic countries in low-intensity conflicts. To categorize the democratic states from the large scale UCDP dataset, this research uses Monty G. Marshall and Keith Jagger's approach in the "Polity IV Project: Political Regime Characteristics and Transitions" as a primary source.

It is also important to identify the manpower systems used, and whether they involve conscription or volunteer military organizations. To capture this, the research relies on data and information from the Toronto Nathan Military Recruitment Data Set,<sup>48</sup> which set provides country-year observations on states' methods of military recruitment. In order to understand the impact on military expenditure, the duration of war, the number of troops, and other measures of state resources used for military systems, this

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<sup>42</sup> Lotta Themnér and Peter Wallensteen, "UCDP/PRIO Armed Conflict Dataset - Uppsala University, Sweden," 2014, [http://www.pcr.uu.se/research/ucdp/datasets/ucdp\\_prio\\_armed\\_conflict\\_dataset/](http://www.pcr.uu.se/research/ucdp/datasets/ucdp_prio_armed_conflict_dataset/).

<sup>43</sup> Joakim, Kreutz, "How and When Armed Conflicts End: Introducing the UCDP Conflict Termination Dataset," *Journal of Peace Research*, UPPSALA, Department of Peace and Conflict Research, 2010, [http://www.pcr.uu.se/research/ucdp/datasets/ucdp\\_conflict\\_termination\\_dataset/](http://www.pcr.uu.se/research/ucdp/datasets/ucdp_conflict_termination_dataset/).

<sup>44</sup> Monty G. Marshall, "Polity IV Project: Country Reports 2010," Center for Systemic Peace, 2014, <http://www.systemicpeace.org/polity/polity4.htm>.

<sup>45</sup> Nathan Toronto, "Military Recruitment Dataset, Version 2005.1," September 12, 2007.

<sup>46</sup> David J. Singer, "Correlates of War National Material Capabilities Data Set," Correlates of War, 1987, <http://www.correlatesofwar.org/>.

<sup>47</sup> R Development Core Team, R: A Language and Environment for Statistical Computing.

<sup>48</sup> Toronto, "Military Recruitment Dataset, Version 2005.1,"

research uses the COW National Material Capabilities Data Documentation Version 4.0 and dataset.

## **B. VARIABLE MEASUREMENT**

This research uses variables which can provide a better understanding about the behavior of countries in small wars. The dependent variable of this quantitative analysis is the war toleration. The key independent variable in each analysis is the military system. In order to understand the relationship between the military and a country's war toleration, the research uses eleven control variables. One significant factor is measured as the hard power of the countries in terms of national material strength, including the economic and human resources of states. Regime type and polity factor is also understood in this research as an important factor. The thesis uses variables which can reflect to the military strength of the countries such as military expenditure and military personnel. Next to the military strength, casualties are also measured as the human cost of war. The cause and the outcome of the war are also calculated as important variables. The research supposes that these variables cover a wide field of study regarding the important domains in small wars, which are also discussed in the literature by scholars.

### **1. THE DEPENDENT VARIABLE**

War toleration, or the duration of the war, is the dependent variable in all models reported below. For the survival analysis, the dependent variable is calculated from the start and the end date of the conflicts. This thesis seeks to answer how long a democratic society can maintain war, rather than how much the society supports war. Statistical surveys and polling data can demonstrate this factor, though it is always difficult to measure public opinion on a large scale and it is sometimes also irrelevant because democracies can sometimes maintain wars even with low public support. Data from opinion surveys are very useful but there are no large-scale, convincing data about public opinion for every conflict in every country. The other question asked to determine war toleration used in this research is: How long can a society tolerate war? This variable is more important and relevant today, because there are arguments that democracies are not capable or suited to conducting long, protracted conflicts. Therefore, this is the most

interesting question: How long can a state deploy its troops, especially in irregular, low-intensity conflicts, without clear military victory or defeat? The UCDP data set is used to calculate this dependent variable.<sup>49</sup>

## **2. THE INDEPENDENT VARIABLE**

The key independent variable is the military manpower system, referred to in the data set as “recruit.” This research hypothesizes that a professional military system has a significant impact on war toleration in democratic countries when they are in low-intensity conflicts. In order to understand this variable, the research uses information from the Toronto Nathan Military Recruitment Data Set.<sup>50</sup> Conscription forces are coded with 0 and the professional military is coded with 1. Military systems are categorized as conscription when armed service is required by law and mandatory for citizens. Militaries are understood as professional when citizens have the freedom to choose to serve and when the method of recruitment is “volunteering.” However, the military system in some countries is not clearly conscription or all-volunteer. Nathan Toronto defines those cases as:

[S]tates that allow for conscientious objection can still be considered to use conscription as the method of recruitment, as long as conscription is the principal means of satisfying the military manpower requirement. States that use a selective service system are considered to use conscription as the method of recruitment as long as the military manpower requirement is still typically satisfied via the draft.<sup>51</sup>

## **3. CONTROL VARIABLES**

Identifying sufficient control variables is important in this research. Although the whole data set consists of more than 70 variables, not all of them are used in the final investigation. The variables used in this research are measured and selected specifically for this topic and this particular analysis in order to provide a better understanding of the relationship between military systems and war toleration.

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<sup>49</sup> Themnér and Wallensteen, “UCDP/PRIO Armed Conflict Dataset Uppsala University, Sweden,”

<sup>50</sup> Toronto, “Military Recruitment Dataset, Version 2005.1.”

<sup>51</sup> Ibid.

**a. National Power**

The “National Power” variable is a composite index of the National Material Capability (CINC) score. This variable is calculated from the countries’ iron and steel production, military expenditures, number of military personnel, energy consumption, total population, and urban population, and seeks to capture the aggregate military capabilities of states. A high CINC score means the country has a lot of hard, conventional power. More power suggests better performance in low-intensity conflicts and, if it is necessary, more powerful countries can provide more resources for a longer period of time.<sup>52</sup>

**b. Military Expenditure**

Another indicator of military capabilities is military expenditures. Military expenditure is an important continuous variable, because it shows whether conscription or a volunteer system is more expensive and which one requires more resources from democratic countries.<sup>53</sup> Mack argues that insurgents could defeat a militarily superior metropolitan power if they manage to destroy the external power’s political capacity to wage war. This political will to fight fails when society no longer supports the loss of more money, human lives, and economic resources to maintain the war.<sup>54</sup> War toleration and resources thus have a significant relationship with each other during low intensity conflicts, especially within the context of the military system.

