Economic Freedom and Civil Peace

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Masteroppgave ved Institutt for Statsvitenskap

UNIVERSITETET I OSLO

Høst 2011

2011

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http://www.duo.uio.no/

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Master thesis

Department of Political Science

UNIVERSITY OF OSLO

Fall 2011

Preface

I am grateful to my supervisor Håvard Strand at The Peace Research Institute Oslo for great supervision, and for sharing with me his extensive knowledge on the subject of civil conflict and quantitative methodology. I am especially thankful for the countless advice and input he has offered me in the last days of my work.

I am also very grateful to Kjetil Klette Bøhler, Thorleif Aass Kristiansen, Jo Steinson Stenehjem, Carl Martin Rosenberg and Jonas Gjendemsjø for all their help, good advice and great friendship.

Finally I wish to thank my parents Tyra Elise Seland and Ralph Kittelsen Røberg for unlimited support and making it possible for me to write this thesis.

The many remaining errors are my responsibility alone.

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1 Introduction

In my study of economic policies and civil war, I have found that there are two dimensions of economic freedom that reduce the likelihood of civil war: *polices that promote freedom to trade internationally*, and *polices that reduce domestic market regulations*. Further I have found that low income countries benefit the most from free trade policies. But at the same time developing countries face in increased risk of civil conflict when privatizing the public sector.

As I write this thesis, the world is facing the possibility of a new major recession. International Monetary Fund (IMF) has downgraded their projections for world economic growth, cautioning that we might see slowing global economic activity and continued financial instability ("World Economic Outlook," 2011).

Will this trend blemish the merits of economic integration and the spread of capitalism, and what might be the consequences of reduced economic freedom? The road to recovery is perilous and the double dip prediction is looming on the financial horizon.

At the same time we see political unrest, rebellion and revolutions sweeping across North Africa and the Middle East; European mass media has dubbed these events as the Arab Spring. It started in Tunisia after a man set himself on fire in protest and desperation. His name, Mohamed Bouazizi, became a symbol for the protests against the sitting regime. It is significant to note that his action was not prompted by ethnic hate or ideological opposition; instead, it was a response to being harassed and excluded from selling his products on the local marketplace.

One of the greatest revolutions since the fall of the Soviet Union was sparked when government officials denied a man the opportunity to exercise his right to trade with his fellow citizens. Let this be a lesson to those who follow the fallen regimes; the success of the Arab Spring may be more dependent on economic policies than on democratic rights.

2 Research thesis

The persistence of poverty, slow development and weak state apparatus in large parts of the world undermines the ability of governments to pacify their own populations. Consequently, we need to find policies that function under the absence of a strong state. It seems natural that civil society and the international community will prove to be strong allies in keeping peace. The question is how to enlist their help to defend weak governments. The answer might be what some liberals have said all along: *economic freedom*. In this study I will look at economic freedom as a multidimensional phenomenon that needs to be comprehensively analyzed before it can be fully understood. My answer will not be whether economic freedom is good or bad for civil peace; instead, I will be precise in stating which kind of economic freedom decreases the likelihood of violent civil conflict. I will also explain under which circumstances economic freedom leads to civil peace.

The debate over how and to what extent capitalism contributes to interstate peace is becoming central to the study of international relations and the study of war. Given the interest in the empirical results connecting capitalism and interstate war referred to as *the capitalist peace*, there is surprisingly little empirical scholarship on the relationship between civil armed conflict and capitalism (de Soysa & Fjelde, 2010). Following the work of de Soysa and Fjelde (2010) I will expand the understanding of how economic openness, in the form of institutions and policy, interacts with state capacity to create civil peace. My main thesis is:

Policies and institutions that promote an open economy decrease the risk of violent civil conflict. This effect is highly dependent on the development of the state and what kind of economic policy the state tries to implement.

This thesis has two important parts. The first is that economic openness leads to fewer violent civil conflicts. To explain this effect I will use both classic and neoliberal theory. The second part posits that the effect of economic openness is contingent upon the economic development of a country. To explain this effect, I will use the concept of state capacity and model its possible interaction with economic freedom.

2.1 The theme

Liberal, and especially neoliberal, theories try to explain the positive effect of economic freedom by referring to individual reason/rational-choice that favors cooperation over conflict. In this framework, greed and self-interest ultimately lead to a positive social outcome. The theory covers interactions on both domestic and international levels, and some principles are thought to extend to human behavior in general.

A contrasting school of thought is the radical/Marxist school. They see capitalism and its emphases on economic freedom as driven by rich groups of society and rich countries of the world. Further, they believe that economic freedom promotes group interests, undermines social welfare and increase inequalities between groups/countries (Boswell & Dixon, 1993). These economic inequalities create grievances among marginalized people and heighten the risk of violent conflict.

The debate over the merits of capitalism is long-standing and can easily be traced back to Adam Smith (1979) who criticized both domestic and international policies. He wanted a system of perfect liberty to encourage free enterprise and international trade. Further, he argued that the price of war increased faster than the payoffs, making war more costly for industrial countries. Marx and Engels (2005) later contested this view, criticizing capitalism for aggravating class struggle and laying bare the "naked, shameless, direct, brutal exploitation" (Marx & Engels, 2005, p. 3) of one class, for the benefit of another. They believed this would ultimately lead to armed revolutions in capitalist countries.

To fully understand the effect of economic policy on the risk of conflict, we need to explore the different dimensions of economic freedom. I believe no research so far has adequately compared the effects of different economic policies to establish not only whether economic policy lessens the risk of civil war, but also which kind of economic policy contributes the most to civil peace. It's clear that the work done by other academics in the field, which tend to aggregate the economic freedom in one single index (de Soysa & Fjelde, 2010) or proxy it by using one variable like trade (Hegre, Gissinger, & Gleditsch, 2003) and FDI (Barbieri & Reuveny, 2005), will benefit by having the components and proxies of economic freedom more vigorously explored.

One study that compares different dimensions of economic freedom is Steinberg and Sideman's (2008) study of the relationship between government involvement in the economy and ethnic violence. However, such studies are still rare in civil war studies and "researchers

have paid surprisingly little attention to the effects of government involvement in the economy" (Steinberg & Saideman, 2008, p. 237).

Another important point is that most of the proxies that measure the volumes of trade or other types of transactions miss half the picture. They tend to capture economic dependency and structure while ignoring political will and policies. In this paper I focus mainly on the issue of policy. If policy is an expression of political will, it may be the factor most susceptible to influence by those who want to avert violent conflicts.

In this paper I look at four different dimensions of economic policy. The first is the state's openness to international trade. The second is the government's share of the economy. The third is the state's protection of property rights. The forth is the state's regulation of domestic economic activity. Comparing different measurements of economic policy allows me to investigate what part of economic freedom helps secure civil peace.

Of the four dimensions of economic policy three mainly concerned with the domestic level, while one is concerned with the international level. This opens the possibility to compare the effect of policies on international and domestic levels. The different forms of economic policies on the domestic level also give us the possibility to compare the effect of state participation in economic activities (states' size of economy) with that of states' regulation and organization of economic activities (property rights and states regulation of economic activity).

Scientists are already arguing that to understand the capitalist peace and its effect in detail we must explore "which explanation for [the capitalist peace] is most persuasive" (Mousseau, 2010, p. 191). Mousseau (2010) recognizes at least four different theories of how capitalism prevents interstate war. If there is such a thing as a capitalist domestic peace, then we must explore competing theories of how it comes about. In the literature I detail at least three explanations for how capitalism creates civil peace. The first is that in a free economy the pursuit of business opportunities is more abundant and profitable, and therefore individuals will have less incentive to take up arms against the state. The second is that a free economy lowers the payoffs to individuals from capturing the state. The third argument is that free economies make the distribution of welfare less political and therefore reduce the insecurity of groups in weaker political positions. There are certainly a plethora of other explanations, but these will form a starting point in this analysis.

2.2 Data

To find evidence supporting or rejecting the liberal position that economic freedom prevents armed civil conflict, I investigate the phenomena. To do so I use data from the Fraser Institute (Gwartney, Hall, & Lawson, 2010a) and the UCDP/PRIO Armed Conflict Dataset (N. P. Gleditsch, Wallensteen, Eriksson, Sollenberg, & Strand, 2002). The Fraser Institute dataset has data covering a number of years and countries during the period between 1970 and 2009. This will increase my temporal and geographic potential for generalization. This is important because I am testing a set of general hypotheses. I chose the Fraser institute dataset also because it contains observations of a number of different dimensions pertaining economic policy. Using this dataset, I will test if I can predict the outbreak of conflict by a country's composition and level of economic policies. The composition simply refers to the fact that a country may adopt quite different levels of liberalization in different areas of the domestic and international market.

2.3 Structure of the paper

This paper is divided into different chapters with each chapter representing a different stage in my study. In this chapter I present my research topic and a light introduction to the general topic of the thesis. The next chapter presents a review of the literature. Here I outline some of the major contributions and discussions within the field of the economic theories of civil war.

The chapter after that is entitled "Models and Theories". Here I present the models and theories I will use to explain the effect of economic policies on armed civil conflict. After presenting the existing models I discuss how they may be improved further regarding the different dimensions of economic freedom and state capacity.

In the chapter entitled "Research design" I outline the general research design I employ in testing my hypothesis. Here I discuss the reasons and challenges of choosing quantitative research design. I also use this chapter to present the operationalization of my theoretical concepts.

In the following chapter I present my results from the statistical analysis. The empirical predictions derived from my hypotheses will be compared to multiple models with different specifications.

After presenting my results I discuss the broader implications of this study for theory and policy. In the final chapter I present some conclusions based on the preceding chapters.

3 Literature Review: The Causes of Civil Violent Conflict

Many hundreds of books, academic papers, and articles have been written about civil war and its causes. In this literature review I focus my attention on the growing body of research connecting economic factors and domestic conflict. The theories I use in this paper draw heavily on economic theories of civil war, and this chapter places my research in the context of these theories.

Civil wars have always been more common than war among states, but the ratio has shifted heavily in favor of civil wars since 1945 (Levy & Thompson, 2010). Even if civil wars have been common, they have received much less attention from observers of political events than interstate war. There are, of course, rich descriptions and analyses of well-known cases like the English Civil War (1642-51), the American Civil War (1861-1865) and the Spanish Civil War (1936-1939) (Levy & Thompson, 2010). Yet theories of war have historically been preoccupied with why states go to war with each other.

In the 1960s, academic interest in civil war increased. Furthermore, the focus of analysis shifted from attempting to explain important cases of civil wars to more generalized models. Davies (1962) and Gurr (1970) argue that relative deprivation was key to explaining revolts. An influential line of thought posited that inequalities play an important role in provoking armed insurrection, but there was no consensus on exactly what this role entailed (Levy & Thompson, 2010). Many early theories were based on the observation that ethnic, economic, religious, and ideological grievances lead to civil conflict. Many scholars challenged this view, creating what has possibly been one of the most central debates in the civil war research program: the greed versus grievance debate. The argument concerned the question of whether rebels driven mainly by their lust for profit (greed) or for justice (grievance).

Central ideas were put forward in the 1990s which became important to the debate of greed versus grievance. First, Jack Hirshleifer (2001) applied neoclassical economic theory to the study of violent conflicts (Hanlon & Yanacopulos, 2006). He put forward the idea that there are two types of economic activities: one in which participants produce goods or services to enrich themselves, and another in which participants prey I on others or the common wealth

to enrich themselves. This predatory motivation could lead actors to engage in violent conflict (Hirshleifer, 2001).

Later Collier and Hoeffler (1998) presented an economic model in which the important causes of civil war include the expected economic gains of the rebels versus the risks incurred by rebelling. The following year, Collier (1999) presented another paper in which he discredited grievance causes of civil war in favor of greed causes. A period of heated debate followed over greed-based versus grievance-based motives in civil war.

The focus then shifted somewhat in favor of an opportunity model. Since scholars determined that greed is likely too narrow and questionable as a single explanation for motive, and grievance too common to explain the relatively rare phenomenon of civil war, Collier, Hoeffler, & Rohner (2009) postulated that one should focus on what makes a rebellion possible and not what motivates it.

Two important groups of researchers are the prominent advocates of the economic models of civil war: those associated with the World Bank led by Collier, and Fearon and Laitin (Levy & Thompson, 2010, p. 193). I discuss the contributions of both under "Opportunity and State capacity". First, however, I give a quick introduction on how liberal thinking has influenced theories of war.

3.1 The Liberal Peace

In classical liberal theory, economic freedom and the pursuit of individual wealth and success has been seen as a positive driving force in capitalistic society. Adam Smith's (1979) idea that competition between selfish individuals creates the optimal social outcome is perhaps the most famous example. Other classical liberal economic thinkers like David Ricardo (2004) and Bernard Mandeville (1988) share similar beliefs.

Since the discipline of civil war studies has historically been overshadowed by the study of interstate war, the classical thinkers in war studies express themselves more on the subject of peace between states than within. This of course does not mean that the concept of a liberal civil peace is hard to imagine or that the concepts developed in liberalist theory are inapplicable to domestic war. Even Kant (2007) commented on the internal peace of a country:

> Instead of genuine morality, the mechanism of nature brings it to pass through selfish inclinations, which naturally conflict outwardly but which can be used by reason as a means for its own end, the sovereignty of law, and, as concerns the state, for promoting and securing *internal*[1] and external peace. (Kant, 2007, p. 38)

This argument is similar to the one put forward by Adam Smith: they both express a faith in selfishness leading to social stability. Some liberal thinkers also believed that commerce had an educational effect on citizens. If people expand their business and investment in other towns and cities, their new contacts and the interests of those contacts will help them overcome petty parochial views and sympathies and instead embrace a concern for national welfare (Hobson, 1911).

Other later economic thinkers have not been so optimistic. Keynes writes that "dangerous human proclivities can be canalized into comparatively harmless channels by the existence of opportunity for money making and private wealth, which if they cannot be satisfied in this way may find their outlet in cruelty, the reckless pursuit of personal power and authority, and other forms of self-aggrandizement"(Keynes, 1997, para. 5) I return to this quote later in the thesis as it forms a possible starting point for inferring how economic freedom effects civil conflict.

Hirshleifer (2001) also takes a somewhat cynical view of the possible consequences of self-interest on human activities. He makes the point that people are rational, utility-optimizing individuals with choices (Hanlon & Yanacopulos, 2006), but he does not agree that this necessarily leads to a preferred social outcome:

> Hirshleifer proposes that while there may be a 'way of Coase', after Ronald Coase's proposition that individuals never willingly pass up an opportunity for beneficial exchange, there is also a 'way of Macchiavelli', since neither will pass up an opportunity to exploit, extort, and appropriate by force. (Hanlon & Yanacopulos, 2006, p. 168)

[1] Emphasis added by author.
[2] Whether it does this is of course highly disputed.

[4] Some of the observations I have in my study, will hopefully share similar characteristics with the ones that are

The “way of Macchiavelli” is a powerful conceptual supplement to the strong tradition of liberalism. This argument explains how people governed by reason and planning for their own best interest can be capable of plunder, destruction and murder of their fellow citizens.

Even with the introduction of more somber and less optimistic beliefs in the power of free enterprise, few liberals would dismiss capitalism and free market as champions for peace. The mistrust of greed is less than the mistrust in political ambition. Both may lead to war, but greed can hardly have conflict as an end in itself, while history has shown that the same cannot be said for political ambition.

With this discussion of some of the theoretical literature of liberalism and war in mind, I examine some empirical studies in the next section.

3.2 The Democratic Peace and The Capitalist Peace

Introducing empirical research that is aimed at verify liberal theories of peace, I start with interstate war. Liberal theory has had a much longer tradition and stronger impact on this field than regarding intrastate war. There are two sides of liberal peace theory concerning interstate war. One is the belief that trade and common economic interest will impact war, an argument I have already touched upon. The second is the belief that democratic institutions and practices produce values and sentiments that favor peace.

Scholars often refer to the empirical observations and results concerning these ideas as democratic peace and capitalist peace. The idea behind the democratic and the capitalist peace is that the pacifying effect of liberalism is not only a theoretical possibility, but an empirical reality. The democratic peace thesis asserts that few wars have taken place between democracies in modern times, or in recorded history for that matter.

The democratic peace thesis can be traced as far back as the 1960s and 1970s with contributions from authors like Babst (1964) and Rummel (1979). By the end of the 1990s the dyadic relationship between democracies and peace was rigorously confirmed and well-established (Mousseau, 2009).

The 1990s was also the time when interest and research into capitalist peace followed in the footsteps of democratic peace. In his canonical study of dyadic behavior and war, Bremer (1992) found that joint economic development strongly decreases the likelihood of war.

Capitalist peace is believed to reduce violent conflicts through several different mechanisms. Angell (1912) notes that there are at least two ways in which capitalism reduces the risk of war. First, it changes the accessibility of most input resources, making states less dependent on controlling territory and natural resources. As resources become accessible and cheap, they are more easily obtained through trade than conquest. Second, as states integrate into a global economy, they can not only access to the world financial market, they share the risk of economic loss if the market destabilizes. Thus, if an aggressor affects one economy, all economies in the system will suffer, including the perpetrator.

Gartzke (2007)explains the peace-contributing effect of capitalism by referring to how it helps overcome the security dilemma. If states can be both strong and pacifist, there is less reason to fear them. Gatzke (2007) believes capitalism helps nurture such states. First of all, it brings policy closer, making violent disputes over political issues less likely. Secondly, even though states cannot easily share territories and resources, free markets tend to reduce their value, so no capitalist state would want to fight for them.

Finding support for a democratic peace between nations, scholars have tried to find support for a similar effect on domestic peace. The results have been mixed, but many studies have shown that both “pure” democracies and autocracies are more stable than hybrid forms (Francisco, 1995; Hegre, 2001). This U-shaped relationship makes it hard to determine to what extent results support democratic civil peace. The point here is that intrastate research follows the interstate tradition in both empirical and theoretical studies of war.

Now with regards to my current study, one can observe that capitalist peace is developing similarly to how democratic peace once developed. If this is true, it places my research in a similar position as the early studies of democracy and civil war. I suspect there will be many more studies that attempt to determine whether there is a capitalist civil peace. The results so far seem in favor of such an effect (de Soysa & Fjelde, 2010; Hegre, et al., 2003), but capitalism and economic freedom are quite complex phenomena, and challengers will not be satisfied until it is established on a solid empirical and theoretical foundation. My study attempts to work toward this goal. I will now present some important findings associated with civil war and economic variables.

3.3 The direct effect of economic policy

Scholars have investigated whether civil liberties, and especially democracy, lead to civil peace without finding any conclusive support for increased or decreased risk of civil war (Fearon & Laitin, 2003). Researchers have contested these findings, and there seems to be solid evidence indicating that full democracies have a reduced risk of conflict in comparison with semi-democracies and autocracies (Hegre, 2001). Vigorous and systematic study of government type and civil conflict has been crucial to understanding the complex interaction between these factors.

Why, then, have scholars largely neglected economic policy in large N-studies? If we couple this fact with the ongoing debate of whether capitalism and global economic integration lead to civil peace (Weede, 2004) or to anti-globalization movement and civil unrest (Boswell & Dixon, 1990), it is clear that the topic requires far more attention by scholars in the field

One explanation for this neglect may be that there has not been the same availability of good data on economic policy as on democratic score, for what remains a predominantly quantitative research program. Polity IV and Freedom House datasets are famous in the field and cited in multiple studies; the Polity IV data is especially comprehensive and its coverage both in time and space surpass any similar classification of economic system or economic policy. Whatever the case, trade has been the most common measurement so far of liberal economic policies and the extent of exposure to globalization (de Soysa & Fjelde, 2010).

Trade as an indicator has the drawback that it measures (proxy) economic freedom on the international level and not the domestic. One would intuitively prefer an indicator related directly to the domestic level when dealing with civil violence; it is not obvious that mercantilism, for example (which is design to promote domestic growth[2]), should necessarily make domestic groups either angry or happy.

Fearon and Laitin (2003) test the influence of trade openness by using trade as share of GDP, but find no significant impact on civil war onset. Using trade as share of GDP is under no circumstances a sufficiently good proxy for trade openness. The crudeness and conceptual stretch most studies employ with regard to economic freedom is astounding. As well as offering poor measurements of trade openness, they fail to capture any broader political dimension of economic openness. Therefore, we still know little about the general economic policy implications of open versus closed economies.

[2] Whether it does this is of course highly disputed.

In light of the lack of good research connecting economic policy and civil peace, de Soysa and Fjelde (2010) present an important paper. They use an index of economic freedom to measure whether there is a connection between capitalism and civil peace. They find a strong and significant negative effect of economic freedom on civil conflict. These results are nothing less than remarkable, and will lend support to proponents of capitalism if they hold up to further scrutiny.

To explain their results de Soysa and Fjelde (2010) present an opportunity-cost model of how economic freedom leads to civil peace. The model focuses both on rebel-specific capital and state strength; however, in light of the finding that the economic freedom variable makes per capita income insignificant, they suggest that "free markets where people invest money in productive enterprise free of state theft, surely stabilize social relations more than state capacity alone can achieve" (de Soysa & Fjelde, 2010, p. 293). de Soysa and Fjelde (2010) stipulate that if governments overtax or do not effectively protect property, there is an incentive to organize in the shadows. This again creates rebel-specific capital like armament, tunnels finances and shadow organizations which rebels can potentially use to fight the government. A more open economy lessens these problems.

Another danger to civil peace is that the state monopolizes the economy, which raises the reward for capturing the state. This may lead groups to gamble on the only game in town, even though it may be a long shot. It illustrates how "states that have an economic system favoring private commercial interests and thereby lower involvement of the state in the economy show a lower risk of conflict" (de Soysa & Fjelde, 2010, p. 296).

My research specifically aims to understand the results of de Soysa and Fjelde 's (2010) work and to expand the knowledge of how economic freedom creates foundations for civil peace.

I am especially interested in the interaction between per capita income, which has been an important proxy in many studies, and economic freedom. Since economic freedom is measured as an index, it may be fruitful to break it down and carefully examine which parts of this index create the positive civil outcome.

Finally, we need to use this new knowledge to evaluate existing models and determine whether opportunity models demand precedence over motive models when economic freedom seems to indicate that policy matter

3.4 Opportunity and State capacity

One reason for favoring opportunity explanations over grievance explanations is what is known as the collective action problem. Social justice and a good government comprise a common good everyone can enjoy, regardless of individual participation in establishing it, which creates a free rider incentive. Why not let someone else risk dying for what you will enjoy in the end regardless of who makes the sacrifice? With this incentive structure it' is difficult to explain why a rational person would participate in a rebel group.

The opportunity for organization must therefore be based on something else. Collier et al (2003) finds that "[…] the key root cause of conflict is the failure of economic development. Countries with low, stagnant, and unequally distributed per capita incomes that have remained dependent on primary commodities for their exports face dangerously high risks of prolonged conflict" (Collier, et al., 2003, p. 53) . These create typical opportunities for a rebel group. "As we have seen, whether a country is prone to civil war is related to more mundane factors such as the level of income, its structure, and its rate of growth" (Collier, et al., 2003. p. 173).

Collier and Hoeffler present a similar argument in which they retreat from their assertion that only greed proxies explain civil war to a more nuanced stance in which they recognize that grievance also plays a role. This article also establishes opportunity as a central idea. In one of their most recent publications, they refine the idea of opportunity into what they call the "feasibility" and then contrast this with motivation.

Collier et al. (Collier, et al., 2009) synthesize Collier and Hoeffler's former concepts of greed and grievance, positioning them as motives. Only a few years earlier, scholars rejected grievance-based explanations because grievance was common to nearly all countries. Now Collier et al. (2009) dismiss motives as "incidental" and taken up by the first rebel group to fill the niche, either for a profit or non-profit cause.

Now let us shift focus to the important contribution made by Fearon and Laitin. In their paper "Ethnicity, Insurgency and Civil War" they find no support for variables related to motivation, including policy, ethnicity and inequalities (Fearon & Laitin, 2003). This differs slightly from Collier et al. (2009)finding that ethnicity effects the onset of civil war. And while Collier et al. (Collier, et al., 2009) present a feasibility hypothesis, Fearon and Laitin (2003) present a state capacity hypothesis. Both studies stress factors which make rebellion

possible; the only difference is the theoretical interpretation of how the different variables interact to create states prone to civil war.

Fearon and Laitin (2003) are less concerned about the financing and military aspects of the rebels and more concerned about the state' ability to deny a potential rebel group key strategic positions and use of insurgency tactics. They both agree that weak states are prone to civil war, but while Collier et al. (2009) stress that "often a rebellion will simply be beyond the financial means of those groups politically opposed to the government," Fearon and Laitan (2003) take the view that "all the guerrillas really need is superior local knowledge, which enables them to threaten reprisal for denunciation" (Fearon & Laitin, 2003, p. 88). I find that this difference in how easily the rebel side can organize and sustain themselves explains some of the difference in what the two research groups emphasize.

Fearon and Laitan (2003) use per capita income as proxies for state capacity. This represents the states' degree of poverty and marks weak financial and weak bureaucratic states. Less developed economy also lessens the revenue the state might generate and use to control the population. Mountain coverage translates into rough terrain which is hard for the state to control and can be used as staging point for an insurgency group. Furthermore, a large population makes it harder for the state to control the population.

It is interesting to note that as opposed to Collier and Hoeffler, Fearon and Laitin see their perspective not as economic but rather as Hobbsian (Fearon & Laitin 2003). This, of course, follows because they theorize the state and its strength as central explanations for civil peace. Given this argument, one might still argue that their perspective is quite similar to that of Collier and Hoeffler who also focus primarily on the economic strength of the state.

Since economic performance and its organization is key to state strength, I am inclined to define Fearon and Laitin's theories as economically founded. A part-Hobbsian view seems to penetrate the work of both Collier and Hoeffler and Fearon and Laitin in the respect that both groups take for granted that, if unrestrained, any society will revert to a state of civil war. In the opportunity models both teams present, they take for granted that there will always be a group ready to seize the "opportunity" if it presents itself.

These two important research groups conclude that the evidence favors opportunity-based explanations over motivation-based explanations for the onset of civil war. They do not entirely discredit motivation as a factor, but rather see it as a constant.

It may be too early to speculate on whether these new perspectives and results will spark a debate over "motivation versus opportunity", but, as I discuss last part of this chapter, there are many who do not share the economic theory of civil war. Case studies in particular seem to find strong evidence for motivational explanations for the onset of civil war.

Both groups of proponents for economic explanations for civil war stress the importance of economic performance; however, they have little theoretical or empirical analysis of economic policy. This lack of analysis is quite surprising as economic policy could change both motivation and opportunities within a country. I will explore the relationship and interaction between economic performance and economic policy as the second part of my hypothesis.

3.5 Poverty and inequality

I have so far presented many proponents of greed and opportunity as causes of civil war; however, a literature review of civil war research should mention the research around need and inequality. Income per capita is one of the strongest and most robust variables connected with civil war onset (Fearon & Laitin, 2003; Hegre & Sambanis, 2006).

There is considerable debate about how to interpret this relationship. The findings imply that poverty matters to conflict. Poor countries experience more civil wars than rich countries, and the richest seem nearly immune to civil war. Muller et al. (1991)write that:

> Almost all of the major insurgencies and revolutions in the second half of the twentieth century have taken place in the less-developed countries of the Third World, where objective levels of deprivation are much higher than in advanced industrialized countries. (Muller, et al., 1991, p. 1262)

The first and maybe most intuitive explanation for this is that a poor population may be dissatisfied by a government which is unable to provide for their needs. Under extreme circumstances, this dissatisfaction can lead to a violent confrontation between the government

and people organizing against the state. The belief that absolute poverty leads to conflict is central to many theories within the war literature (Lichbach, 1989).

Another explanation for income and inequality as factors is that it is not absolute deprivation but relative deprivation that fuels civil conflict. A difference in income between economic groups in a society leads to relative deprivation. The groups that have less income demand more from of the people in power. Therefore, societies with great inequalities experience more civil conflict. Relative deprivation can also result from times of economic stagnation or decline when people were expecting a raise in living standards. This type of reasoning is central not only to civil war literature, but to nearly all literature concerning social conflict. Lichbach (1989) writes that:

> First, it often appears that the principal political contest and debate in a nation involve a polarization of social groups around distributional issues. Conflict protagonists in a society are often divided into two groups: the challenging groups, i.e., the have-nots or the disadvantaged, who seek economic equality by attacking the status quo distribution of resources; and the established groups, i.e., the haves or the advantaged, who perpetuate economic inequality by defending the status quo distribution of resources. (Lichbach, 1989, p. 432)

Given the perspective that deprivation, both absolute and relative, has been prominent in the debate on how economic performance affects the likelihood of violent civil conflict, one of the most interesting discoveries by some recent large N-studies on conflict is that inequality seems to have little effect on the risk of civil war (Collier & Hoeffler, 2004; Fearon & Laitin, 2003; Hegre, et al., 2003). These findings weaken the position that assigns civil war to a class conflict between the poor and the rich within a country.

Another argument in the inequality debate is that it is not inequality between individuals that creates conflict, but rather inequalities between groups within the society. These groups can be economic, ethnic, religious, or any other type that creates a strong in-group identity. This argument splits inequalities into vertical inequalities between economic stratas, and horizontal inequality between groups. Østby (2008) finds support for horizontal inequalities associated with higher risk of civil war, while no one has found such a relationship between civil war and vertical inequalities. If inequalities are not only regarded to be differences in income and

possessions but also in opportunities, we may suspect that the implementation of liberal economic policies will decrease horizontal inequalities.

While poverty and material well-being are important concerns to the individuals within a society, the distribution of wealth is often connected to ideological considerations and political design. Consequently, deprivation and inequality can lead groups to take up arms in attempt to overthrow an inherently wrong system. This view was the dominant position during the cold war and is still the principal explanation regarding conflicts driven by inequality.

I acknowledge the importance of poverty and the level of development within poor countries, but I believe there is strong evidence to disregard material inequality as an important explanation. Instead, poverty and development may be more important as a measurement state capacity and the state's ability to implement policy efficiently. The exact causal pathway is hard to clarify, and the exact way in which economic development promotes civil peace will probably be an ongoing debate for many years.

3.6 Critics of the liberal civil peace

Not everyone believes that the spread of capitalism leads to a more peaceful world. Dependency theorists argue that the process and policies of liberalization often promote social cleavages and inequalities between people (Magee & Massoud, 2011) that could lead to conflict.

Marxists and neo-Marxists posit that the more a capitalist economy develops, the more alienated the worker class will become, which can lead to class conflicts and eventually revolutions. Again, others argue that the process of economic globalization undermines the state in favor of transnational corporations and financial institutions. This weakening of the state may leave it unable to manage its own population.

Others argue that a too-narrow focus on economic factors misses the importance of identity. For these scholars, economy is important mainly because it defines class identity and decides the distribution of wealth among ethnic groups. They don't necessarily argue against introducing liberal policies; rather, they do not believe such policies are the root cause of either peace or conflict.

In my opinion the strongest objection against the liberal belief in the pacifying effect of the market does not steam from either the Marxists theories stressing inequality or the scholars focusing on identity, but from the consideration of political power as the driving force behind conflict. Similarly to how realists criticize liberals for downplaying the importance of the distribution of power within the international system, liberals may be missing or not acknowledging the distribution of power within the domestic setting. Essentially, a conflict may come from a "need" to restructure this distribution. Policy could affect this distribution, but it is not yet clear if it would dictate the actions of the domestic players in power or opposition.

I have chosen to base my models and hypothesis on the liberal school's understanding of how economic freedom may affect the possibility of civil conflict, which is the opposite of the view presented by the dependency theorists, Marxists and other radical thinkers. If my results are contrary to my hypothesis, they will most likely lend support to those who question the pacifying effect of economic freedom.

4 Models and hypothesis

In the introduction I referred to three possible explanations for why economic freedom contributes to civil peace: the increased economic gain by peaceful cooperation/competition, the lowered payoff of capturing the state, and the less biased distribution of wealth. There are, of course, many other possible explanations, but these form a good point of departure.

The explanations above have different causal inferences depending on which theory one applies to the study of civil war and economic freedom. This research project hopes to test several hypotheses concerning economic freedom and civil conflict. These tests require an underlying theory that supports my hypothesis and explains the causal relationship between the phenomena. In this chapter I present arguments and create models derived from theories using the main perspectives of classical and neoclassical liberal economic theory in conjunction with the contemporary concepts of state capacity. It is important to stress that it is not yet clear how these views compliment, contradict and generally are related to one other. My selection of perspectives is based on a balance between the strong theoretical and historical foundations of the liberal peace and the extensive empirical work done by proponents of state capacity explanations of civil war.

4.1 State capacity

I have already introduced the central idea of state capacity in the literature review. Here I further explain the concept of state capacity and how it may interact with economic policy.

I agree with Huntington (1968) in his assertion that "the most important political distinction among countries concerns not their form of government but their degree of government" (Huntington, 1968, p. 1). The state is essential to keeping the peace within a country. The capacity of a state can be viewed in many ways. Sobek (2010) writes that:

> "One critical factor that affects opportunity is the capacity of the state. In particular, states have the ability to address the demands of their citizens in ways that reduce the incentive for political violence, which limits the ability of rebels to overcome the problems associated with collective action. In addition, strong states can simply deter resistance through their ability to physically coerce dissenters. (Sobek, 2010, p. 46)

State capacity is likely a vital deterrence against rebellion; however, I believe there are at least two other sources of state deterrence against rebellion. The first is domestic support, which the civil war literature describes by its negative: grievance. The second is international support. Both domestic and international support may work together with state capacity to deter rebels.