**c. Incompatibility**

Incompatibility refers to the “officially” stated problem between the parties in the conflict. This variable provides better understanding about the causes of the war. Incompatibility is a categorical variable and coded in three categories: 1. Fight for Territory 2. Fight for Government, and 3. Fight for Government and Territory.<sup>55</sup>

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<sup>52</sup> Singer, “Correlates of War National Material Capabilities Data Set,”

<sup>53</sup> Ibid.

<sup>54</sup> Mack, “Why Big Nations Lose Small Wars.”

<sup>55</sup> Kreutz, “How and When Armed Conflicts End.”

**d. Victory Side**

This variable shows who wins the conflict. The variable is coded 1 when the victory is achieved by the government in internal conflicts, and 2 when the rebels win the conflict.<sup>56</sup>

**e. Outcome**

This research investigates six different types of outcome in low-intensity conflicts. This variable is a categorical variable: 1. A peace agreement is signed by every major actor in the conflict. 2. A ceasefire agreement with conflict regulation is an accepted agreement between all or the main actors about the ending of military operations and about some sort of mutual conflict regulatory steps. 3. A ceasefire agreement is an agreement about the ending of military operations. 4. Victory is when one side either loses, is eliminated, or accepts defeats and announces its capitulation. 5. Low activity is when conflict activity continues but does not reach the UCDP threshold with regard to fatalities. 6. Other is when conflict does not fulfil the UCDP criteria with regards to organization or incompatibility.

**f. Type of Conflict**

The “Type of Conflict” variable is a categorical variable taken from the UCDP data set, which takes three possible values: 1. Extrasystemic or extrastate armed conflicts occur between a state and a non-state group. 2. Interstate armed conflicts occur between two or more states. 3. Internal armed conflicts occur between the government of a state and one or more internal opposition groups.<sup>57</sup>

**g. Polity-IV**

The level of democracy is one of the most important variables in this research. As the literature review suggests, the nature of democracy has a significant impact on conflicts, war toleration, type of warfare, and the implemented military manpower

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<sup>56</sup> Ibid.

<sup>57</sup> Themnér and Wallensteen, “UCDP/PRIO Armed Conflict Dataset - Uppsala University, Sweden,”

system. Joseph Schumpeter in *Capitalism, Socialism and Democracy* defines democracy in terms of “the will of the people” (source) and “the common good” (purpose) and understands the democratic method as an “institutional arrangement for arriving at political decisions in which individuals acquire the power to decide by means of competitive struggle for people’s vote.”<sup>58</sup> Samuel P. Huntington follows Schumpeter’s argument and defines a political system as “democratic to the extent that its most powerful collective decision makers are selected through fair, honest, and periodic elections in which candidates freely compete for votes and in which virtually all adult population is eligible to vote.”<sup>59</sup> Huntington argues that democracy “also implies the existence of those civil and political freedoms to speak, publish, assemble, and organize that are necessary to political debate and the conduct of electoral campaigns.”<sup>60</sup> Huntington understands the deeper, more philosophical meaning of democracy as “liberté, effective citizen control over policy, responsible government, honesty and openness in politics, informed and rational deliberation, equal participation and power, and various other civic virtues.”<sup>61</sup> This effective citizen control over policy has a great impact on both foreign policy and armed conflicts. Democracy can provide a significant opportunity for citizens, organizations, political parties to shape defense policy and war through free media, speech, elections, votes, and, in extreme situations, demonstrations.

This research uses the Polity-IV project to grade countries with the polity score. According to the project, countries with a score of six or more, on a scale ranging from -10 to 10, are understood as a democracy.<sup>62</sup>

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<sup>58</sup> Joseph Alois Schumpeter, *Capitalism, Socialism and Democracy* (Whitefish, MT: Kessinger Publishing, 2010), 269.

<sup>59</sup> Samuel P. Huntington, *The Third Wave: Democratization in the Late 20th Century* (Norman: University of Oklahoma Press, 1993), Chapter 1 and p.7.

<sup>60</sup> *Ibid.*, 7.

<sup>61</sup> *Ibid.*, 9.

<sup>62</sup> “Polity IV. The Polity data series is a widely used data series in political science research. The latest version, Polity IV, contains coded annual information on the level of democracy for all independent states with greater than 500,000 total population and covers the years 1800–2011. Polity’s conclusions about a state’s level of democracy are based on an evaluation of that state’s elections for competitiveness, openness and level of participation,” Monty G. Marshall, “Polity IV Project: Country Reports 2010,” *Center for Systemic Peace*, 2014, <http://www.systemicpeace.org/polity/polity4.htm>.

***h. Military Personnel***

The size of the troops can affect the duration of the conflict, the number of casualties and the toleration of the war. The research uses the data set from the COW National Material Capabilities Data Documentation Version 4.0, 2010.<sup>63</sup>

***i. Term of Enlistment***

The term of enlistment is an important control variable because it refers to the quality of the troops. Professional armies have longer terms of service. They have more exercises and more training, which can mean better performance in a conflict. Better combat skills mean fewer casualties occur, which can impact the toleration of war if we believe that democracies are very concerned about casualties. In order to calculate the term of enlistment this research relies on the Toronto Nathan Military Recruitment Data Set.<sup>64</sup>

***j. Total Population***

This variable is taken from the COW National Material Capabilities (NMC) Data Documentation Version 4.0. The COW NMC documentation provides a clear argument about the importance of the population that “the total population of a state has been theorized to be one of the major factors in determining the relative strength. A state with a large population can have a larger army, maintain its home industries during times of war, and absorb losses in wartime easier than a state with a smaller population.”<sup>65</sup>

***k. Casualties***

Democracies are often criticized for their limited toleration of casualties in armed conflicts. However, it is difficult to measure combat casualties in war because it should consist of the death toll and the number of the wounded, including the magnitude of psychological traumas and defects caused by the wars. There is no such data set. That is why this research focuses on the death toll during the conflict as a control variable

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<sup>63</sup> Singer, “Correlates of War National Material Capabilities Data Set,”

<sup>64</sup> Toronto, “Military Recruitment Dataset, Version 2005.1,”

<sup>65</sup> Singer, “Correlates of War National Material Capabilities Data Set,”

because that data is available for nearly every conflict. The research uses the data set from the UCDP in order to understand and calculate battle related deaths. The UCDP defines casualties as “all fatalities—military as well as civilian—are counted as battle-related deaths.”<sup>66</sup>

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<sup>66</sup> “UCDP Battle-Related Deaths Dataset Codebook: Definitions, Sources and Methods for the UCDP Battle-related Death Estimates,” Version 5.0, July 2013, Uppsala Conflict Data Program (UCDP) Department of Peace and Conflict Research, Uppsala University.