Two dimensions are crucial to how state capacity helps pacify a population: the increase in the state's ability to implement policy to meet citizen demand, and an increase in its capability to deter rebellion through the display of sheer force. I believe that both of these traits are likely to interact with economic freedom, which needs to be implemented for economic policies to be successful. Good intentions and nice can signal efforts to facilitate a functioning market, but such goals may still be beyond the capacity of many states. Governments may have ambitious reform policies that could transform their economies, but due to a fundamental lack of state capacity the reforms are destined to fail before they even start. On the other end of the scale, truly strong states may be practically immune to armed rebellion.

The concept of state capacity or state strength is complex. Hendrix (2010)recognize at least three types of categories into which most definitions and operationalizations fall: military capacity, bureaucratic/administrative capacity, and political institutional capacity. Using factor analysis, he finds that 15 common measurements of state capacity collapse to three dimensions: *rational legality, rentier-autocraticness* and *neopatrimoniality* (Hendrix, 2010). Of the five countries scoring highest in each factor category, only two experienced war between 1984 and 1999.

If the effect of state capacity on peace is sufficiently strong, the effect of policy on the risk of armed conflict may be minimal. Government unpopularity due to inefficient policies and mismanagement of the economy will seldom lead people to take up weapons in response. Such an endeavor would be utterly futile and only result in unnecessary deaths, most of which the rebels would likely suffer themselves. This does not mean that the government is not under threat of coups and mass demonstrations but rather that they should avoid a military confrontation with the general population.

In sum, I posit that there are two effects of state capacity on the risk of conflict. One depends on its ability to implement policies, the second on its ability to deter rebellion by show of force. Both of these pacifying effects are central to my thesis, but their results on the risk of

conflict is expected to be different very different. The government's ability to implement good economic policies can creates a positive indirect effect of state capacity on economic freedom. The state's ability to suppress dissent can have a direct positive effect on the risk of armed conflict, but a negative effect on the contribution from economic policies. I explain this interaction further in the rest of the chapter.

4.2 The liberal arguments

A central argument put forward by economic liberals that government involvement generally has a negative effect on market performance. They suggest that government meddling in markets tends to undermine the "natural" supply and demand of products and services. This can create inefficiencies and decrease economic growth and participation; furthermore, liberal scholars see economic growth and participation as closely related to the material well-being of people. Ultimately, economic performance and participation will provide or deprive people of certain benefits which are desirable. Liberal scholars suggest that one such benefit is civil peace.

There is also a more normative argument for why people have the "right" to certain liberties. Most liberal thinkers believe economic autonomy is a civil right, regardless of the economic performance of free economies. This argument states that economic liberties are in themselves a benefit; however, it is difficult to relate this line of thought to civil peace unless one proposes that the population of most countries also value liberalism and will take up arms to protect this right. I therefore concentrate on how liberal economic policy might impact a society through opportunity, growth and distribution.

I outline above three explanations for how economic freedom may create civil peace. I will now explain them in depth and derive meaningful hypotheses based on these explanations.

4.2.1 Rational pacifism

The question of what makes one person take up a shovel while another takes up a gun is not easy to answer. If both are equipped with reason and the faculties to make rational decisions, why does one engage in war while the other engages in trade? Liberalist explanations tend to point to factors encouraging peaceful enterprise and development of a healthy economic sentiment.

Smith (1979) argues that the European transformation was possible because people started amassing wealth and not influence. Money that was once spent on acquiring more land and supporting an even greater score of tenants was instead channeled into more profitable trade and production in the cities. Citizens spent the profits on new luxury products and symbols of riches. If a rich landowner clad himself in gold and silk, it may have been comfortable and beautiful, but was not a direct increase in his power. The same money might have supported hundreds of people for a year, and so vanity and greed slowly changed the relationship between people. It is quite possible that by changing values and priorities the landowner class lost much of its capacity to wage war and assert its power in conventional ways.

Adopting economic policy that favors the free flow of wares and labor likely accelerates the process of people conforming to an economic way of thinking. The capitalist sentiment is important if any social change is to follow the introduction of new economic policies. The spirit of capitalism might be taken for granted in many developed countries, but it has yet to penetrate many of the rural areas of the less-developed parts of the world. In some communities there are still stronger allegiances than money, which might center on kinship, ethnicity, patronage or religion. Keynes (1997) neatly sums up the gain from breaking down such social bonds:

> "It is better that a man should tyrannise over his bank balance than over his fellow-citizens; and whilst the former is sometimes denounced as being but a means to the latter, sometimes at least it is an alternative". (Keynes, 1997, para. 5)

The breakdown of old social orders in favor of new ones based on individual economic activity will make the mobilization of large groups of people against the government much more difficult. Rebels have traditionally recruited either by payment or a shared identity or cause. Thus a weakening of traditional values in favor of economic interests might also lessen rebels' chances of using such attachments for mobilization. In the same way, the payment offered for participation might be less attractive if there are other opportunities to earn money within the structure of the normal domestic economy. Fewer economic restrictions will ultimately result in greater prospects for starting new businesses that can employ local populations.

The invisible hand that creates social good on the account of individual concerns may also be an invisible force for peace. By subtly changing the stakes each individual has in the continuation of the state, the state becomes an institution in which many have investments. These investments are measured in prosperity and wealth by the powerful and in opportunities, aspirations and transparency by the weak. Even though critics have accused capitalism of favoring the rich, I believe have the most to gain from easier access to the domestic market.

In regimes in which economic freedom is greatly reduced, the prospects for each individual are more limited. The extra opportunities generated by a freer economy may be illusory and hardly within reach for most citizens; however, the illusion remains, and for the strongest individuals it is a channel for their energy and ambition.

In *The Theory of Moral Sentiment*, Smith (1790) discusses why we work and labor so hard. He believes that it is not just for personal sustenance, but to attain what the prosperous have. People want to emulate the higher classes and attain the same riches and stations as their "superiors". This hierarchical way of thinking is not very democratic, but it gives merit to a capitalist organization of society.

The philosopher of Machiavelli that proposes that no people will pass up a chance to pray on others for their own gain, and the philosophy of Coase that proposes that no people will pass up a chance to trade for their mutual benefit, can be summed up by the neoliberal maxim that people will act to increase their own gain. States struggle to suppress predatory behavior but often "forget" that there must be a choice for those ambitious individuals that wish to rise within the society. When states use resources to also suppress peaceful economic behavior, it inadvertently results in a changed incentive structure in favor of other more sinister activities.

Let us use the term "rational pacifism" for the belief that economic sentiment and opportunities create an incentive to engage in peaceful activities over violent ones. This will simplify later references to the idea.

Based on the above arguments I expect that countries with greater economic freedom are more successful in producing civil peace: policies that protect private property, make it easier to establish enterprise and choose employment, and give everyone an equal right to participate

in economic activity should reduce the likelihood of civil war. From this expectation I have derived the following hypothesis:

H_1: Policies that promotes few regulations on the domestic market reduce the risk of armed civil conflict.

H_2: Policies that promote property rights reduce the risk of armed civil conflict.

4.2.2 Possible interaction between domestic economic freedom and state capacity

To wish something does not always make it so. This may also be the case for policymakers wanting to liberalize the domestic economy. If the state is unable to provide physical protection of property and the required infrastructure for engaging in economic activities, good policy may be irrelevant.

There may be a fine mechanism of self-reinforcing, self-serving morals that govern the action of a population within a free economy; however, it would be naïve to believe that such morals develop without coercive instruments to instill them. There will be too many tempting opportunities for people defect to predation regardless of how others act. Society will be simultaneously threatened by other positions on how it should be organized. Finally, there seem to always be the few who want to enslave the many, or many who want to enslave the few.

To punish the defectors and destroy fanatics, the government needs a minimum of coercive means at their disposal, and to implement policy, they need a minimum of bureaucratic capacity and some essential infrastructure.

Hall (1988) notes that contemporary economic historians stress the importance of large number of people being able to participate in the European economy at the eve of industrialization. There was a large group of people who owned a certain amount of wealth and created a high demand, enabling the industrial revolution. A functioning market would likely have similar prerequisites.

Given that there is a minimum of economic development and a state tapping into its resources, a healthy economy may flourish and attract support from the population. Rational

pacifism stemming from economic freedom is therefore likely to be influenced by and maybe contingent upon government performance.

To reflect the difference in capacity between states in the international system I have divided them into categories of strength based on different state capacity measurements. The categories are weak countries, having especially low state capacity. The middle weak countries are still weak, but they have a higher capacity than the countries in the weak category. The strong category consists of the strongest nations in the international system.

Based on the reflection in this section, I derive the following sub-hypothesis which states that:

$H_{1.1}$: Middle weak states will face a substantially reduced risk of armed civil conflict with policies that liberalize the domestic market.

$H_{2.1}$: Middle weak states will face a substantially reduced risk of armed civil conflict with policies that secure property rights.

When a country reaches a certain point of development, it seems it becomes practically immune to violent civil conflict. I believe there are two reasons for this. Firstly, the economic base provides resources to strengthen the military, and secondly, development likely leads to a better-organized society. Both of these traits, if they meet sufficient levels, should provide governments with superior capabilities and therefore deterrence against rebellion. The main driving force of pacifist behavior in such countries is not the rewards of peace, but the punishment of war.

Such states might be able to sustain poor economic policies without being challenged militarily. This leads me to suggest the following hypothesis:

$H_{1.2}$: The strongest states will receive only a moderate reduction in the risk of armed civil conflict with policies that liberalize the domestic market.

$H_{2.2}$: The strongest states will receive only a moderate reduction in the risk of armed civil conflict with policies that secure property rights.

4.2.3 International peaceful transactions: rational pacifism on the international level

Interdependence between states in the international system is one explanation for how liberal peace works (Oneal & Russett, 1999). Yet it is not as clear how interdependence between states would benefit civil peace. If international trade is more vulnerable to conflict than other forms of economic activity, it would make civil war more costly.

Polachek (1980) writes that "the implicit price of being hostile is the diminution of welfare associated with potential trade losses" (Polachek, 1980, p. 80). He is referring to interstate war but the theory might also hold in a model of civil war. Since the international market is a place of many actors and multiple sources of natural resources and manufactured goods, actors may easily change trading partners, resulting in the following consideration:

> It is likely that international trading relationships are more sensitive to conflict than intrastate trade is, since foreign firms can more easily choose alternate trading partners. In that case, open economies have a greater opportunity cost of internal conflict than do closed economies. Governments of open economies may thus have a stronger incentive to act in ways that minimize domestic conflict, and we should observe fewer violent conflicts in countries with higher levels of openness. (Magee & Massoud, 2011, p. 60)

There is one apparent weakness of Magee and Massoud's (2011) argument: the belief that governments with more open economies may have stronger incentives to minimize domestic conflict. States will always have a desperate wish to minimize domestic violent conflict. I find it difficult to construct a scenario in which a government would abandon the imperative of monopolizing the use of force, and even less a situation in which it would tolerate a direct military challenge. In the instances where such imperatives are abandoned, I doubt it's because the incentives of trade revenues failed.

Instead we must build a model with more actors than only rebels and the government. States interact with other states on the international level, the government and other groups interact domestically, and individuals interact within groups. The arguments introduce above for rational pacifism on the domestic level should, with some modifications, hold on all of these levels. Other laws or the lack of laws may govern the international level, but it will still conform to self-interest and rational behavior.

International trade connects states in a market, and all actors share in the benefit of such a market. I assume for the sake of argument that the market is more valuable the more actors that participate, and that the market is especially exposed by the sudden withdrawal of any actor.

The economic crisis in Greece shows the vulnerability of an interconnected market. Even though Greece is a relatively small economy compared to Germany, France, Italy and England, it has the potential to negatively impact all of the countries in the European Union. The danger of Greek default is twofold, including the economic losses for European banks and the withdrawal of Greece from the Union. The response from the other Union states is to support Greece and attempt to avoid a default.

I theorize civil conflict as a phenomenon that might threaten a country's participation in a market. Under certain conditions, the other countries in the market will wish to reduce the risk of civil conflict in that country. When the country at risk fails to allocate sufficient resources to reduce that risk, it is more likely that other actors will contribute. The reason for this is twofold, including the economic losses for the rest of the market and the potential losses as the market shrinks. This rests, of course, on the assumption that international support can help a state deter rebels. Fearon and Laitin (2003) find that foreign support may influence rebels' prospects.

This argument reflects the same thoughts put forth regarding interstate war and interdependence. States may be unwilling to go to war against each other because they risk not only incurring damage on their opponent, but also on themselves. Economic interdependence makes civil war costs impossible to contain within a single country. Economic integration is therefore likely to create an incentive for international support in providing preventative measures against civil disturbance.

Based on the above arguments I suggest the following hypothesis:

H_3: Increased trade reduces the likelihood of armed civil conflicts.

Trade policy, I would argue, is even more important than trade, for it signals commitment to a market. A common understanding of the importance of a shared market, could promise a future gain (to all participants) which can easily overcome the value of current trade flows between nations.

The market is therefore more than the simple sum of trade between nations; it is also a shared understanding of how future trade will be conducted for common prosperity. Free trade policies should signal commitment to the market and make third-party support more likely. Thus, ledges to international markets lead to increased security for participants, and this hypothesis follows:

H_4: Adopting free trade policies reduces the likelihood of armed civil conflict.

4.2.4 International support and state capacity

If nations benefit from international support in maintaining civil peace, this effect is likely to be unevenly distributed between the strong and the weak. Compare country like the United States to a country like Botswana. It is unlikely that the international society could or would allocate enough resources to discourage a group from challenging the US government if the group had the resources and will to do so. On the other hand, it is more likely that direct support or the promise of direct support from the international society would enable the Botswana government to bolster its position against potential rebels, and hence strengthen its deterrence against military challenges.

The interaction between the state's own ability to prevent rebellion and the possible addition of international support may be governed by the law of diminishing utility. Because it makes sense to count the domestic contribution to overall deterrence first, any subsequent addition is highly dependent on the size of the preexisting domestic deterrence.

The options of international security politics are also limited. Most countries will only accept a certain type of support for internal affairs and most countries will only offer a certain type of help. These restrictions may put a ceiling on the total support any country can expect to receive regardless of what is at stake; that is, if a country is vital to the international market and the prosperity of all, it still may not be possible for benefactors to lend proportional support for addressing internal threats. At a glance this seems irrational, but when norms are at stake countries may have to show restraint to avoid establishing dangerous precedence.

Given the above argument I advance the following hypotheses:

$H_{3.1}$: Trade substantially reduces the risk of armed civil conflict for weak states.

$H_{4.1}$: Free substantially trade policies reduce the risk of armed civil conflict for weak states.

The above hypotheses run counter to the expectation and findings of Suzuki and Krause's (2005) study of civil war and trade openness in Asia. They instead find that increased development leads to a stronger effect of trade openness. I on the other hand argue that trade freedom have a marginal utility dependent on state capacity, which should give a greater benefit to weak and middle weak states.

4.2.5 Lowering the value of capturing the state

The agenda and goals of rebels are diverse. The world has seen separatist movements, ideological struggles, religious and ethnic wars, and pure struggle for power and economic benefits.

There is disagreement within the contemporary civil war literature over the scope and importance of these differences. Some scholars suggest that the underlying causes and goals of rebellion are much more homogeneous then political statements and conflict narratives seem to indicate. In the literature review I introduce the greed perspective, which subscribes to the idea that rebellions are economically motivated and that the ultimate goals of most rebels are to extract winnings from loot, illegal taxation and ultimately gain control of the government and all of its assets.

Contemporary wars in Africa especially have been branded as greed-driven. The best example is likely Sierra Leone, in which the rebel group Revolutionary United Front (RUF) extracted alluvial diamonds to finance their rebellion. Their original slogan, "No More Slaves, No More Masters. Power and Wealth to the People", was followed by enormous cruelty and exploitation of the areas under RUF control.

If rebels are driven by greed and the ultimate prize is control over the national resources, then the size of the government is an important incentive: “if the state is the “only game in town” then rational actors will invest in predation over production (rent-seeking) and the capture of state power” (de Soysa & Fjelde 2010, p. 290).

The rebels see the state as a cookie jar filled with tasty sweets. Instead of trying to protect the jar, a government might turn it upside down and let all the cookies fall out in an attempt to disperse them in the market, thus hiding the sweets from greedy hands.

Policies that reduce tax income, government subsidies and ownership over businesses should make the government a less attractive target. To simplify later references I will call this argument the diminished prize argument.

Based on this argument I offer the following hypothesis:

H_5: A reduction in the government's share of the economy leads to a reduced risk of civil violent conflict.

4.2.6 Diminished Prize of Capturing the State and State Capacity

The size of the government's share of the economy is most likely related to its capability to manage its own population. I have argued that as the government is reduced, the government's possibility for misusing its power is probably also reduced. The problem is that so is perhaps its capabilities for punishing violent dissention and providing a minimum of public utility.

Much of the criticism leveled against capitalism and the liberalization of the state argue that it leaves the state unable to provide and manage its most basic and important tasks. This is a powerful argument and it is not ignored by liberal thinkers. If I assume that there is a minimum of how small a government can become before it loses its power over vital areas, then this might be influenced by the size of the economy as a whole.

The measurement of the size of the government is relative to the overall size of the economy. If a minimum government is in place in a country, and the vital tasks it's commissioned to solve stay somewhat constant. Then a growth of the economy will reduce the ration between the public and the private economy without the government making a single cut in its expenses. Of course the assumption that vital tasks stay the same and costs are constant is probably not for filled. Still a minimum state is likely to grow much slower than the private economy when a country experience economic growth.

This would make it possible for more developed countries to keep down or cut their government size without losing vital capabilities. In the other end of the specter it makes it problematic to reduce the government in the most impoverished countries. They will need to allocate a greater share of their economic resources to provide vital public services. Cutting the size of the government in these weak countries might render them impotent. So as

countries develop they have a greater benefit from keeping government interference in the economy down.

Based on the argument over I have constructed the following hypothesis:

$H_{5.1}$: Middle weak countries will receive a substantial reduced risk of armed conflict with policies that reduce the government's share of the economy.

As a government's capacity develops far beyond what any opposition could possibly hope to defeat through violent confrontation, the need for popular support becomes less. The argument of diminishing marginal utility of popular support is probably especially relevant with regards to the government size. I therefore posit that:

$H_{5.2}$: The strongest countries will receive only a moderate reduced risk of armed conflict with policies that reduce the government's share of the economy.

4.2.7 Less Biased Distribution of Wealth

Following the argument that the government size matters to potential rebels; civil strife may result from not only greed, but also desire for justice and a fair distribution of economic opportunities. One of the main concerns in politics is the distribution of limited resources. It could become problematic if certain groups fear that other groups will use their monopoly of the state to take advantage of a favorable position in the government (Steinberg & Saideman, 2008).

Divisions in society based on identity will deepen further if one faction is in control of the state apparatus, and has the ability to use it either to enrich themselves or suppress other factions. Conflict may not require that the group in power misuse its power, but rather only that it has the opportunity to do so. To protect itself from discrimination or the risk of discrimination an opposing group may be tempted to wrestle power from the fraction in control.

By reducing its control over state resources and economic activity, the government may reduce the insecurity of opposing groups. Even regulations that are well-intended could enrage elements that perceive the regulations as unfair and discriminating. Political competition is very different from economic competition. Dispersing power in the market

may ease intense political confrontations, thereby creating a situation in which deprived groups will seek to dominate the market rather than the political sphere. Let us call this position the de-politicization of distribution argument.

This argument for lessening the politicization of the economy by reducing the interference and share of the government is much in line with the other two explanations for how economic freedom might produce civil peace. The diminished prize strategy is concerned with curtailing predatory opportunities through reducing the value of the state, and de-politicization of distribution tries to induce security by taking away the power of the government to discriminate against politically weak groups. These perspectives therefore share the hypothesis:

A reduction in the government's share of the economy leads to a reduced risk of civil violent conflict

The rational pacifism explanation centers on self-interest and opportunities to explain how economic freedom contributes to civil peace. The same self-interest and opportunities are what certain groups feel they may lose if the "wrong" people gain the highest political offices. The argument of rational pacifism and de-politicizing of distribution, therefore share the same hypothesis regarding domestic economic policies.

Policies that promote few regulations on the domestic market reduce the risk of armed civil conflict.

Policies that promote property right reduce the risk of armed civil conflict.

5 Research Design

The theories and models I present in the previous sections are not new. Case studies, theoretical studies and, more recently, quantitative studies have all put these theories under scrutiny. The political nature of the question has made agreement difficult, and the answer to whether economic freedom leads to civil peace seems dependent on the initial school of thought to which the author subscribes. Even if the debate over economic freedom and social peace has not reached a consensus, it has produced some strong hypotheses and clarified some casual pathways. I therefore believe the hypotheses should be tested and theory can be refined by the resulting data. My research project is to determine the effects of different dimensions of economic policy on the risk of domestic violent conflict. To test this thesis I chose the research design described in this chapter.

5.1 A Quantitative Method

By adopting a quantitative research design I can test my hypotheses on a great number of countries over a substantial number of years. My unit of investigation is country-year, which means that I pool all yearly observations of each county in my study. However, by choosing countries-years as my unit of interest, I risk losing domestic local nuances within each country. Since the distribution of market participation and distribution of wealth are likely to exhibit sub-national characteristics, the aggregated level could lose some important information. Still the government is the most central actor is my models, and therefore it seems most efficient to choose states as my geographical unit.

Also I choose an aggregated cross-national time series study in order to contribute to a specific part of the civil war literature. My research project is a continuation of the research into the liberal peace, and as such attempts to explain general relationships between economic policy and violent conflict. By selecting the same unite of investigation and similar methods as other observers of civil war I make comparison relatively easy.

5.2 Research Gap

In the literature review and theory section I mention that there have been several studies on the relationship between economic freedom and civil conflict (Barbieri & Reuveny, 2005; de

Soysa & Fjelde, 2010; Hegre, et al., 2003; Magee & Massoud, 2011). These studies have found interesting, though conflicting, effects of economic freedom; however, scholars in the field have insufficiently empirically explored many effects of economic freedom on conflict. For example, de Soysa and Fjelde write that "future studies might focus more vigorously on the relationship between high income, economic freedom and peace" (de Soysa & Fjelde 2010, p. 293). Hence the aim of the present study is, to explore how state capacity interacts with economic policy to reduce the risk of domestic conflict. I also adopt several dimensions of economic policy to better understand what policies successfully contribute to civil peace. To my knowledge, the interaction between state capacity and various dimension of economic policy have not been analyzed empirically in large scale N-studies by others.

5.3 Temporal and Spatial Coverage

My datasets on economic freedom cover 140 countries from[3] 1970 to 2008. It is mainly this dataset that dictates which countries are in the analysis and which are excluded. Furthermore, it is quite clear that the countries excluded from my dataset are not excluded at random. This can create a biased selection of states that does not accurately represent the world. Necessarily limiting my analysis to 140 countries will affect the generalizability of my results; however, I feel confident that the countries in my study are numerous enough, with enough variation across borders and time, to make inferences about the remaining countries[4]. For a complete list of countries included in this study consult Table 1 in the appendix. The dataset also presents problems concerning specific years for which some data is scarce. To address this I have either excluded these specific country-years or I have imputed the date. Later in this chapter I more fully describe the processes I have employed.

5.4 Operationalization's and data

Finding high-quality data is essential to any empirical study; the relevance and reliability of my data define the quality of the findings in my study. All the data included in my empirical analysis is collected from secondary sources. I have selected data from institutions often used and cited in the civil war literature. For anyone wishing to replicate this study the data should

[4] Some of the observations I have in my study, will hopefully share similar characteristics with the ones that are excluded from my study.

be readily available and easily obtained. In this chapter I describe my selection of data sources and operationalizations of theoretical concepts.

5.4.1 Operationalization of civil violent conflict

I operationalize civil peace as the absence of civil violent conflict. The dependent variable is constructed from the UCDP/PRIO Armed Conflict Dataset v4-2009 (N. P. Gleditsch, et al., 2002; Harbom & Wallensteen, 2010). This dataset contains data on armed conflict in the period from 1946 to 2008. They define an armed conflict as "a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths" (Harbom, Strand, & Nygard, 2009). The dataset contains the dates of when a conflict reaches the threshold[5] of 25 battle-related deaths, the type of conflict, the years in which the conflict is active, and other information that is not relevant to this research design. I use the onset (start) of a conflict instead of incidence (year with conflict); this is preferable since I want to explore the relationship between risk of a conflict breaking out, and the level of economic freedom.

5.4.2 Operationalization of economic freedom

The theoretical concepts I measure as my main explanatory variables are four policy dimensions connected to economic freedom, including: (1) policies that limit the size of the government, (2) policies that secure property rights, (3) policies that limit the regulation of the domestic market, and (4) free trade policies.

My definition of policies that limit the size of the government is *guiding principles that reduce the government income, consumption, ownership, control over companies, and allocation of funds to different enterprises*.

To define policies that secure property rights I use Barzel's (1997) notion of legal property rights. Legal property rights are essentially "what the state assigns to a person" (Barzel 1997, p. 3). The states decide who has a right to an object or property and how this right should be enforced. My definition of policies that secure property rights is *guiding principles that give people the right to own things, and help enforce this ownership within the state*.

[5] I use the date the conflict reaches this threshold instead of the date of the first battle-related death.

For the purposes of this study, I define free trade policies as *guiding principles that reduce government interference in the movement of goods and services across national borders*.

Finally, I define policies that reduce domestic regulation as *guiding principles that reduce government regulation on production, trade and finances within the state*.

To operationalize my four dimensions of economic policy I have chosen to use the Index of Economic Freedom from The Fraser Institute (Gwartney, Hall, & Lawson, 2010b).

The Heritage Foundation presents a similar dataset, but it has a lower temporal cover, and the components in the index are often constructed on less data than the ones presented by the Fraser institute.

The Fraser Institute index is designed to measure the level of economic freedom within a country. The Institute defines economic freedom as the following:

> Economic freedom is present when adults are free to produce, consume, and trade with others as long as their actions do not harm the person or property of others. Use of violence, theft, fraud, and physical invasions are not permissible but, otherwise, individuals who are economically free are free to choose and compete as they see fit. The index published in Economic Freedom of the World (EFW) is designed to measure the consistency of a nation's institutions and policies with this concept of self ownership. The four cornerstones of economic freedom are [:] personal choice[,] voluntary exchange coordinated by markets[,]freedom to enter and compete in markets [and] protection of persons and their property from aggression by others (Gwartney et al. 2010b).

The Fraser Institute divides their Index of Economic Freedom into five major areas which comprise the total freedom of the economy. These areas are: "[1] Size of Government: Expenditures, and Taxes, Enterprises; [2] Legal Structure and Security of Property Rights; [3] Access to Sound Money; [4] Freedom to Trade Internationally; [5] Regulation of Credit, Labor, and Business" (Gwartney et al. 2010b:3).

These five major areas are comprised of 23 subcomponents, some of which are the result of several variables. In total the index is made up of 42 variables. Each component and subcomponent is scored between 0 and 10 to reflect the distribution of the values from the

variables. If a component consists of subcomponents, the average value of these makes up the value of the component. The average value of the components within a major area makes up the value of that area, and finally, the average of the five major areas determines the value of the index.

For my research project I am primarily interested in the major areas of the index. The major areas are divided into categories similar to the dimensions of economic freedom I wish to investigate.

5.4.3 Operationalization of size of government

I will use "Size of Government: Expenditures, and Taxes, Enterprises" for my operationalization of policies that reduce the size of the government. The index for this major area measures the following variables: general government consumption spending as a percentage of total consumption, transfers and subsidies as a percentage of GDP, government enterprises and investment, and top marginal tax rate. High values on this index indicate a small government. This operationalization is useful because it captures some essential sides of a government that takes a large share of the economy.

My primary problem at this stage is to determine if the components are an expression of policy or an expression of economic performance. Because the index does not directly measure political will to reduce the state, but rather measures the actual size of the state, the following question arises: Will a government with the policy to reduce its size be capable of doing so? I believe the question in most cases is yes: transfers and subsidies, and top marginal tax rates, can be reduced relatively quickly while government ownership and investments can be transferred to private actors in a short time.

The slowest process is likely the reduction of government consumption, but a government can accelerate this process by adopting the right policies. Based on these assertions I feel the Fraser index of size of government is a reasonable operationalization of policies that reduce the size of the state.

5.4.4 Operationalization of security of property rights

To operationalize policies that secure property rights I use the major area index of "Legal Structure and Security of Property Rights". This index consists of the following components: judicial independence, impartial courts, protection of property rights, military interference in rule of law and the political process, integrity of the legal system, legal enforcement of contracts, and regulatory restrictions on the sale of real property. This index is much more problematic than that measuring government size.

The following components are all fine indicators of property right protection: impartial courts[6], protection of property rights, legal enforcement of contracts, and regulatory restrictions on the sale of real property. The more problematic components include judicial independence, military interference in rule of law and the political process, and integrity of the legal system. These are all important indicators of a liberal state, but their merit as indicators connected to economic freedom is more questionable. The problem is that the indicators likely also measure factors like corruption and good governance, which are not necessarily traits that vary in accordance with the degree of economic freedom. Military interference in rule of law is especially problematic to this study of violent conflict.

This index leaves me with two choices: I can exclude the indicators or include them and risk measuring more than I wish to measure. I have chosen to edit the Fraser data by removing the problematic variables: judicial independence, military interference in rule of law and the political process, and integrity of the legal system. In hopes of improving the Fraser index for use in my study, I have chosen to edit it by removing the problematic variables.

Finally I consider whether the index captures only performance or whether one can use it to measure policy. Laws and legal systems that protect property rights seem to be result of intended political policy; therefore, my operationalization of policy securing property rights seems to capture policy and not performance.

5.4.5 Operationalization of free trade policy

I use the major area index of "Freedom to Trade Internationally" to represent free trade policies. The Fraser Institute constructs this index with the following components: taxes on

[6] This component is closely related to the economy. It is " from the Global Competitiveness Report's survey question: "The legal framework in your country for private businesses to settle disputes and challenge the legality of government actions and/or regulations is inefficient and subject to manipulation (= 1) or is efficient and follows a clear, neutral process (= 7) (Gwartney et al. 2010b:221)."

international trade, regulatory trade barriers, compliance cost of importing and exporting, size of trade sector relative to expected, black market exchange rates and international capital market controls.

Five of these components are unproblematic and seems to capture the essence of free trade policy quite well. The problematic component is "size of trade sector relative to expected". This factor captures the size of the trade sector and compares it to an expected value given other countries with similar traits[7]. Because this is clearly a performance variable, I removed it from the index. The remaining variables tax on international trade, regulatory trade barriers, compliance cost of importing and exporting, black market exchange rates and international capital market controls, are all good indicators in my index of free trade policies.

5.4.6 Operationalization of Domestic Regulation

My operationalization of policies that reduce the regulation of the domestic market uses the major area index of "Regulation of Credit, Labor, and Business". The index consists of the following components: credit market regulations, labor market regulations, and business regulations. These are all important to government regulation of the domestic market. I find this operationalization to be in line with my theoretical concept.

I include a complete list of variables used to construct the various indexes in the appendix under table 3. These indexes, entitled Areas 1, 2, 4 and 5, are the indexes I use to operationalize the four dimensions I test in my analysis.

5.4.7 Operationalization of state capacity

State capacity is a widely-used concept within civil war literature; however, there is no common definition of the concept. Hendrix (2010) recognizes that state capacity definitions fall into three categories: military capacity, bureaucratic/administrative capacity, and political institutional coherence and quality.

[7] "Regression analysis was used to derive an expected size of the trade sector based on the population and geographic size of the country and its location relative to the concentration of world GDP. The actual size of the trade sector was then compared with the expected size for the country" (Gwartney et al. 2010b:225).

I investigate the interaction between economic policy and state capacity specific to the implementation of policy and repressive potential. I therefore concentrate on military capacity and bureaucratic/administrative capacity.

To investigate military capacity I use two different variables: one measuring military personnel per 1000 inhabitants and another measuring military expenditure per capita. These variables are from The National Material Capabilities data set and are part of the COW project (Greig & Enterline, 2010; Singer, 1988; Singer, Bremer, & Stuckey, 1972).

To measure bureaucratic/administrative capacity I use the tax ratio of GDP. This ratio measures the extractive capabilities of the state, which is one of the most important administrative tasks of the bureaucracy. It takes a substantial amount of organization and monitoring to compel citizens to pay for government expenditure. However, there are some problems with this operationalization: countries as diverse as Algeria, Lesotho, and Sweden had the same average ratio of tax to GDP (31%) in the period between 1980 and2002 (Hendrix 2010, p. 275).

To remedy this issue I have included a second operationalization using Kugler and Arbetman's (1997) relative political capacity (RPC), which is constructed to measure the difference between the state's actual and predicted extractions. This variable has the following form: Tax/GDP = $b_0 + b_1$(time) + b_2(Real GDP) + b_3(GDP from mining/GDP) + b_4(GDP from exports/GDP) + b_5(Health expenditures/GDP) + b_6(Dummy for OECD membership) + e. It captures the shape of the economy, thereby giving a more representative picture of the level of extraction. This variable is a useful indicator of bureaucratic/administrative capacity. Regarding the possible influence of RPC on the implementation of policy, Arbetman-Rabinowitz and Johnson says the following:

> [RPC] also represents the ability of a government to implement a set of policy choices: politically capable governments will be able to change or influence policy - pursuing their political and economic goals while preserving political stability. (Arbetman-Rabinowitz & Johnson, 2007, p. 2)

It is clear that RPC will measure the some factors important to the current study.