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## IV. ANALYSES AND RESULTS

The results of the data analyses, comparative descriptive statistics, survival analyses, and regression models strongly support the hypothesis that professional military systems can maintain longer war toleration when they are conducting small wars. The selected data set consists of 392 country-conflict-year observations.<sup>67</sup> In these quantitative analyses, armed conflicts are investigated and analyzed between 1945 and 2013, including interstate and intrastate armed conflicts,<sup>68</sup> in order to understand the impact of a professional (all-volunteer) military manpower system on war toleration. In this research, Albert Einstein's recommendation is the basic principle: "make everything as simple as possible, but not simpler."<sup>69</sup>

First of all, conflicts in the UCDP data set are categorized according to whether a democratic country was involved in or not. Polity-IV scores were assigned to each country involved in conflicts to decide whether it was a democratic or an autocratic regime.<sup>70</sup> Military manpower systems were also assigned to the selected data set. States with primarily professional military manpower systems are coded as 1 and states with conscription systems are coded with 0.

The dependent variable is the time variable, also known as the duration of the war or "war toleration," as mentioned previously. In today's conflicts, it is more important to ask: How long could a democratic country deploy its forces without clear military victory or defeat? In this research the question, it is "how long?" instead of "how much?" the population is willing to support war efforts.

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<sup>67</sup> UCDP, Polity-4, NMC, Military Recruitment Data Set

<sup>68</sup> Themnér and Wallensteen, "UCDP/PRIO Armed Conflict Dataset - Uppsala University, Sweden,"

<sup>69</sup> Albert Einstein. "Albert Einstein Quotes," *BrainyQuote*, <http://www.brainyquote.com/quotes/quotes/a/alberteins103652.html>.

<sup>70</sup> Marshall. "Polity IV Project: Country Reports 2010,"

## A. DESCRIPTIVE STATISTICS

The literature review suggests numerous challenges for democratic countries when they are involved in low intensity conflicts. These challenges range from the institutional constraints of democracies to casualty aversion and the crisis of democratic values in small wars. The data analyses allow this research to present some other conditions and circumstances with more logical extensions in an historical perspective in which democracies take responsibility in low intensity conflicts.

The data shows that democracies have to be ready to tackle small wars mostly against groups, organizations, and networks—not against another state—in bloody, internal conflicts with significant cultural challenges. These internal conflicts are mostly fought for territory on a more intensive level with inevitable casualties (see Table 1). These conflicts, by their nature, are also longer in duration. Democratic elites and military leaders have to be aware of these historical preconditions; otherwise, the officially stated strategy and timeline can create a gap with the reality of these types of conflicts and this can cause misunderstanding and disappointment in the democratic society, which can lead to civil resistance against war efforts.<sup>71</sup>

Descriptive statistical data are compared between countries with a professional or a conscription military system. The “number of observations” suggests that there is no significant balance or disparity in favor of one or the other in the data set.

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<sup>71</sup> Gil Merom has similar argument in *How Democracies Lose Small Wars*, 18–24.

Table 1. Descriptive statistics of countries in small wars with a conscription or a professional military system between 1945 and 2013.

|   | Conscription | Professional |
|---|--------------|--------------|
| Military system (categorical variable)                    | 0            | 1            |
| Observations (between 1945–2013)                          | 200          | 167          |
| Duration  | 1,190        | 1,569        |
| Military expenditure                                      | 5,223,663K   | 2,268,712K   |
| Military personnel  | 569,047K     | 309,096K     |
| National power (CINC)                                     | 0.021        | 0.013        |
| Polity score  | -1.262       | -0.019       |
| Casualties  | 9,317        | 6,356        |
| Extrastate conflict                                       | 0.095        | 0.012        |
| Interstate conflict                                       | 0.215        | 0.102        |
| Internal conflict   | 0.690        | 0.886        |
| Fight for territory                                       | 0.580        | 0.569        |
| Fight for government                                      | 0.385        | 0.431        |
| Fight for terr. & gov.                                    | 0.035        | 0.000        |
| Peace agreement   | 0.165        | 0.120        |
| Ceasefire agreement with conflict regulation              | 0.075        | 0.096        |
| Ceasefire agreement                                       | 0.035        | 0.072        |
| Victory   | 0.305        | 0.240        |
| Low activity  | 0.380        | 0.455        |
| Other   | 0.040        | 0.018        |
| Victory for Side A (the government in internal conflicts) | 0.210        | 0.174        |
| Victory for Side B (the rebels in internal conflicts)     | 0.095        | 0.066        |

The average or mean duration of conflicts for professional military systems is 1,569 days, and 1,737 days when only considering democracies. This means that democracies with all-volunteer forces can tolerate military operations for an average duration of 4.7 years. In general, conflicts in countries with conscription systems have a duration of 1,190 days, while democracies with conscription tend to last for 1,304 days on average. This is a considerable difference between the professional and conscription systems in the duration of small wars. The hypothesis of this thesis is that democratic countries with a professional military system have a higher war tolerance in small wars. It means that the nature of the professional military itself can increase war toleration and

all-volunteer forces can operate longer without clear military victory or defeat, which is crucial in low intensity conflicts.

The military expenditure of democratic countries is higher when they have a professional system and those countries are also more powerful with considerably larger military organizations. Countries with all-volunteer forces also have a higher polity score on average, which means that they are more stable democratic systems with more mature democratic institutions and stronger beliefs in democratic values. In liberal democracies, individual rights are especially important. Some literature suggests that the all-volunteer system is more suitable for democratic countries while others still argue that conscription is more representative of democratic values.<sup>72</sup> In addition, from an ultra-liberal perspective, it is even anti-democratic to force citizens to serve in the military by law.<sup>73</sup> Volunteerism implies a powerful relationship between citizens, states, and their military.

Comparing total population and the size of the military organization, it is clear that in most countries, the military organization is a small percentage (on average, 0.26 percent) of the society (Table 2).

Table 2. Representation of the military in the society.

|                           | Conscription | Professional  |
|---------------------------|--------------|---------------|
| Military System           | 0            | 1             |
| Number of Observation     | 200          | 167           |
| Total Population (mean)   | 80,917.200 K | 148,670.300 K |
| Military Personnel (mean) | 569.047 K    | 309.096 K     |

Conscription military systems are usually more robust than professional military organizations (see Table 2). Although the percentage of a military organization in society cannot really tell the real representation and the differences between the military systems, generally conscription armies by their nature are more embedded and represented in

<sup>72</sup> Charles C. Moskos, John Allen Williams, and David R. Segal, *The Postmodern Military: Armed Forces after the Cold War* (New York: Oxford University Press, 1999), 265–279.