Finally, I measure the development of the economy given its importance to both the military and bureaucratic/administrative capacities. Unless the rebels plan to either win a decisive

victory early in the campaign or destroy much of the state's resources when at the controls, they must face the prospect of government mobilization. Such a mobilization will draw on the economic base of the state, drawing capital through loans, redirecting funds and/or increasing taxes. The state will then invest the capital in repressive means.

The economic base also likely influences the efficiency of the government, given that it is difficult to maintain an efficient bureaucracy without sufficient funds. Over time I believe countries with a strong economic base will be capable of producing a good bureaucratic/administrative capacity.

To operationalize the economic base I use the GDP per capita. Hendrix's (2010) study of state capacity uses factor analysis to find the relationship between 15 operationalizations of state capacity. He finds three important factors that cumulatively explain 91% of all the variation in the matrix. The first accounts for 53% of the variation and is highly correlated with GDP per capita with an r=0.81. This makes GDP per capita one of the most highly-correlated variables with respect to the other measurements of state capacity.

Economic policies and economic development is likely related to each other. Some of the most capitalist countries in the world also exhibit a relatively high level of economic freedom. For my study this can create indirect effects and the inclusion or exclusion of the GDP per capita variable will likely influence my results greatly.

The five measurements: military personnel, military expenditure, relative political capacity (RPC), tax ratio and GDP per capita to represent state capacity, should in sum suffice to operationalize most aspects of the concept. .

5.4.8 Control variables

For this analysis to be accurate, it needs to be clear that the relationship between the explanatory independent variables and the dependent variable is not spurious, or rather, that there are no confounding variables causing a variation in both the independent and dependent variables (Skog, 2004, p. 381). The removal of confounding variables is substantially the most important condition for this analysis, but also one of the most difficult to test (Skog 2004, p. 381). To minimize the risk of spurious effects leading to false conclusions I include multiple control variables in my analysis.

5.4.9 Population

Many studies have found that a large population increases the chance of conflict (Fearon & Laitin, 2003; Hegre & Raleigh, 2006; Hegre & Sambanis, 2006). To be sure that the size of the state does not confound the relationship I am investigating, I also include log population. This variable I am using is from the World Bank dataset (The World Bank, 2010). The data goes back to 1960 and includes 213[8] countries. The data has relatively few country-years missing.

5.4.10 Ethnic and Religious Fractionalization

Scholars often see ethnic and religious differences as important reasons behind why civil violent conflicts arise. That cultural lines lead to conflict is the basic idea in the influential writings of Huntington (1992), but this is especially disputed by large N-studies into civil war which find no such relationship Other authors link fragmentation to economic performance:

> In the case of Sub-Saharan Africa, economic growth is associated with low schooling, political instability, underdeveloped financial systems, distorted foreign exchange markets, high government deficits, and insufficient infrastructure. Africa's high ethnic fragmentation explains a significant part of most of these characteristics. (Easterly & Levine, 1997, p. 1203)

This could indicate that fractionalization may be a confounding variable, in which case I need to control for it. Because the literature diverges on exactly how ethnic and religious fractionalization may affect conflict and the economy, I include a linear and quadratic measure of fractionalization.

To measure ethnic and religious fractionalization I use Alesina, Devleeschauwer, Easterly, Kurlat, & Wacziargs (2003) data on ethnicity and religion, which allows for two individuals with the same religion or ethnicity to be drawn at random from the population. The data in the index is gathered from Encyclopedia Britannica, CIA's World Factbook, Levinson's Ethnic Groups Worldwide, Minority Rights Group International's World Directory of Minorities, as well as from Mozaffar & Scarrit (1999) for some select African countries.

[8] This does not include Taiwan.

5.4.11 Type of Government

Civil war researchers have focused a great deal on the relationship between type of government, institutions, and the risk of civil war (Hegre, 2001; Vreeland, 2008); however, there is little agreement on which kind of government promotes civil peace or whether type of government has an effect on civil war (K. S. Gleditsch & Ruggeri, 2010). Some scholars have pointed out that a lack of political participation and opportunity might create grievances. Countries with democratic institutions should be able to better facilitate such concerns and hence reduce the likelihood of conflict.

Other scholars argue that the nature of autocracies makes them less susceptible to rebellion. An autocracy may find it easier to use extreme force and repression against its own population, while a democracy may find it difficult to respond sufficiently under the same circumstances. This distinction could partially account for the stability of autocracies over democracies

There is a third explanation in which consistent autocracies and democracies are both stable, but institutions with mixed elements from the two are unstable. This instability may be due to the fact that these institutions do not sufficiently facilitate peaceful democratic activities, nor do they sufficiently repress their populations.

The discussion around economic freedom seems quite similar to that around government stability. Are democracies or autocracies best at implementing policies that liberalize the economy? Economic theories do not give a straightforward answer to this question (De Haan & Sturm, 2003). Autocracies may be less dependent on popular support and therefore more able to liberalize the economy. Democracies, on the other hand, may have to make compromises that threaten liberalization in favor of group interests.

Some scholars argue that democracy make both possible: the development of a free economy depends on the free institutions of a democratic government. North (1993) argues that "well specified and enforced property rights, a necessary condition for economic growth, are only secure when political and civil rights are secure; otherwise arbitrary confiscation is always a threat."

Because government might affect both civil conflict and economic freedom, I chose to control for the effect of government type. To measure the different types of governments I use the

Scalar Index of Polities. The Scalar Index of Polities measures to which degree a government is democratic (Gates, Hegre, Jones, & Strand, 2006). It covers the period from 1800 to 2009 and includes all independent countries with populations exceeding half a million.

5.4.12 Economic Growth

Intuitively, economic growth should generate public support given that it strengthens state capacity and represents positive development within a country. Furthermore, growth should generate business opportunities, which I argue are important factors in ameliorate discontent.

Empirical studies have found that economic growth is positive in reducing civil conflicts (Collier & Hoeffler, 2004; Hegre & Sambanis, 2006). Since economic growth might have simultaneously effect on both civil peace and economic freedom it is important to include it as a control variable.

I constructed the measure by taking the difference between the World Bank GDP per capita two years and one year before the onset of civil war.

5.4.13 Ongoing conflict

In my analyses I include countries that have an ongoing conflict. With conflict classified by low threshold of 25 battle-related deaths, and given that a conflict is only coded as finished after at least two years of inactivity, a country could experience a low intensity conflict for a long period of time. I do not want to exclude these country-years of low conflict, but it is problematic to include them. An ongoing conflict might both erode economic freedom and produce rebel-specific capital of which a new rebel group might take advantage. I therefore control for ongoing conflict by including a variable that captures the direct effect an ongoing conflict has on the risk of another conflict arising.

5.4.14 Years of peace

To address the problem of temporal dependency in a time series cross country design, I include a variable that measures the time since the last active conflict. Because the effect of peace years will likely not be linear, I have modeled it as a decay function $2^{(-time)}$. This function is halved every year and quickly becomes very small. The data on conflicts go back

to 1946, but some countries have not existed that long. Therefore, I give all countries 14 years of peace as they enter the dataset. This means that all countries that have not yet experienced conflicts have a score close to zero.

5.5 Missing data

The datasets I use are missing a significant amount of data, which is very problematic and can result in biased findings. The largest amount of missing data is in the indexes of economic freedom. The good news is that economic freedom is a broad concept that seems to correlate with a lot of other data, and its values approximate a normal distribution. These attributes make it a good candidate for multiple imputation.

Multiple imputation is, in most cases, the most efficient and least biased way of addressing the problem of missing data. There is a broad agreement between methodologists and statisticians "that 'multiple imputation' is a superior approach to the problem of missing data scattered through one's explanatory and dependent variables than the methods currently used in applied data analysis" (King, Honaker, Joseph, & Scheve, 2001, p. 49).

The process of multiple imputation requires drawing from the posterior probability distribution. The imputation program creates a space of possible variance covariance-matrixes which could have created the existing dataset. It uses this space of possible variance covariance-matrixes to draw 20 complete datasets. This provides probable values for the missing data and an uncertainty term.

Multiple imputation may seem a strange or dubious approach to addressing the missing data. In fact, it is a much more statistically sound strategy than listwise deletion, which is the standard for dealing with missing observations. For listwise deletion to outperform EMis, which is the imputation algorithm I have chosen, the following conditions must be satisfied:

> For listwise deletion to be preferable to EMis, all four of the following (sufficient) conditions must hold. (1) The analysis model is conditional on X (such as a regression model), and the functional form is known to be correctly specified (so that listwise deletion is consistent, and the characteristic robustness of regression is not lost when applied to data with measurement error, endogeneity, nonlinearity, and so on). (2) There is NI missingness in X,

> so that EMis can give incorrect answers, and no Z variables are available that could be used in an imputation stage to fix the problem. (3) Missingness in X is not a function of Y, and unobserved omitted variables that affect Y do not exist. This ensures that the normally substantial advantages of our approach in this instance do not apply. (4) The number of observations left after listwise deletion should be so large that the efficiency loss from listwise deletion does not counterbalance (e.g., in a mean square error sense) the biases induced by the other conditions. (King, et al., 2001)

The above criteria are almost never satisfied, and as I discuss in the next paragraphs, I believe my model is not one of those rare cases. Therefore, the choice of multiple imputations seems appropriate. I do not use the EMis algorithm, but a similar bootstrapped version called EMB which gives essentially the same answers as EMis (Honaker, King, & Blackwell, 2010).

The problem of missing data is dependent on the way in which it is missing. There are several types of missingness, including: missing completely at random, missing at random, and non-ignorable. When data is missing completely at random, the distribution of missing values in the combined[9] data matrix is independent of the values of any other cell in the matrix, including the missing cell itself. This does not mean that the missing value is independent of all other cells in the matrix, but rather that the missingness is independent of all other cells. This type of missingness is not likely to bias the results in any way; instead, it simply reduces the size of the date available. This reduction holds for both listwise deletion and multiple imputation. When one can explain or predict the missingness by the value of the cells in the data matrix that are *not* missing, the data is missing at random. Data missing at random can lead to biased results when using listwise deletion, but not when using multiple imputations (King et al. 2001). If one can predict the missingness only by the value the data "would" have had if they were not missing, then the missing values are non-ignorable and can lead to biased results regardless of the technique applied.

The data missing from the Fraser Index is missing for two reasons. First of all, for period from 1970 to 2000 they only report scores every fifth year. Because I use country-year as my unit of analysis, the Index leaves me with four years of data missing between my data points; however, these missing points are not as problematic as they might seem. The index only

[9] This matrix is made up of the variables in the analysis.

incidentally measures data every fifth year, and that interval of time have nothing to do with either the values on the index itself or any other variables[10]. This makes the missingness almost completely random. Here the choice between listwise deletion and multiple imputation is only a matter of efficiency. Neither of the techniques should create any bias.

The other type of missingness is where the points are gone for any other reason. This type is called either missing at random or non-ignorable. The problem, however, is that it's impossible to know whether the data here has non-ignorable missingness (King et al. 2001), because that determination depends on the data that I am missing. Still, I can make some reasonable assumptions. The first is that the level of economic freedom does not *lead directly* to less willingness to report economic data. There probably is a correlation between missingness in my economic freedom data and the level of economic freedom, but this may be an indirect effect explained by other characteristics of the missing observation (low economic development, conflict, authoritarian government, low bureaucratic capacity and so on). I therefore assume that the two phenomena of missingness and economic freedom are not directly causally linked.

The next assumption is that there is other data that could explain just as well or better why some data on economic freedom is missing. Likely candidates include: onset of conflict, type of government, economic development, population size, and many more. It is important to stress that explaining why something is missing is not the same as determining the values of the missing observations.

I believe these two assumptions are close to valid for my dataset. The exceptions are the cases in which data is missing for many variables simultaneously. To remedy this I have excluded observations with more than 40 of the 64 variables missing. To impute these observations would likely strain the imputation process, and likely not contribute significantly to the analysis.

There are two assumptions that a dataset should satisfy when using the EMB algorithm. The first is that the missingness is not non-ignorable (which I have already discussed), and the second is that the data has a multivariate normal distribution both for missing and non-missing data. To satisfy the second condition I have transformed some of the variables to better fit a normal distribution. Some variables did not show a good fit to a normal

[10] The only exception is time (year), but I believe this is not problematic.

distribution, but "there is evidence that this model works as well as other, more complicated models even in the face of categorical or mixed data (Honaker et al. 2010:4)".

I imputed 20 datasets, which more than sufficed to make the results stable and reproducible. I chose to impute so many datasets because so much data is missing that there is likely not enough data to predict the missing values with great accuracy; therefore, I need many datasets to correct for the differences. The standard errors I use in my logistical model are based on the normal standard error and the uncertainty I derived from the draw of imputed datasets. This can be expressed as:

$$SE(q)^2 = \frac{1}{m}\sum_{j=1}^{m} SE(q_i)^2 + S_q^2(1 + \frac{1}{m})$$

The important factor to see here is that as the number of datasets m grow, the standard error decreases. After Fraser Index created the datasets I "combined" them for use in my analysis. I believe this is the best response to my problem of missing data. I ran some diagnostics that indicate that the imputation model was appropriate and generally unproblematic, see appendix 2. To improve the predicted missing values I added several additional variables (for a complete list, consult the appendix 2).

I also set the data to be time series cross-sectional in the imputation program in order to use the fact that many variables vary smoothly over time in predicting imputed values. This step is extremely important and most of the information concerning missing data will likely result from correlation between observations of the same variable closely related in time.

How the variables vary over time is not known; therefore, I include a sequence of polynomials of the time index: $(\text{economic freedom})_{ti} = \beta 0 + \beta_1 t + \beta_1 t^{2.}$ This sequence makes the model more general then an ordinary linear model would.

Finally, because missing data is one of the major challenges of this analysis, I include models using two different strategies of addressing missingness. The first is listwise deletion and the second is linear interpolation. Comparing these strategies should provide a general idea of the robustness of my results with regard to utilizing different methods dealing with missing data.

5.6 Statistical method

The dependent variable is a dichotomous variable which takes the value 1 if a conflict begins that year in a specific country and the value 0 if there is no such onset. Because the dependent variable is binomial, I have a choice between discriminant analyses, ordinary least squares regression (OLS), logistic or probit regression.

I reject linear discriminant analysis because I have categorical (incident) independent values and also a few that are not normally distributed. Scholars do not commonly employ linear discriminant analysis for analyzing events; instead, they use it to classify groups.

I am left with OLS, logistic or probit regression. The most common methods in social science are OLS and logistic regression. Scholars use the probit model less often, but the distinction between logistic and probit regression is of little importance in most applications. Hahn and Soyer (2008) writes that "the conventional wisdom is that in most cases the choice of the link function is largely a matter of Taste" (Hahn & Soyer, 2008, p. 1), but argue that this only holds under certain circumstances. Regardless, I do not pursue this discussion here.

One can use OLS regression with a binary response variable: this model is called a linear probability model and can be used to describe conditional probabilities. Using OLS in this way, however, creates issues with the residuals. With a binary dependent variable the model violates the assumption of homoscedasticity and normality of errors which is prescribed when using OLS regression. This does not necessarily become a problem for the analysis. Pohlmann and Leitner (2003) find that logistic and OLS regression give the same substantial interpretations for the data they used to test the models. However they conclude that:

> The structure of the logistic regression model is designed for binary outcomes, whereas OLS is not. Logistic regression results will be comparable to those of OLS in many respects, but give more accurate predictions of probabilities on the dependent outcome (Pohlmann & Leitner 2003, p. 124).

Logistic regression seems to be the best method for my analysis, or at least as good as any other choice available. The logistic regression model considers following:

$$Logit(Y) = \log\left(\frac{Y}{1-Y}\right) = b_0 + b_1 X$$

Here *Y* is the dependent variable expressing the share of a given value, b_0 is the intercept/constant, and b_1 is the regression parameter expressing the increase in the *logit(Y)* with an increase of one unit of *X*. It is clear that there is a linear relationship between logits of the dependent variable and changes in the independent variable. This is similar to OLS regression, with one important difference: logits do not measure the value of the dependent variable. Instead, they measure the odds of the dependent variable assuming the value of 1. Additionally, the odds values are log transformed. The simplest way to express and understand logistic regression is to express the relationship in odds ratio:

$$OR = e^{b_1}$$

One can interpret the odds ratio (OR) as the change in odds when going from one X to another. If the change is simply increasing one unit of X, the new odds is the old odds multiplied by the OR.

Because my study is a time series cross-section analysis, I should be very concerned about interclass correlation. Country-year observations belonging to the same country are bound to share similar traits. Because the logistic analysis ordinarily assumes that all observations are independent of each other, it will underestimate the reported standard errors. This is especially a problem when dealing with binary data where "the lack of a simple residual makes it harder to model either the time series or the cross sectional property of the error process" (Beck, 2008, p. 11).

To remedy this I use clustered robust standard errors which account for the data lost from interclass similarities. This is not the perfect way to deal with interclass correlation created in a time series cross-section analysis, but Beck, Katz and Tucker (1998) have shown that Hubers robust standard errors give "reasonably correct assessments of the variability of the ordinary logit standard errors, even though the Huber procedure does not take into account that the error structure in a unit should be that of the serial correlation" (Beck, 2008, p. 11). There is one important thing to point out when using a procedure to inflate the standard error to account for interclass correlation: it makes no changes to the problems of fitting a wrong model, only increase the uncertainty of the results related to wrongly fitted models.

There are three conditions data should meet to ensure good results when running logistic regression, including: the logistic curve gives a correct description of the empirical

relationship I want to model, the individual observations are independent of each other, and no confounding variables affect both the dependent and the independent variables.

I test the first condition by running a Hosmer-Lemeshow-test. The test seems to confirm that the logit linear model sufficiently describes the relationship. The results are included in appendix 6. The second condition of independence between observations is more likely problematic. Temporal dependency in the data is a frequent problem in time series cross-section studies. The data for this study covers relatively many countries, which reduces the problem of temporal dependency.

It is problematic, however, that many of the variables measures phenomena that are likely linked in time, especially when this is true of the dependent variable. It is likely that the onset of a conflict will affect the likelihood of a new onset. I describe this above as an important motivation for including the years of peace and incident variables. Without including these variables, I found theoretical and statistical evidence for temporal dependency as a significant challenge. After including the two variables, I believe the dependency is within manageable limits.

The final condition, requiring no confounding variables, cannot be solved or tested by statistical analysis. I ran a fixed effect model to minimize the chance of my control variables leaving significant variations between countries unaccounted for.

6 Results

In this chapter I will present my empirical work on the relationship between economic freedom and armed civil conflict. The hypotheses I am going to test are the following:

H_1: Policies that promote few regulations on the domestic market reduce the risk of armed civil conflict.

> *$H_{1.1}$: Middle weak states will face a substantially reduced risk of armed civil conflict with policies that liberalize the domestic market.*
>
> *$H_{1.2}$: The strongest states will receive only a moderate reduction in the risk of armed civil conflict with policies that liberalize the domestic market.*

H_2: Policies that promote property rights reduce the risk of armed civil conflict.

> *$H_{2.1}$: Middle weak states will face a substantially reduced risk of armed civil conflict with policies that secure property rights.*
>
> *$H_{2.2}$: The strongest states will receive only a moderate reduction in the risk of armed civil conflict with policies that secure property rights. .*

H_3: Increased trade reduces the likelihood of armed civil conflicts.

> *$H_{3.1}$: Trade substantially reduces the risk of armed civil conflict for weak states.*

H_4: Adopting free trade policies reduces the likelihood of armed civil conflict.

> *$H_{4.1}$: Free trade policies substantially reduce the risk of armed civil conflict for weak states.*

H_5: A reduction in the government's share of the economy leads to a reduced risk of civil violent conflict.

> *$H_{5.1}$: Middle weak countries will receive a substantial reduced risk of armed conflict with policies that reduce the government's share of the economy.*
>
> *$H_{5.1}$: The strongest countries will receive only a moderate reduced risk of armed conflict with policies that reduce the government's share of the economy.*

The results I will present in support of some of my hypotheses are quite interesting. I have structured the chapter chronologically by subscript starting with H_1 and ending with H_5. In the first part of the chapter 6.1-6.5 I present several models all aimed at testing my hypotheses. Then in 6.6 I test the robustness of my results.

6.1 Testing the effect of reduced domestic market regulation

The argument of rational pacifism and de-politicization of distribution predict that less government interference in the domestic market leads to less likelihood of civil war. If this is hypothesis is true it should show a negative correlation between liberal domestic market policies and onset of civil war.

In Table 1 I have first included the index of domestic market regulations named "Domestic market regulations" with the basic control variables. In model two I also include GDP per capita which is my first proxy for state capacity. In the third model I have included interaction terms between market regulations and GDP per capita.

The baseline category is the middle income per capita country-years, which are made up of the 20th to 50th percentile of GDP per capita. The weak category is made up of the lowest 20 percentile of GDP per capita country-years. The strong category is made up of the country-years within the 50 to 100 percentile of GDP per capita. All the results are reported as odd ratios.

Tabel 1: Model 1-3

	Model 1 Onset civil war	Model 2 Onset civil war	Model 3 Onset civil war
Regulations	0.750**	0.782**	0.766+
	(0.07)	(0.07)	(0.12)
GDP growth	1.051	1.068	1.068
	(0.05)	(0.06)	(0.06)
Population	1.530***	1.496***	1.492***
	(0.12)	(0.10)	(0.10)
Ethnic	10.24***	7.072***	6.964***
	(5.78)	(4.18)	(4.01)
Ethnic sq.	0.0352	0.0187*	0.0206+
	(0.07)	(0.04)	(0.04)
Religion	0.267*	0.285*	0.298*
	(0.16)	(0.16)	(0.17)
Religion sq.	0.00305**	0.00683*	0.00778*
	(0.01)	(0.02)	(0.02)
Democracy	0.871	1.093	1.119
	(0.28)	(0.35)	(0.35)
Democracy sq	0.422	0.615	0.730
	(0.55)	(0.82)	(0.97)
Incidence	0.939	0.854	0.847
	(0.30)	(0.27)	(0.26)
Peace years	2.417*	2.332*	2.343*
	(0.86)	(0.83)	(0.83)
High GDP		0.456**	0.424**
		(0.12)	(0.13)
Low GDP		0.977	1.169
		(0.25)	(0.33)
High*Regulations			0.881
			(0.19)
Low*Regulations			1.175
			(0.23)
Observations	4763	4763	4763
Countries	140	140	140
Conflicts	163	163	163

Exponentiated coefficients; Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

In model 1 the effect of regulations is significantly less than 1. Thus the odds of suffering a civil war is reduced for countries that score higher on the index of domestic market freedom.

Model 2 reports nearly identical results. This indicates that good domestic market policies have a direct positive effect on civil peace, and that the effect is not primarily channeled

through the level of development. The findings seem to be in line with my first hypothesis: *H_1 Policies that promote few regulations on the domestic market reduce the risk of armed civil conflict.* The results are exactly what I expected to find, and the first dimension of economic freedom seems to contribute to civil peace.

My first models assume that the impact of regulations is the same regardless of the level of GDP per capita. This assumption might be false, and I have argued that there are reasons to believe that middle weak countries have a greater benefit of economic freedom. To test if there is a different between level of economic development and the positive effect of liberal domestic market regulations on civil peace, I include an interaction term between GDP per cap and regulations. The interaction is reported in model 3.

The interaction term between weak economic development and regulations is greater than 1, indicating that weak countries have a smaller benefit from shifting to liberal domestic market regulation than middle income countries. The size of the coefficient is large enough to give substantially interesting interpretations. Unfortunately it doesn't become significant, and it does not support my interaction hypotheses $H_{1.1}$ and $H_{1.2}$

Looking at the standard errors of the interaction terms, the problem seems to be that there is a lot of variation in the data. When I calculate the odds ratio of weak states based on the results from model 3 I get 0.89 which is quite a substantial reduction both with regards to middle weak countries (0.74) and strong countries (0.67). Still I am unable to say if the effect of the interaction term is due to random variation in the data or if it is a real difference between the least and the more developed countries. This suggest that a lot of country-years exhibit a strong interaction effect between liberal regulation and economic development, but that there is also a smaller group that exhibit the exact opposite effect. This gives quite high odds ratios, but also a quite high uncertainty for the odds ratios.

This suggests that GDP per capita may be a poor indicator of state capacity, thus creating categories not reflecting the real capacity of my observations. There is also the possibility that the extreme variation is due to the heterogeneous nature of countries. In the next part I will investigate the possibility that there is a better measurement of state capacity.

6.1.1 Domestic market regulations and alternative measurements of state capacity

Income per capita didn't significantly affect the positive contribution from polices that reduce the domestic regulation in my first models. To test if this result holds up to different proxies for state capacity I have included four other operationalizations of state capacity. In model 4 I have included Kugler and Arbetman's relative political capacity (RPC) index, and in model 5 I have included tax ratio. These variables are included in the analysis to capture the bureaucratic side of state capacity, which should be especially important to implementing good economic policies.

In model 6 I have included military expenditure, and in model 7 I have included military personnel as alternative measurements of state capacity. They cover the military side of the government's resources. Physical force might be needed to protect and implement good economic policies. The results are presented in Table 2.

Tabel 2: Model 4-7

	Model 4 Onset civil war	Model 5 Onset civil war	Model 6 Onset civil war	Model 7 Onset civil war
Domestic market regulations	0.770+	0.789	0.752*	0.628**
	(0.12)	(0.12)	(0.11)	(0.11)
HighRPC*Regulation	1.119			
	(0.22)			
LowRPC*Regulations	0.845			
	(0.16)			
HighTax*Regulations		1.022		
		(0.20)		
LowTax*Regulations		0.898		
		(0.19)		
HighMilex*Regulations			0.946	
			(0.18)	
LowMilex*Regulations			1.046	
			(0.22)	
HighMilper*Regulations				1.221
				(0.26)
LowMilper*Regulations				1.303
				(0.36)
High RPC	1.361			
	(0.41)			
Low RPC	1.067			
	(0.30)			
GDP growth	1.049	1.051	1.051	1.053
	(0.05)	(0.05)	(0.05)	(0.06)
Population	1.573***	1.564***	1.550**	1.602***
	(0.12)	(0.12)	(0.22)	(0.17)
Ethnic	10.00***	9.889***	9.921***	9.285***
	(5.92)	(6.02)	(5.46)	(5.55)
Ethnic sq.	0.0308+	0.0314+	0.0323	0.0223+
	(0.06)	(0.06)	(0.07)	(0.05)
Religion	0.260*	0.274*	0.270*	0.267*
	(0.14)	(0.15)	(0.16)	(0.16)
Religion sq.	0.00204**	0.00222**	0.00311**	0.00392**
	(0.00)	(0.01)	(0.01)	(0.01)
Democracy	0.837	0.845	0.854	0.847
	(0.27)	(0.26)	(0.27)	(0.26)
Democracy sq	0.364	0.323	0.406	0.444
	(0.48)	(0.42)	(0.54)	(0.58)
Incidence	0.916	0.886	0.940	0.978
	(0.30)	(0.30)	(0.30)	(0.30)
Peace years	2.342*	2.435*	2.432*	2.326*
	(0.78)	(0.87)	(0.87)	(0.82)
High Tax		1.411		
		(0.40)		
Low Tax		1.463		
		(0.44)		
High Milex			0.943	
			(0.39)	
Low Milex			0.975	
			(0.31)	
High Milper				0.889
				(0.30)
Low Milper				1.151
				(0.47)
Observations	4763	4763	4763	4763
Countries	140	140	140	140
Conflicts	163	163	163	163

Exponentiated coefficients; Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Again I get the same results as in Model 3. The interaction terms stay insignificant. Two of the main effects are now less significant than in the in model 3, but to interpret this directly is not possible. The main effect is influenced by the inclusion of the interaction terms, and now only give a correct interpretation for odds ratios where both high = 0 and low = 0. If we take out the interaction terms in model 4-7 we will again find a strong support for a reduction in civil armed conflict with liberal domestic market policies.

The alternative models for state capacity also failed to give any significant interaction terms, and thus I have no support for $H_{1.1}$ and $H_{1.2}$.

6.2 Testing the effect of Strong Property Rights

In the first part of the analysis I found support for my first hypothesis concerning liberal market regulations and armed civil conflict. There are reasons to expect similar results concerning policies strengthening property rights. Both policy dimensions concern the domestic level and are directly tied to the legal system. Further, the argument of rational pacifism and de-politicization of distribution predict that individuals and groups will support and protect the government if it insures their material interests. Property rights are the most direct way that such concerns can be addressed by a government. To test whether strong property right polices actually reduce the risk of conflict I have constructed four models.

The first model presents the property rights variable named “Property rights” together with all the control variables. In model 9 I add GDP per capita as a proxy for state capacity. Because the results in model 9 indicates that property rights and GDP per capita share much of the same pacifying effect I include an extra model where I use a continuous GDP per capita variable. This will insure that the effect of strong property rights doesn’t measure economic development. In model 11 the interaction terms for GDP per capita and property rights is added.

Tabel 3: Model 8-11

	Model 8 Onset civil war	Model 9 Onset civil war	Model 10 Onset civil war	Model 11 Onset civil war
Property rights	0.796** (0.07)	0.855+ (0.08)	0.886 (0.09)	0.831+ (0.09)
GDP growth	1.048 (0.05)	1.065 (0.05)	1.056 (0.05)	1.067 (0.06)
Population	1.590*** (0.11)	1.549*** (0.10)	1.517*** (0.09)	1.518*** (0.10)
Ethnic	7.096*** (3.80)	5.927** (3.22)	4.694** (2.63)	5.842** (3.24)
Ethnic sq.	0.0134* (0.03)	0.00978* (0.02)	0.00808* (0.02)	0.0155* (0.03)
Religion	0.302* (0.17)	0.286* (0.16)	0.237* (0.14)	0.295* (0.17)
Religion sq.	0.00909* (0.02)	0.0133+ (0.03)	0.0170+ (0.04)	0.0135* (0.03)
Democracy	0.711 (0.22)	0.854 (0.27)	0.941 (0.30)	0.930 (0.30)
Democracy sq	0.441 (0.59)	0.617 (0.83)	0.616 (0.81)	0.783 (1.05)
Incidence	0.872 (0.28)	0.818 (0.26)	0.811 (0.26)	0.818 (0.26)
Peace years	2.593** (0.95)	2.477* (0.90)	2.444* (0.88)	2.468* (0.90)
High GDP		0.498** (0.13)		0.440** (0.12)
Low GDP		0.978 (0.25)		1.290 (0.46)
GDP pr cap.			0.724** (0.08)	
High*Rights				0.765 (0.13)
Low*Rights				1.235 (0.25)
Observations	4763	4763	4763	4763
Countries	140	140	140	140
Conflicts	163	163	163	163

Exponentiated coefficients; Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

The effect of increased property rights is strong and significant in the first model, but when we add the categorical GDP per capita measurements this effect is greatly reduced. To make sure that there is an effect of Strong property rights on the risk of civil war I included a continuous measure of GDP per capita in model 10. The effect of the continuous GDP per capita measurement rendered property rights insignificant. This finding is interesting and tells a lot about the parallel development of income and property rights.

Property rights are a fundamental part of liberal economic theory. The Fraser Institute writes that

> Security of property rights, protected by the rule of law, provides the foundation for both economic freedom and the efficient operation of markets. […] Perhaps more than any other area, this area is essential for the efficient allocation of resources. Countries with major deficiencies in this area are unlikely to prosper regardless of their policies in the other four areas. (Gwartney et al. 2010b:5)

Even if property rights are essential for economic development as Gwartney argues, there is no significant direct contribution of property rights promoting civil peace in my models. In model 11 I once again find insignificant interaction terms, and there seem to be no economic level where countries gain from strong property rights after I have controlled for GDP per capita. The odds ratios for the interaction terms differ quite a lot from 1, but with a large standard error these results are rendered insignificant.

6.2.1 Property Rights and Alternative Measurements of State Capacity.

In table 4 I have the included models for property rights interacting with relative political capacity (RPC), tax ratio, military expenditure and density of military personnel. There are no significant interaction terms.

Tabel 4: Model 12-15

	Model 12 Onset civil war	Model 13 Onset civil war	Model 14 Onset civil war	Model 15 Onset civil war
Property Rights	0.771+	0.808+	0.835	0.772+
	(0.11)	(0.10)	(0.10)	(0.12)
HighRPC*Rights	1.103			
	(0.22)			
LowRPC*Rights	0.961			
	(0.16)			
HighTax*Rights		0.986		
		(0.17)		
LowTax*Rights		0.990		
		(0.16)		
HighMilex*Rights			0.808	
			(0.12)	
LowMilex*Rights			1.006	
			(0.15)	
HighMilper*Rights				1.029
				(0.18)
LowMilper*Rights				1.204
				(0.26)
High RPC	1.422			
	(0.42)			
Low RPC	1.260			
	(0.39)			
GDP growth	1.048	1.049	1.048	1.049
	(0.05)	(0.05)	(0.05)	(0.05)
Population	1.615***	1.612***	1.574***	1.630***
	(0.11)	(0.11)	(0.21)	(0.16)
Ethnic	7.425***	7.337***	6.992***	6.839***
	(4.17)	(4.19)	(3.55)	(3.78)
Ethnic sq.	0.0106*	0.0113*	0.0136*	0.0122*
	(0.02)	(0.02)	(0.03)	(0.02)
Religion	0.290*	0.298*	0.286*	0.297*
	(0.16)	(0.17)	(0.16)	(0.18)
Religion sq.	0.00660*	0.00582*	0.00687*	0.00978*
	(0.02)	(0.01)	(0.02)	(0.02)
Democracy	0.714	0.717	0.738	0.694
	(0.22)	(0.21)	(0.23)	(0.21)
Democracy sq	0.405	0.383	0.439	0.453
	(0.54)	(0.52)	(0.59)	(0.60)
Incidence	0.862	0.832	0.872	0.885
	(0.28)	(0.28)	(0.29)	(0.28)
Peaceyears	2.556**	2.587*	2.607**	2.555**
	(0.90)	(0.95)	(0.96)	(0.92)
High Tax		1.466		
		(0.40)		
Low Tax		1.698+		
		(0.51)		
High Milex			0.707	
			(0.30)	
Low Milex			0.929	
			(0.29)	
High Milper				0.889
				(0.33)
Low Milper				1.136
				(0.53)
Observations	4763	4763	4763	4763
Countries	140	140	140	140
Conflicts	163	163	163	163

Exponentiated coefficients; Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

The main effects are all less than 1 and three are significant, but this is only because I changed the proxy for state capacity from GDP per capita to RPC, tax-ratio, military expenditure and military personnel. The main effects in these models mirror the effects in model 8, but they also similarly disappear if I add a variable for GDP per capita. In my models I could find no support for H_2, $H_{2.1}$ and $H_{2.2}$.