<sup>73</sup> Cohen, *Citizens and Soldiers*, 134–144.

society through family ties. In a conscription system, usually every male and sometimes every female of a certain age (in most cases, around the age of 18) is forced by law into military service from one to three years and become reservists after trainings. In a conscription system the fluctuation is more intensive; therefore, more people get into and out of the military. The size of the military could be similar to a professional military, but the sequence of recruitment, training, and deployment is different. The notion that every citizen might be forced by law to go to war also creates a different relationship between people and military organizations. In this system, every citizen and every family is involved in the conflict directly through mandatory military service or indirectly in a psychological sense because a family member is serving. This is an important and interesting phenomenon because besides the financial resources and the human cost of war, the representation of the military can be another factor that either increases or decreases war toleration.

Families and communities are widely and highly affected by conscription soldiers. Society can easily feel the losses, because somehow everybody is involved directly or indirectly in the conflict through family ties or kinship. Conversations and letters with family can reveal the real nature of the war and sometimes show the gap between reality and official policy. The literature suggests that democracies are willing to sacrifice when the stakes are high. Smart democratic elites, using a systematic information campaign and crisis communication, can maintain and raise this feeling of sacrifice, but conscription and reservist soldiers can undermine the government's efforts, as for example, happened with the French in Algeria and the Israelis in Lebanon. In contrast, professional military organizations are usually more disciplined because of their level of training and the psychology of volunteerism, and better supervised by authority. A professional military has a smaller link to society, due to a lack of connection and under-representation in communities, which means that fewer personal experiences and real-life stories are shared. News and war stories therefore greatly depend on official communication. That is why society needs more time to realize the gap—if there is a gap—between official statements and the reality of the battlefield. Professional military organizations may become closed communities within the democratic societies, with

relatively weak channels to other citizens. Soldiers live in separated military apartments and houses, sometimes within a post, with ties primarily to other military personnel. A common citizen sometimes does not know any soldiers and does not have any real idea about the nature and the progression of a particular low-intensity conflict.

The literature review suggests that democracies are vulnerable through casualties, and public opinion can easily turn against war when dead bodies are sent home. A descriptive statistical comparison shows that countries with a conscription system have an average of 9,317 casualties (see Table 1). On the other hand, countries with a professional system have 6,356 casualties. This comparison implies that professional militaries operate with significantly fewer casualties. Vasquez argues that the conscription military system has fewer casualties;<sup>74</sup> however, this research finds that professional military organizations run conflicts with fewer casualties.

The lower casualty rate suggests that democracies may be more tolerant of the professional military because they get fewer casualties. At this level of analyses, there is a logical question: Why does the professional military operate with fewer casualties?

This research suggests that professional militaries have fewer casualties because they are better trained and equipped. Comparing the military expenditures between democracies with a professional system against a conscription system, we find that countries spend significantly more money on their military in states with a professional system than in states with a conscription system (see Table 1). This leads to a number of logical extensions. First, democratic elites and politicians are ready to invest more money in a professional military in order to avoid public debate against their power diplomacy and war efforts. Second, citizens are also willing to pay more, sometimes including extra taxes or economic difficulties, rather than be drafted and sent to war. Democracies with a professional military system have a higher military budget to improve weapon systems and force protection measures which also decreases wartime casualties and increases war toleration.

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<sup>74</sup> Vasquez, "Shouldering the Soldiering," 849–73.

Countries with a professional military do not just spend more money but usually spend more time in training. More time of service in the military means more education, more training, and more experiences, which can lead to higher survival skills in the battlefield and better performance in the conflict. This also causes fewer combat casualties and improves longer war toleration in low intensity conflicts. From this analysis, there is another logical question: Are professional militaries better than conscription armies?

There is a generally accepted idea that professional militaries are more successful than conscription-based militaries. This research presented here argues against this opinion because there is no statistical evidence to support this claim in this data (see Table 1). In terms of clear, military victory, democracies with professional military organizations are not better than countries with a conscription system. Indeed, the percentage of victory is higher for conscription. Professional militaries are not only less successful, but they are also more willing to leave the conflicts without comforting results or solutions. The rate of continuing the conflict is especially higher (45 percent) when professionals are involved in the small war (see Table 1). In contrast, the table shows that democracies with a conscription system are more willing to terminate the conflict with some kind of peace agreement. Professional militaries are also less successful in internal conflicts. Countries with conscription military system defeat rebels in a significantly higher percentage of conflicts (see Table 1).

The descriptive statistical comparison suggests that on average, democracies with professional militaries can maintain longer military commitments with fewer casualties. Democratic societies are also willing to provide more resources to the professional system with a higher military expenditure. However, all-volunteer forces are not better than conscription military systems. In general, professional militaries achieve fewer victories and are more likely to leave the conflict without solutions.

## B. SURVIVAL ANALYSIS

In this research, survival analysis<sup>75</sup> or event history analysis is a productive approach to understand the relationship between military systems and the duration of small wars. This type of analysis can examine how long it takes for a certain event to happen, which in this case is the end of an armed conflict. With survival analysis, we can estimate the impact of the military system on the likelihood of ending a war. We can also calculate the probability of ending the war and how it changes over time with different values of the explanatory variable. The survival and hazard functions are key ideas in survival analysis for describing the distribution of event times in the ending of small wars. The survival function gives, for every duration, the probability of surviving (or not experiencing the event) up to that time. The hazard function gives the potential that the event will occur, per unit of time, given that an armed conflict has continued up to the specified time.

The technique used to estimate the survivor function is the Kaplan-Meier estimator. The advantage of this non-parametric analysis is that the results do not depend upon a lot of assumptions, but rather attempts to let the data speak for itself.<sup>76</sup>

The survival function is going down over time, as Figure 1 demonstrates, which means that in low intensity conflicts the probability of ending the war increases with a longer duration. In this model, the military system is not counted yet, in order to see the overall shape of the survival function.

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<sup>75</sup> Elisa T. Lee and John Wenyu Wang, *Statistical Methods for Survival Data Analysis* (Hoboken, NJ: Wiley, 2013).

<sup>76</sup> Maarten L. Buis, "An Introduction to Survival Analysis," Department of Social Research Methodology Vrije Universiteit, Amsterdam, 2006, <http://maartenbuis.nl/wp/survival.pdf>.

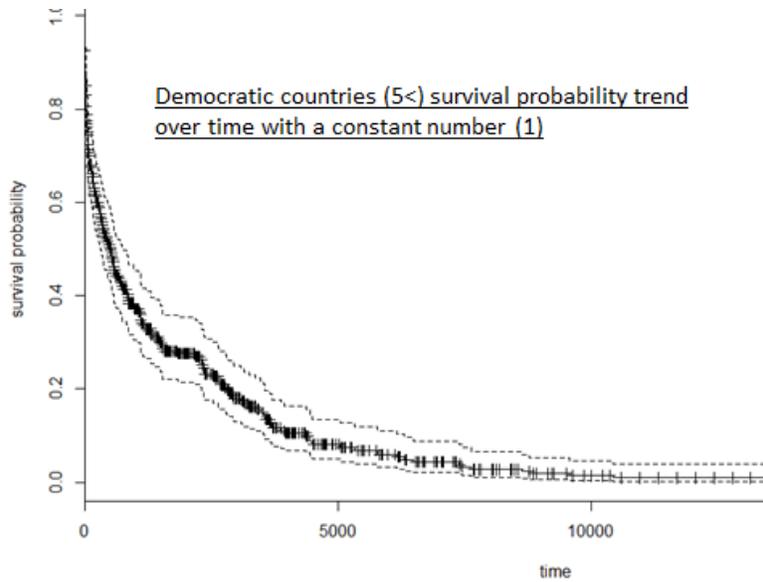


Figure 1. Survival probability trend over time.

The hypothesis of this research is that a professional military system has a significant impact on war toleration. Figure 2 provides evidence supporting this claim. With the same unit of time, professional military systems have a higher survival probability in small wars than military systems using conscription. In other words, conscription systems have to give up war efforts sooner than professional militaries.

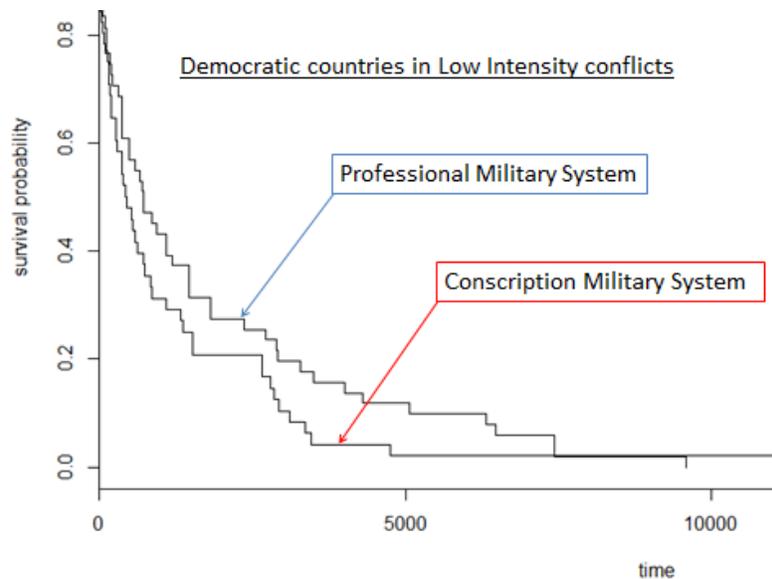


Figure 2. The survival probability of democratic countries in small wars.

As a result of this model we can see that the survival probabilities of professional military systems are higher in the same unit of time. For example, one year into a low intensity conflict for democratic countries with a conscription system yields a 49 percent probability of survival (continuation of the conflict), while countries with a professional system have a 61 percent probability of continuing military operations.

Figure 3 shows the survival probability of non-democratic countries with their military system. Based on this figure, it appears that there are no substantial differences in survival probability between conscription and professional military systems in non-democratic countries. The logical extension of this finding is that non-democratic countries have tight control over military, society, and media. Free speech, media, and information flow are basic tools for citizens to find a gap between official war policy and the reality of the battlefield, which is also a basic circumstance of opposing war and pressuring the political elite to end the war effort. Merom arrives at the same conclusion when he underlines the importance of free media and newspapers regarding the declining support of war efforts in the cases of France in Algeria and Israel in Lebanon, which led to strong civic and political movements against the respective wars and concluded with total withdrawal.<sup>77</sup> Figure 3 implies that military systems have a significant impact on war toleration only in democratic countries where basic conditions for opposition exist.

The literature discusses at length whether conscription or all-volunteer military systems are more suitable for democratic values. This is an interesting and important topic in this thesis because the data analysis suggests that democratic societies are more permissive of professional, all-volunteer military systems regarding the human and economic costs of war. It seems that the individual choice to join the armed forces has a powerful impact on how the democratic society can see, handle, and support its own military. The Hungarian example confirms this phenomenon and not just the article itself—the first Hungarian casualty in Afghanistan—but the comments in social media

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<sup>77</sup> GilMerom, *How Democracies Lose Small Wars*, 229–250.

platforms.<sup>78</sup> Most of the comments show empathy for the dead soldier and his family but also argue that the military service was chosen by the individual, and casualties are basically part of the “soldiers’ job description.” Citizens generally see professional soldiers as individuals who make rational choices, making a well-informed decision to join the armed forces with a strong awareness about the risks and rewards of the service. Democratic societies can tolerate losses better when they know that the soldiers choose this life and they are not forced by law to go to war.

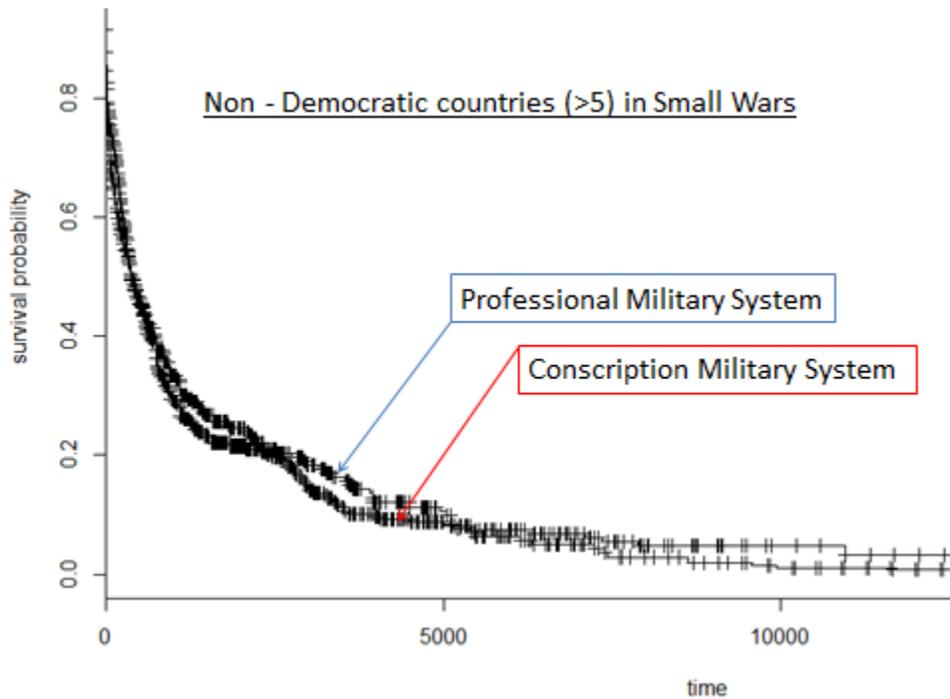


Figure 3. Non-democratic countries in small wars.