6.3 Testing the effect of Trade Volume and Trade Policies

Trade between nations is central to the interstate capitalist peace. The volume of trade between two states ought to reflect some of the possible losses a war might produce. I believe this argument don't apply to intrastate war. Instead I have modified the rational pacifism argument to also encompass the international level. As I argued in section 4.2.3 the volume of trade and liberal trade policies should reduce the risk of civil armed conflict. In table 5 I test Trade as part of GDP and policies that promote freedom to trade international, with respect to civil war onset.

Tabel 5: Model 16-21

	Model 16 Onset civil war	Model 17 Onset civil war	Model 18 Onset civil war	Model 19 Onset civil war	Model 20 Onset civil war	Model 21 Onset civil war
Trade freedom	0.773***		0.793***		0.815**	0.763***
	(0.04)		(0.05)		(0.06)	(0.06)
Trade/GDP		0.688*		0.678*	0.840	
		(0.12)		(0.10)	(0.17)	
Population	1.512***	1.467***	1.500***	1.427***	1.457***	1.492***
	(0.09)	(0.11)	(0.09)	(0.10)	(0.10)	(0.09)
Ethnic	8.633***	9.712***	7.190***	6.667***	7.118***	5.372**
	(4.45)	(5.07)	(3.89)	(3.61)	(3.87)	(3.09)
Ethnic sq.	0.0829	0.0676	0.0638	0.0371+	0.0767	0.0789
	(0.16)	(0.12)	(0.12)	(0.06)	(0.14)	(0.15)
Religion	0.224**	0.222**	0.247**	0.267*	0.264*	0.216**
	(0.12)	(0.13)	(0.13)	(0.14)	(0.14)	(0.12)
Religion sq.	0.00275**	0.00304**	0.00413*	0.00725*	0.00467*	0.00407*
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
Democracy	1.286	0.707	1.428	0.976	1.459	1.589
	(0.38)	(0.21)	(0.43)	(0.31)	(0.44)	(0.48)
Democracy sq	0.295	0.275	0.402	0.429	0.342	0.393
	(0.38)	(0.37)	(0.54)	(0.59)	(0.47)	(0.55)
Incidence	0.827	0.868	0.778	0.768	0.751	0.714
	(0.27)	(0.31)	(0.26)	(0.27)	(0.27)	(0.24)
Peace years	2.349*	2.546**	2.285*	2.425*	2.304*	2.242*
	(0.86)	(0.89)	(0.84)	(0.85)	(0.84)	(0.83)
High GDP			0.539*	0.396***	0.512*	1.697
			(0.15)	(0.11)	(0.15)	(0.65)
Low GDP			0.819	0.850	0.779	0.480
			(0.21)	(0.22)	(0.20)	(0.24)
GDP pr cap.						0.546**
						(0.12)
High*Trade						1.249+
						(0.16)
Low*Trade						1.085
						(0.15)
Observations	4763	4763	4763	4763	4763	4763
Countries	140	140	140	140	140	140
Conflicts	163	163	163	163	163	163

Exponentiated coefficients; Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Trade as part of GDP and Trade freedom both give a substantial reduction in the likelihood of experiencing civil war. The effect is unchanged when GDP per capita is included in the model. In model 20 I include both Trade and Trade freedom to see which have the strongest pacifying effect. The results favor the Trade freedom variable over the Trade volume variable. They both stay pretty strong, but trade volume has a bigger standard error and become insignificant in the model. The effect is even more apparent if I add the continuous GDP per capita variable. In appendix 4 I have included a model A-1 with trade volume and the continuous GDP per capita, and a model A-2 where I have included trade volume, trade freedom and GDP per capita. The models suggest that trade volume is highly dependent on GDP while trade freedom is less so. It also suggest that trade freedom is superior in reducing the risk of civil armed conflict.

The hypothesis H_4 stating that *adopting free trade policies reduce the likelihood of armed civil conflict,* is supported by my results. While the hypothesis H_3 that *increased trade reduces likelihood of armed civil conflicts,* is not supported by my results. The reason for this may be that the international community is more inclined to support countries that signal a will to participate in fair and equal trade, rather than countries that "just" perform well in the international market.

The results indicate that using trade as a proxy for integration only capture part of the positive effect of capitalism on civil peace. The main affect goes through trade policies and not trade performance.

In model 21 I include an interaction terms with high and low GDP per capita and free trade policies. The results support my argument in 4.2.4 that the weak states receive a much stronger pacifying effect than strong countries. In the next models I will try to find more support for my hypothesis $H_{4.1}$.

6.3.1 Liberal Trade Policies and Alternative Measurements of State Capacity

The interaction model with trade policies and GDP per capita showed a significant effect of income level on the pacifying contribution from trade policies. To test if there is other measurements of state capacity that show the same expected interaction between state

capacity and trade freedom I have included models with relative political capacity, tax ratio, military expenditure and military personnel.

Tabel 6: Model 22-25

	Model 22 Onset civil war	Model 23 Onset civil war	Model 24 Onset civil war	Model 25 Onset civil war
Trade freedom	0.803**	0.783*	0.773**	0.685***
	(0.06)	(0.08)	(0.06)	(0.07)
HighRPCTrade	1.022			
	(0.11)			
LowRPCTrade	0.846+			
	(0.08)			
HighTaxTrade		1.033		
		(0.14)		
LowTaxTrade		0.926		
		(0.12)		
HighMilexTrade			0.943	
			(0.12)	
LowMilexTrade			1.025	
			(0.10)	
HighMilperTrade				1.166
				(0.14)
LowMilperTrade				1.148
				(0.19)
High_RPC	1.310			
	(0.43)			
Low_RPC	0.988			
	(0.31)			
GDP growth	1.050	1.052	1.052	1.054
	(0.05)	(0.05)	(0.05)	(0.06)
Population	1.543***	1.542***	1.564***	1.537***
	(0.10)	(0.10)	(0.17)	(0.14)
Ethnic	8.625***	9.015***	8.429***	8.330***
	(4.78)	(5.15)	(4.22)	(4.44)
Ethnic sq.	0.0717	0.0818	0.0801	0.0605
	(0.13)	(0.15)	(0.15)	(0.11)
Religion	0.235**	0.231**	0.220**	0.219**
	(0.12)	(0.12)	(0.12)	(0.12)
Religion sq.	0.00166**	0.00161**	0.00257**	0.00257**
	(0.00)	(0.00)	(0.01)	(0.01)
Democracy	1.308	1.283	1.287	1.258
	(0.40)	(0.38)	(0.39)	(0.38)
Democracy sq	0.219	0.213	0.290	0.318
	(0.29)	(0.29)	(0.38)	(0.41)
Incidence	0.792	0.782	0.838	0.854
	(0.27)	(0.28)	(0.28)	(0.27)
Peace years	2.222*	2.355*	2.366*	2.315*
	(0.74)	(0.87)	(0.86)	(0.83)
High Tax		1.601		
		(0.52)		
Low Tax		1.356		
		(0.51)		
High Milex			0.894	
			(0.37)	
Low Milex			0.886	
			(0.27)	
High Milper				1.123
				(0.40)
Low Milper				1.077
				(0.53)
Observations	4763	4763	4763	4763
Countries	140	140	140	140
Conflicts	163	163	163	163

Exponentiated coefficients; Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

The interaction term between low RPC and free trade policies clearly supports $H_{4.1}$ that hypothesizes *that free trade policies substantially reduce the risk of armed civil conflict for weak states*. In the RPC model the weakest states get a staggering 0.68 odds ratio. That is a very substantial reduction in the risk of civil war onset.

6.4 Testing the Effect of the Governments share of the Economy

In section 4.2.5 I presented the argument of diminished prize for capturing the state, which posits that by reducing the government's share of the economy, the government will be a less attractive target for rebels. As a consequence rebels have less incentive to challenge the state, and this reduces the likelihood of civil armed conflict. The size of the government might also be important for how insecure marginalized groups feel. A monopolization of the economy might lead to discrimination or the fear of discrimination in groups with less political power.

In table 7 I present my models where I test if a reduction in government size delivers civil peace:

Tabel 7: Model 26-28

	Model 26 Onset civil war	Model 27 Onset civil war	Model 28 Onset civil war
Size of Government	0.910 (0.09)	0.907 (0.09)	0.818* (0.08)
GDP growth	1.048 (0.05)	1.069 (0.05)	1.066 (0.05)
Population	1.582*** (0.11)	1.526*** (0.10)	1.539*** (0.10)
Ethnic	11.15*** (6.58)	7.339*** (4.40)	6.614*** (3.70)
Ethnic sq.	0.0397 (0.08)	0.0191* (0.04)	0.0171* (0.03)
Religion	0.182** (0.10)	0.201** (0.11)	0.193** (0.11)
Religion sq.	0.00180** (0.00)	0.00430* (0.01)	0.00414* (0.01)
Democracy	0.629 (0.21)	0.884 (0.29)	0.931 (0.30)
Democracy sq	0.392 (0.53)	0.596 (0.81)	0.630 (0.85)
Incidence	0.958 (0.30)	0.861 (0.27)	0.871 (0.27)
Peaceyears	2.429* (0.95)	2.304* (0.90)	2.179+ (0.91)
High GDP		0.408*** (0.11)	0.426** (0.11)
Low GDP		0.983 (0.24)	1.113 (0.25)
High*Size			1.256 (0.24)
Low*Size			1.309+ (0.20)
Observations	4763	4763	4763
Countries	140	140	140
Conflicts	163	163	163

Exponentiated coefficients; Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Both model 26 and model 27 seem to imply that there is no reduced risk of armed conflict with a smaller government size. In a general sense this is true, for all countries taken together, but if we break down countries by their economic level we get a different picture. In model 28 the government size variable becomes significant on the 5%. The size of the odds ratio tells us that middle weak countries have a substantially reduced risk of onset of civil war.

The interaction terms between the dummy variable for the lowest 20 percentile and government size is now significant at the 10% level and quite strong. If we multiply the odds ratio of the main effect with the low interaction term, we get 0.818*1.309 = 1.071, which is close to zero. The same is true for the odds ratio for the countries with the highest GDP per capita level, which is 1.033, but not significantly different from the middle level countries. I interpret this as meaning that the least developed countries does not get any substantial benefit from reducing their government size. This supports the hypothesis $H_{2.1}$, but not the main hypothesis H_2. The interaction term between the high GDP per capita variable and government size is large, but it fails to become significant.

In this fourth dimension of economic policies I found evidence for a strong interaction between the level of development and the pacifying effect of economic policy. I interpret this as supporting the hypothesis *middle weak countries will receive a substantial reduced risk of armed conflict with policies that reduce the government's share of the economy.*

In the next part I have tested if my findings apply to other operationalizations of state capacity.

6.4.1 Government Size and Alternative Measurements of State Capacity

In table 8, model 29 and model 30 must be interpreted with some care. Since the measurements of both RPC and tax ratio are based on the government's ability to extract necessary resources, it probably shares some of the same effect as government size on the onset of civil conflict. Models 29 and 30 give no significant to any of my explanatory variables, and the odds ratios are opposite to the prediction values anticipated by hypotheses $H_{5.1}$ and $H_{5.2}$.

Tabel 8: Model 29-32

	Model 29 Onset civil war	Model 30 Onset civil war	Model 31 Onset civil war	Model 32 Onset civil war
Size of Government	1.122	0.973	0.862	0.984
	(0.15)	(0.14)	(0.11)	(0.12)
HighRPC*Size	0.772			
	(0.13)			
LowRPC*Size	0.763			
	(0.13)			
HighTax*Size		0.911		
		(0.16)		
LowTax*Size		0.979		
		(0.21)		
HighMilex*Size			1.084	
			(0.19)	
LowMilex*Size			1.163	
			(0.22)	
HighMilper*Size				0.870
				(0.14)
LowMilper*Size				1.114
				(0.30)
High RPC	1.211			
	(0.30)			
Low RPC	1.388			
	(0.31)			
GDP growth	1.044	1.050	1.047	1.050
	(0.05)	(0.05)	(0.05)	(0.05)
Population	1.612***	1.603***	1.604***	1.675***
	(0.11)	(0.11)	(0.22)	(0.16)
Ethnic	11.40***	11.08***	10.42***	11.38***
	(6.81)	(6.81)	(5.66)	(6.82)
Ethnic sq.	0.0295+	0.0277+	0.0376	0.0282+
	(0.06)	(0.05)	(0.08)	(0.06)
Religion	0.179**	0.196**	0.193**	0.161**
	(0.10)	(0.11)	(0.11)	(0.09)
Religion sq.	0.00167**	0.00173**	0.00208**	0.00258**
	(0.00)	(0.00)	(0.00)	(0.01)
Democracy	0.647	0.638	0.625	0.630
	(0.21)	(0.20)	(0.21)	(0.21)
Democracy sq	0.387	0.333	0.394	0.415
	(0.52)	(0.44)	(0.53)	(0.56)
Incidence	0.930	0.900	0.953	1.008
	(0.29)	(0.30)	(0.29)	(0.31)
Peace years	2.346*	2.446*	2.402*	2.301*
	(0.88)	(0.96)	(0.98)	(0.92)
High Tax		1.355		
		(0.34)		
Low Tax		1.780*		
		(0.46)		
High Milex			1.000	
			(0.36)	
Low Milex			0.961	
			(0.30)	
High Milper				0.688
				(0.19)
Low Milper				0.945
				(0.35)
Observations	4763	4763	4763	4763
Countries	140	140	140	140
Conflicts	163	163	163	163

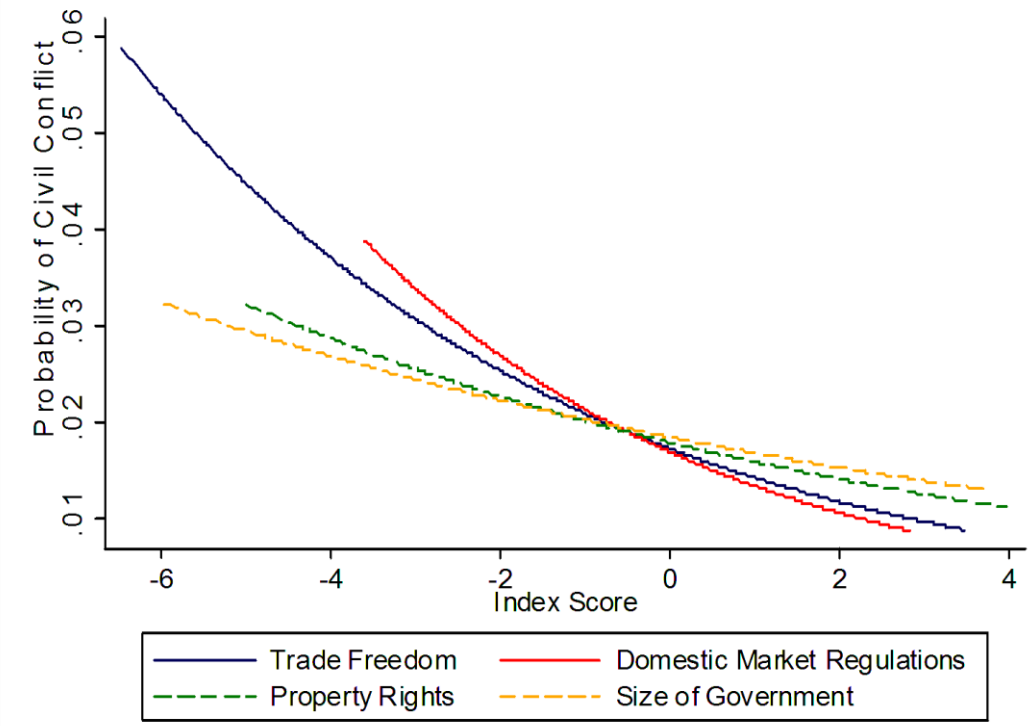
Exponentiated coefficients; Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

In model 31 with military expenditure the same pattern is revealed as in the interaction model with GDP per capita. Here the odds of experiencing civil war are less for middle weak countries with a smaller government, and the effect disappears when looking at the countries with the lowest military expenditure. All the odds ratios in model 31 are as expected, but they fail to become significant. My alternative models can't confirm the findings from model 28 where I found a significant interaction between the least developed countries and government size.