### C. COX-PROPORTIONAL REGRESSION ANALYSES

Another widely accepted and used technique, which allows for the inclusion of additional control variables, is Cox-proportional regression analysis.<sup>79</sup> The non-parametric Kaplan-Meier survival analysis allows us to gain insight with the smallest

<sup>78</sup> Origo, “Meghalt Egy Magyar Katona Afganisztánban,” [approximately, “Hungarian Soldier Died in Afghanistan”] June 10, 2008, <http://www.origo.hu/itthon/20080610-meghalt-egy-magyar-katona-afganisztanban.html>.

<sup>79</sup> Garson, *Cox Regression: 2013 Edition*.

number of assumptions, but it can only compare a limited number of groups. For example, in this research we only compared two groups: a professional or a conscription military system. Consequently, this method of analysis cannot deal with continuous variables or control for other categorical variables. In contrast, Cox proportional hazards regression models allow testing for differences in survival times of two or more variables, while also allowing an adjustment for other variables.<sup>80</sup>

In this research six different regression models are tested in order to calculate the significance of the military systems over time in low-intensity conflicts and in relation to other control variables. The first three models (1-2-3) are tested without regime regulations, including both democratic and non-democratic countries in small wars. The second three models (4-5-6) are calculated with only democratic countries and their respective military systems (Table 3).

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<sup>80</sup> Buis, "An Introduction to Survival Analysis,"

Table 3. Cox regression models 1–2-3 without regime constraints, 4–5-6 models calculate only democracies in low intensity conflicts between 1945 and 2013.

|                              | <i>Dependent variable:</i>                              |                       |                      |                   |                       |                     |
|------------------------------|---|-----------------------|----------------------|-------------------|-----------------------|---------------------|
|                              | Duration of the Low-intensity Conflict (War Toleration) |                       |                      |                   |                       |                     |
|                              | (1)   | (2)                   | (3)                  | (4)               | (5)                   | (6)                 |
| Military system              | -0.330***<br>(0.117)                                    | -0.371***<br>(0.120)  | -0.365***<br>(0.120) | -0.332<br>(0.266) | -0.666**<br>(0.285)   | -0.336<br>(0.271)   |
| Polity score                 | -0.034***<br>(0.009)                                    |                       |                      | -0.017<br>(0.079) |                       |                     |
| National power<br>(CINC)     | 9.554***<br>(2.156)                                     |                       |                      | 7.701*<br>(4.235) |                       |                     |
| Military<br>expenditure      |   | 0.0005***<br>(0.0001) |                      |                   | 0.001***<br>(0.0003)  |                     |
| Military<br>personnel        |   | -0.174***<br>(0.035)  |                      |                   | -0.321***<br>(0.076)  |                     |
| Casualties                   |   | -0.00000<br>(0.00000) |                      |                   | -0.00001<br>(0.00001) |                     |
| Fight for<br>Government      |   |                       | 1.446***<br>(0.293)  |                   |                       | 1.328***<br>(0.507) |
| State victory<br>over rebels |   |                       | 1.024***<br>(0.160)  |                   |                       | 1.029***<br>(0.372) |
| Observations                 | 317   | 313                   | 355                  | 90                | 86                    | 96                  |
| R <sup>2</sup>               | 0.102   | 0.118                 | 0.428                | 0.040             | 0.203                 | 0.445               |
| Max. Possible R <sup>2</sup> | 0.998   | 0.998                 | 0.998                | 0.980             | 0.979                 | 0.979               |

|                      |                    |                    |                      |                |                    |                    |
|----------------------|--------------------|--------------------|----------------------|----------------|--------------------|--------------------|
| Log Likelihood       | -953.124           | -926.370           | -990.829             | -173.675       | -155.431           | -158.286           |
| Wald Test            | 38.450*** (df = 3) | 44.130*** (df = 4) | 211.680*** (df = 10) | 3.680 (df = 3) | 19.240*** (df = 4) | 50.050*** (df = 8) |
| LR Test              | 33.984*** (df = 3) | 39.174*** (df = 4) | 198.024*** (df = 10) | 3.639 (df = 3) | 19.475*** (df = 4) | 56.484*** (df = 8) |
| Score (Logrank) Test | 39.543*** (df = 3) | 45.951*** (df = 4) | 243.630*** (df = 10) | 3.836 (df = 3) | 20.186*** (df = 4) | 63.954*** (df = 8) |

*Note:*

\* p < 0.05  
 \*\* p < 0.01  
 \*\*\* p < 0.001

The Kaplan-Meier survival analysis supports the claim that countries with professional military systems can tolerate wars with a longer duration. We can see the gap between the two curves and we can also read from the axis that the survival probabilities of professional systems over time are higher than that of conscription armies. However, we still do not know the strength or the significance of these relationships. The Cox regression model shows the statistical significance of the independent variable as well as the coefficients of the control variables. The role of the control variables is important because by analyzing them, we can better understand the “why factor.”

The key independent variable in each model is the military system. In order to understand the relationship between the military and a country’s war toleration, the research uses seven control variables grouped around four main ideas. The first category covers the hard power of the countries in terms of national material strength, including the economic and human resources of states. These variables seek to capture the idea that more powerful countries with more resources can terminate conflicts faster or, if necessary, maintain the war for a longer period of time. This category also covers the polity factor and shows the importance of regime type in low intensity conflicts,

The second category reflects the military strength of the countries in low intensity conflicts. Two variables demonstrate the importance of military power in the models: military expenditure and military personnel. It may be reasonable to suspect that countries with a higher military expenditure can maintain wars longer. However, we can also understand military expenditure as the economic cost of war. More troops also means more human resources and more available assets needed to extend war efforts in low intensity conflicts. Next to the economic cost of war, the models also include casualties as a measure of the human cost of war.

The third category includes the cause of war and the nature of victory in the war. In the original data set “incompatibility” covers this important factor of the cause of the conflict. In the models we see “Fight for Government,” because from the three categories of incompatibility—fight for territory, fight for government, and fight for territory and

government—only the “Government” issue achieves statistical significance. The largely accepted view is that a “good” cause or a “good” story can maintain war and extend war toleration. However, Kober argues that democracies are less patient about internal conflicts when the main issue is political.<sup>81</sup> In addition, state victory over rebels can measure the clear end of internal conflicts and also show the “positive” progress of the war. We can see that these three categories with seven control variables cover a wide field of study regarding the important factors in low intensity conflicts, which are also discussed in the literature by scholars.

Table 3 presents six regression models. We can see that Model 1 and Model 4 use the same variables, as do Models 2 and 5, and Models 3 and 6. This parity is not accidental, because this research would like to understand the relationship between the variables with and without regime filtration.

In Model 1, we see clear evidence that professional militaries can maintain conflicts over a longer period of time, given the negative and statistically significant coefficient for the Military System variable. The power of states also plays an important role in small wars, as we can see from the positive coefficient and strong significance level of the CINC<sup>82</sup> score variable. This indicates that countries with significant hard power can lower the duration of war, which means that stronger countries with more power and more resources can experience the event faster. Powerful countries may win the conflict by inputting more resources into the war; however, the data indicate that countries achieve clear victory only about 20 percent of the time. Countries, especially democratic countries with professional military systems, give up war efforts without victory in about 80 percent of the conflicts and leave almost half of the cases (about 45 percent) while the struggle is still ongoing. On one hand, we can agree that the power of the country can help terminate the conflict faster. On the other hand, the result is more interesting knowing the poor victory rate of countries in low intensity conflicts. Here we should consider Mack’s argument that tremendous human and material resources can be

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<sup>81</sup> Kober, “Western Democracies in Low Intensity Conflict: Some Postmodern Aspects,” 10.

<sup>82</sup> Singer, “Correlates of War National Material Capabilities Data Set,”

also counterproductive in asymmetric conflicts.<sup>83</sup> More troops and more expensive technical assets and weapon systems do not necessarily mean more time and opportunity to maintain legitimacy in small wars. A more visible presence can create more insurgency and more casualties, which can undermine war efforts within the democratic society at home. The power of the country—such as the amount of material power and troops—can help states terminate the war faster, but it does not necessarily equal victory.

The polity score is also very interesting in this model because it has a negative and statistically significant impact on war toleration. The negative polity coefficient means that countries with a lower polity score (more autocratic) can terminate the war slower. This also means that democracies with high polity score can terminate the war faster. We have to underline again, however, that this termination is more likely not a victory. The logical extension of this result is that democratic institutions and democratic values play an important role in low intensity conflicts. Non-democratic regimes can control information flow, which is why their societies have less information about the war and less opportunity to oppose hard power diplomacy.

However, skeptics may be concerned that this result is simply due to the fact that professional militaries generally spend more time on training and use better, more sophisticated equipment in low intensity conflicts. Professional militaries usually have more experiences and better combat skills; however, they win less often. To address this concern, Model 2 includes additional controls for military power: military expenditure, the number of troops, and the number of casualties. As we can see, the coefficient for military systems in this regression remains statistically significant, indicating that the result is unlikely to have been driven by differences in human and economic resources. Military expenditure has a negative and statistically significant result, showing that a higher budget can extend the duration of war. However, the number of military personnel has a positive significant result, which suggests that more professional troops in low intensity conflicts can help terminate the war faster. Yet we have to keep in mind that more troops do not equal quicker victory, especially in low intensity conflicts. In

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<sup>83</sup> Mack, “Why Big Nations Lose Small Wars.”

addition, while there are lots of arguments about the impact of casualties on war toleration, the results in Model 2 indicate that casualties are not a significant factor in the duration of low intensity conflicts.

Model 3 adds controls for the stated cause of the conflict and the outcome of the conflict. Here we can see that the coefficient for military system remains negative and statistically significant, while “fighting for government” as well as “state victory over rebels” has positive and significant coefficients. This result suggests that countries can terminate the war faster when they are fighting for “government issues” and when the internal conflict shows clear progress toward victory over rebels.

In Models 4–6, the same variables are applied to the smaller subset of conflicts involving at least one democratic state. In general, we can see that the coefficients point in the same direction as in Models 1–3. However, with only one-third of the original observations, levels of statistical significance tend to be lower.

From the results of the models, we can conclude that countries in low intensity conflicts with professional military systems can maintain legitimacy and extend war toleration over a longer period of time. From the results of the Cox proportional hazards regression models we can see that the military system has a significant impact on the duration of war. The negative coefficient of the military system means that countries with professional armies have a lower hazard rate, and experience the end of the war more slowly, and that this relationship is significant even without the constraint of regime type.

The military expenditure also has a negative coefficient, which suggests that higher military budget, more money can help countries make longer military commitments in low-intensity conflicts. The variables of “National power,” “Military personnel,” and “Fight for governments” have positive and statistically significant coefficients in the models, which mean that these covariates help countries terminate the war faster. However, it is important to remember that those terminations are more likely to be negative outcomes of the conflicts rather than victories.

## V. CONCLUSION

Since the end of the Second World War, low intensity conflicts have become a real challenge for democratic and non-democratic countries alike. Small wars are usually low in intensity but long in duration,<sup>84</sup> where democracies have to face invisible insurgent groups, terrorist organizations, criminal networks, or rebellious bands. Militaries have to operate in a hostile environment in a politically sensitive arena, where even cultural differences create problems for political leaders and military commanders, as well as for junior officers and non-commissioned officers on the ground. A suitable and feasible strategy with clear ends, understandable ways, and accessible and applicable means is extremely important.

The literature suggests many challenges for democratic countries in small wars, including institutional, legal, and ethical constraints, but quite a few articles deal with the impact of the military system on armed conflicts. This thesis argues that democratic countries with professional, all-volunteer military forces can maintain war efforts in order to make long, necessary, and credible commitments, which is inevitable in low intensity conflicts. This analysis reveals that in most cases, despite the “unlimited” economic resources of powerful democratic states, the real strategic challenge is the deployment of military forces for a sufficient amount of time without clear and hardly measurable military victory or defeat. That is why it is crucial to understand how long a society can tolerate the economic and human cost of war.

In this investigation, descriptive statistical data are compared between conscription and professional military systems, which shows that democratic countries on average can maintain low intensity conflicts longer and with fewer casualties if they have a professional military system during the war than states with conscription. The Kaplan-Meier non-parametric survival analysis shows that professional militaries can operate in low intensity conflicts with a significantly higher survival probability than democratic

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<sup>84</sup> Cohen, *Citizens and Soldiers*, 115.

countries with primarily conscription military forces, a pattern which is further confirmed by the results derived from Cox proportional hazard regression models.

Vasquez argues that conscription forces have fewer casualties in militarized interstate disputes when he analyzes military manpower system between 1950 and 1985.<sup>85</sup> However, this thesis finds different results and demonstrates that professional military systems have significantly fewer casualties, because it analyzes every type of armed conflict in a broader time period and uses a more sophisticated regression analysis method. However, wartime casualties do not seem to be a significant factor in small wars, as Kober also argues in “Western Democracies in Low-Intensity Conflict.”<sup>86</sup>

Choi and James argue from a neo-Kantian perspective that big, standing conscript armies can provide an easy means for politicians to wage wars.<sup>87</sup> This research reaches a different conclusion and argues instead that professional militaries provide an easy means for democratic leaders to start and maintain low intensity conflicts. The analysis demonstrates that democratic societies are less sensitive about the losses of professional soldiers and more sensitive regarding the deaths of conscription soldiers. Merom also underlines the weakness of democratic societies in the face casualties,<sup>88</sup> although Merom only compares democratic countries with conscription in his qualitative, comparative research. This thesis compares democracies and military systems in every level of low intensity conflict. Casualties might be an important factor in low intensity conflicts; however, this research finds that it is not as significant as some people think in explaining the duration of those conflicts.

The survival analysis demonstrates that countries with primarily professional, all-volunteer military manpower system have greater war toleration than states with a conscription system. Professional military organizations are better trained and better equipped in small wars than conscription armies. Politicians and citizens are also willing to pay more and provide more resources for their professional military than states with a

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<sup>85</sup> Vasquez, “Shouldering the Soldiering.”

<sup>86</sup> Kober, “Western Democracies in Low Intensity Conflict,” 15.

<sup>87</sup> Choi and James, “No Professional Soldiers, No Militarized Interstate Disputes?”

<sup>88</sup> Merom, *How Democracies Lose Small Wars*, 249.

conscription system. Democratic leaders also prefer professional militaries because they operate with fewer casualties than militaries that primarily use a conscription system. Fewer casualties suggest a longer duration of war and extended support of war by the population. The data analysis shows that professional militaries are just a “small” part of societies—in most countries only one percent or less of the total population—therefore, citizens have less connection with their military than countries with a conscription system.

It is more interesting that despite the resources of more powerful countries with higher military expenditures, professional militaries are not better and not more successful than conscription forces. Professional militaries achieve less clear victory and often create more problems and more armed tension when they give up and leave conflicts.

The concept that democracies are easily vulnerable through casualties and cannot maintain long, credible military commitments must therefore be rejected, at least in the simplest way that some enemy leaders recently described. Democracies are definitely willing to fight and sacrifice, even more so if they have a professional military system.

However, this is also dangerous because if citizens care less about their military, then political leaders can easily start and manage wars without the fear of strong domestic debate. Merom argues that there were powerful demonstrations against the war in some democratic societies with a significant impact on foreign policy and defense strategy, as seen with Israel in Lebanon, France in Algeria, and the United States in Vietnam.<sup>89</sup> However, recently the wars in Iraq and in Afghanistan, which both have a significant number of casualties and a lack of success or improvement shows the absence of widespread opposition against war efforts, despite the fact that a large number of democratic countries were involved in both conflicts. This research provides clear evidence that the all-volunteer nature of professional military systems can extend war toleration. As Cohen argues in *Citizens and Soldiers*, “the professional and volunteer

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<sup>89</sup> Gil Merom. *How Democracies Lose Small Wars: State, Society, and the Failures of France in Algeria, Israel in Lebanon, and the United States in Vietnam* (Cambridge, UK ; New York: Cambridge University Press, 2003), 242.

nature of the British forces lowered public resistance to use of force, and helped the nation absorb the inevitable losses.”<sup>90</sup>

This research also shows that survival analysis models are useful, productive, and valuable methods in the field of defense analysis. Survival analysis also has a lot of potential to be applied to additional research topics in future. For example, the survival probability of terrorist organizations or insurgent groups could be analyzed by using adequate variables and factors from this concept. This could also apply to information operations, such as determining the survival probability of a particular message over time and the hazard rate of a successful information campaign under different circumstances. The topics are inexhaustible for measuring organizations or systems on a time and event scale.

At the conclusion of this research, the hypothesis of this thesis is confirmed. Professional military systems can provide the opportunity for political leaders and military commanders to maintain the sufficient time frame for deployment, despite the inevitable losses, and also extend the necessary legitimacy of the fight amongst the broader society in low intensity conflicts. Although professional militaries seem to be better trained, better equipped, suffer fewer casualties, and have more opportunity, and more time to accomplish the mission, they are not more successful than military systems based on conscription. All-volunteer systems, especially in modern democracies are considerably more expensive; countries have to pay higher economic costs of war, but it seems that politicians and citizens are ready to bear these costs. There is also a threat that professional soldiers can become easy means in the hand of political leaders and an alienated layer of democratic societies.

The research shows that conscript armies win more often in low intensity conflicts with more casualties but in less duration. Professional militaries are deployed for a longer period of time in small wars with fewer casualties but at a higher rate of failure. Countries with volunteer soldiers give up war efforts in 76 percent of the conflicts without victory. Professionals also have poorer performance in counterinsurgency

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<sup>90</sup> Cohen. *Citizens and Soldiers*, 112.

operations in internal conflicts. Conscription is more embedded in the society and provides a natural constraint for politicians in power diplomacy and war. It is interesting that although conscription is seen to be more representative of democratic values, like shared common rights and responsibilities, in most of the cases, democratic countries abolished conscription first and turned to all-volunteer forces.

It seems that political and military elites are ready to risk the success of a conflict rather than face a public debate against their war efforts. Political survivability is an even stronger motivation than the wish to win a war. Citizens also pander in this situation while they are willing to pay more taxes and suffer higher economic costs in order to avoid the draft and be sent to war. Despite the fact that conscription systems are more suitable, in almost every level of the analysis in small wars, states—especially democratic countries—still believe in and rely on all-volunteer military service or seek the possibility for a transition.

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