6.5 Testing the unique contribution from each policy dimension

So far I have found that few domestic market regulations and freedom to trade internationally give a substantial general contribution to civil peace, and that trade freedom and small government share of the economy both has a specific level dependent contribution to civil peace. The individual contributions are graphed for each policy variable in figure 1. All the other variables are set to their mean values and no interaction terms are included.

Figure 1: Graph policy



Looking at the graph we see that Domestic Market Regulations and Trade Freedom are the lines with the steepest slope, and thus have the greatest impact on the probability of civil conflict. Their contribution is so large that improving either trade policies or domestic marked policies with two points from the average, should reduce the chance of having a civil war by about 50%.

Having found such substantial contribution from both trade freedom and reduced regulations I need to test if the different forms of economic policy give direct contributions or if I have some indirect or spurious effects.

In table 9 I present model 33 in which I combine all the three relevant policy dimensions: reduced domestic market regulations, freedom to trade internationally, and the government's size of the economy, and I use a continuous GDP per cap variable. In model 34 I substitute the continuous measurement of GDP per capita with two dummy variables.

In model 35 I have added the interaction terms between size of government and economic development. Since the model is quite sensitive to the effect of GDP I have included model 36 where I add the continuous GDP variable to the interaction model.

In model 36 I add an interaction term between trade freedom and economic development. Since also trade is sensitive to GDP per capita I add a model 37 in which I include a continuous GDP variable.

With so many variables added to the models it would exceed the limit of what is advisable when running a logistic model with only 163 positive outcomes. Peduzzi, Concato, Kemper, Holford and Feinstein (1996) have shown that as the number of events per variable fall below 10, regression coefficients can become biased in both positive and negative directions. To remedy this problem I have removed the religion control variables. I still keep the ethnicity variables and hopefully this will cover some of the cultural variations between countries in my observations.

The results are presented in table 9.

Tabel 9: Model 33-38

	Model 33 Onset civil war	Model 34 Onset civil war	Model 35 Onset civil war	Model 36 Onset civil war	Model 37 Onset civil war	Model 38 Onset civil war
Trade freedom	0.853+	0.821*	0.823*	0.859+	0.786*	0.803*
	(0.07)	(0.07)	(0.07)	(0.07)	(0.08)	(0.08)
Domestic regulations[11]	0.825+	0.844	0.849	0.837+	0.841	0.818+
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
Size of Government	1.043	1.042	0.947	0.932	1.050	1.047
	(0.14)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
GDP pr cap.	0.773*			0.576*		0.548**
	(0.09)			(0.13)		(0.12)
Population	1.462***	1.491***	1.510***	1.488***	1.499***	1.479***
	(0.10)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
GDP growth	1.059	1.065	1.064	1.054	1.065	1.053
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Ethnic	4.092*	5.086**	4.731**	3.586*	5.103**	3.924*
	(2.73)	(3.11)	(2.75)	(2.24)	(3.13)	(2.57)
Ethnic sq.	0.00596**	0.0136*	0.0111*	0.00931*	0.0137*	0.0121*
	(0.01)	(0.03)	(0.02)	(0.02)	(0.03)	(0.02)
Democracy	1.637+	1.650+	1.665+	1.828*	1.664+	1.857*
	(0.49)	(0.50)	(0.50)	(0.54)	(0.51)	(0.56)
Democracy sq	0.431	0.467	0.476	0.619	0.411	0.446
	(0.56)	(0.61)	(0.63)	(0.82)	(0.57)	(0.62)
Incidence	0.918	0.891	0.896	0.864	0.879	0.833
	(0.31)	(0.30)	(0.30)	(0.29)	(0.30)	(0.29)
Peace years	2.332*	2.331*	2.244*	2.223*	2.319*	2.287*
	(0.83)	(0.85)	(0.88)	(0.86)	(0.85)	(0.84)
High GDP		0.497*	0.510*	1.187	0.558+	1.551
		(0.14)	(0.15)	(0.46)	(0.19)	(0.63)
Low GDP		0.831	0.934	0.492*	0.953	0.453
		(0.21)	(0.22)	(0.16)	(0.41)	(0.23)
High*Size			1.168	1.156		
			(0.26)	(0.25)		
Low*Size			1.302	1.338+		
			(0.23)	(0.23)		
High*Trade					1.109	1.244+
					(0.14)	(0.16)
Low*Trade					1.061	1.057
					(0.14)	(0.14)
Observations	4763	4763	4763	4763	4763	4763
Countries	140	140	140	140	140	140
Conflicts	163	163	163	163	163	163

Exponentiated coefficients; Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

[11] Domestic regulations = Domestic market regulations.

Of the three policy variables in model 3 domestic regulations and trade freedom become significant. These are the two policy variables I have already found correlated with lower civil war onset in model 2 and 18. The reason why they show a weaker relationship, and only become significant on the 10% level is that they share some of the same policy effect, thus reducing their individual contribution. The important thing is that they both give a direct effect on civil peace independent of each other. This offers support for H_1 and H_4.

In model 34 there is an interesting effect of changing to the categorical GDP dummy variables. Now trade freedom increase in effect, whiles the effect of market regulations decrease. The change is subtle, but it makes domestic regulation miss the 10% mark by 1.4 percentage points (pp). In light of the preceding model, and the single policy models run with domestic regulations, I will argue that this results still supports domestic regulation as an important policy dimension.

In model 35 I have included the interaction terms between size of government and GDP per capita. The effect of the interaction term is large, but misses becoming significant by 3.8pp. In the next model 36 I also included the continuous variable for GDP per capita. The interaction term between low GDP countries and size of government becomes significant and strong. To calculate the effect for countries with the low GDP we only need to multiply the odd ratio of the main effect with the interaction effect resulting in a 1.247 odds ratio. This means that the least developed countries have 1.247 times greater odds of experience civil war when government size is reduced by one unit.

The interaction term between free trade and GDP per capita in model 38 is significant and strong. This gives support for hypothesis $H_{4.1}$. In model 37 it is not significant and greatly reduced. Some of my results are apparently very sensitive to how I represent GDP per capita.

In model 22 I found a significant interaction term between low RPC and trade freedom. In model 39 I test if that result survives the inclusion of the other relevant economic policy dimensions.

Tabel 10: Model 39

	Model 39 Onset civil war
Trade freedom	0.817*
	(0.07)
Domestic market regulations	0.919
	(0.10)
Size of Government	1.009
	(0.13)
High RPC	1.292
	(0.41)
Low RPC	0.980
	(0.31)
HighRPC*free	1.026
	(0.12)
LowRPC*free	0.851+
	(0.08)
GDP growth	1.051
	(0.05)
Population	1.533***
	(0.10)
Ethnic	8.622***
	(5.24)
Ethnic sq.	0.0674
	(0.13)
Religion	0.256*
	(0.14)
Religion sq.	0.00187**
	(0.00)
Democracy	1.367
	(0.41)
Democracy sq	0.225
	(0.30)
Incidence	0.797
	(0.28)
Peaceyears	2.218*
	(0.77)
Observations	4763
Countries	140
Conflicts	163

Exponentiated coefficients; Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

The results in model 39 show that the interaction between trade freedom and RPC is still significant and strong after I add the other policy dimensions. This gives great credibility to $H_{4.1}$. Countries suffering from low relative political capacity (RPC) and low income per capita seem to benefit the most from trade freedom.

In this part of the thesis I have presented a number of models. The results clearly illustrate how important it is to investigate economic freedom as a multidimensional phenomenon with very different contribution to civil peace. It also shows how important the level of development is for which polices will be successful in promoting civil peace. Countries that lack the basic capacity to manage its own population are not going to gain from adopting policies that aim to reduce the government size. Rather they will face an increased risk of violent civil conflicts breaking out.

6.6 Testing the robustness of the results

To test the robustness of my results I will present some alternative models with modifications to see if the findings from the previous models still hold. The first and most important concern is where my imputation method gave results that are very different from the results I would have gotten with another strategy for dealing with missingness. In table 11 I compare model 34 using imputation, interpolation and list wise deletion.

Tabel 11: Model Imputation Interpolation and Listwise

	Imputation Model Onset civil war	Interpolation Model Onset civil war	Listwise deletion Model Onset civil war
Trade freedom	0.821* (0.07)	0.836 (0.09)	0.849* (0.06)
Domestic market regulations	0.844 (0.09)	0.676** (0.08)	0.783* (0.09)
Size of Government	1.042 (0.13)	1.139 (0.17)	1.084 (0.12)
High_GDP	0.497* (0.14)	0.886 (0.40)	0.400** (0.14)
Low_GDP	0.831 (0.21)	1.664 (0.82)	1.042 (0.34)
Population	1.491*** (0.11)	1.469*** (0.15)	1.515*** (0.13)
GDP growth	1.065 (0.06)	0.902* (0.04)	0.990 (0.04)
Ethnic	5.086** (3.11)	9.908* (10.87)	7.932** (5.51)
Ethnic sq.	0.0136* (0.03)	0.000547* (0.00)	0.00162** (0.00)
Democracy	1.650+ (0.50)	1.313 (0.78)	2.840** (1.02)
Democracy sq	0.467 (0.61)	0.662 (1.56)	0.550 (0.81)
Incidence	0.891 (0.30)	1.005 (0.51)	0.846 (0.32)
Peaceyears	2.331* (0.85)	1.433 (1.01)	1.594 (0.52)
Observations	4763	1553	3414
Countries	140	132	132
Conflicts	163	45	108

Exponentiated coefficients; Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

The comparison shows that we get substantially the same results in all the models. Trade freedom and Regulations have coefficients less than 1, indicating that they reduce the likelihood of civil war onset. In two instances my explanatory variables miss getting significant on the 10% level, but only with 1.4pp and 1.3pp.

Looking at the number of conflicts, it's interesting to notice that the imputation method let me include over 50% more conflicts in my imputation model. This is a much more efficient use of data compared to the two other methods. I also believe, as I have discussed in section 5.5, that multiple imputation is a less biased way of treating the problem of missing data.

6.6.1 The problem of endogeniety

In my models I have assumed that different types of economic policies lead to a reduced risk of civil war onset. This assumption could be wrong, and in the worst case it is civil war or the expectation of civil war that reduces economic freedom.

Magee and Massoud (2011) find that it's not trade flow and trade openness that reduce civil war, but rather civil war that reduces trade flow and trade openness. To reach this conclusion they use a sophisticated mixture of instrumental variable regression, and full information maximum likelihood estimators. The problem with these methods is that they require instrumental variables that are connected to one of the variables but not the other. Since trade freedom, domestic market regulations and civil conflicts are complex political, social and economic phenomena, the search for such a variable is bound to be very difficult.

Instead I lag my policy variables with 5 years. This should make it less likely that the model suffers from reversed causality. I also remove all conflicts where there is already an incident of civil war. This ensures that I am looking at countries going from peace to war, and not from one war to another. This time I have used model 33 as the comparison model, it's the same as model 34 but with a continuous GDP variable.

Tabel 12: Model 33, 5 year lag

	Model 33 Onset civil war	Model 33: 5 year lag Onset civil war
Trade freedom	0.853+ (0.07)	0.871 (0.08)
Domestic market regulations	0.825+ (0.09)	0.787 (0.13)
Size of Government	1.043 (0.14)	1.078 (0.12)
GDP pr cap.	0.773* (0.09)	0.705** (0.10)
Population	1.462*** (0.10)	1.337** (0.12)
GDP growth	1.059 (0.06)	1.072 (0.09)
Ethnic	4.092* (2.73)	2.914 (2.29)
Ethnic sq.	0.00596** (0.01)	0.00635* (0.02)
Democracy	1.637+ (0.49)	1.391 (0.57)
Democracy sq	0.431 (0.56)	0.234 (0.36)
Incidence	0.918 (0.31)	
Peaceyears	2.332* (0.83)	3842.5*** (5582.76)
Observations	4763	3662
Countries	140	136
Conflicts	163	106

Exponentiated coefficients; Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

The comparison yield results exactly as expected. Both my two explanatory variables lose some of its effect, and that is to be expected when dealing with a changing phenomenon like economic policies. The reduced effect makes my explanatory variables insignificant, but they still perform strongly and give the about same effect as in the original model. Individually the two explanatory variables will become highly significant even with the five year lag. Lagging the explanatory variables by five years does not ensure that there are no problems with reversed causation. Still I will argue that there should have been a more substantial drop in the strength of the coefficients if I were observing that civil conflict reduce economic policies.

6.6.2 Testing the models with fixed effects

One of the main reasons for including a lot of control variables is to reduce the chance of omitted variable bias, which gives wrong results when investigating an empirical relationship. Trying to control for differences between countries can be very difficult. There are great variations in culture, political institutions, infrastructure and geography across the nations of the world. To remedy this I have also tested some of my models with fixed effects. Gelman and Hill (2007) warns that there are several definition of what constitutes "fixed effects". In this thesis it refers to a varying intercept model. This model is described by the following formula:

$$y_{it} = a + u_i + XB + e_{it}$$

Here *i* represents each country while *t* represents each year. The constant term *u* varies with each country, and creates different intercepts ($a+u$) for each country. The country constant term *u* soaks up most of the between country variation, and is numerically[12] equal to including dummy variables for each country in the model.

In table 13 I have presented a fixed effect OLS regression. The choice of OLS over logistic regression is so I can include countries that haven't experienced war in the period I am studying. The logistic fixed effects models gives, similar results to the OLS fixed effects models; I have included the logistic fixed effects models in appendix 5.

[12] There is a difference in computation between adding dummy variables and running a fixed effect in stata.

Tabel 13: Model Fixed effects 1-4

	Model 1 Fixed effects Onset civil war	Model 2 Fixed effects Onset civil war	Model 3 Fixed effects Onset civil war	Model 4 Fixed effects Onset civil war
Domestic market regulations	-0.00745			
	(0.00)			
Property rights		-8.89e-08		
		(0.00)		
Trade freedom			-0.00482+	
			(0.00)	
Size of Government				-0.000769
				(0.00)
Democracy	0.0153	0.0120	0.0190	0.0122
	(0.01)	(0.01)	(0.01)	(0.01)
Democracy sq	-0.102*	-0.106*	-0.103*	-0.106*
	(0.05)	(0.05)	(0.05)	(0.05)
Incidence	-0.0797***	-0.0793***	-0.0792***	-0.0793***
	(0.01)	(0.01)	(0.01)	(0.01)
Peaceyears	0.0397*	0.0404*	0.0395*	0.0403*
	(0.02)	(0.02)	(0.02)	(0.02)
Constant	-0.101	0.00743	-0.168	-0.00757
	(0.23)	(0.22)	(0.24)	(0.23)
Observations	4763	4763	4763	4763
Countries	140	140	140	140
Conflicts	163	163	163	163

Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

The first interesting thing to notice in the fixed effects models is that GDP per capita and population lose their significance. This quite clearly illustrates the big difference between the fixed effects models and the pooled models. Both GDP per capita and population are strong and robust predictors of onset of civil conflicts. The reason why they now become insignificant is probably because they change relatively slowly within most counties. In the

period I have observed, most of the rich countries have stayed rich and enjoyed civil peace, while the poor countries have stayed poor and experienced internal conflicts.

Looking at the explanatory variables we see that domestic market regulations fail to become significant. The effect is quite strong, but it misses the 10% mark with 1.1pp. Based on the very significant and strong results in other single policy models I choose to interpret the fixed effects model in favor of a pacifying effect from reducing market regulations within countries.

Trade freedom becomes significant at the 10% level and seems to give a contribution not only between countries, but also within counties. The fact that policies outperform the GDP per capita variable is quite interesting. It suggests that it is extremely hard to change the development level within a country, but much easier to change economic policies.

6.7 Summary of the Results

In this chapter I have tested my hypotheses by using statistical models of the relationship between variables measuring economic policies, state capacity and armed civil conflict. Of my five main hypotheses derived from liberal economic peace theory, I could only find support for two. It seems that *policies that promote few regulations on the domestic market reduce the risk of armed civil conflict*, and *adopting free trade policies reduce the likelihood of armed civil conflict*. Of my sub-hypotheses relating to state capacity to the effect of economic policies, I found support indicating that *free trade policies substantially reduce the risk of armed civil conflict for weak states*. In table 14 I present all the hypotheses and an X marks the ones supported by my research.

Tabel 14: Hypotheses

Hypotheses	
H_1: Policies that promote few regulations on the domestic market reduce the risk of armed civil conflict.	X
$H_{1.1}$: Middle weak states will face a substantially reduced risk of armed civil conflict with policies that liberalize the domestic market.	
$H_{1.2}$: The strongest states will receive only a moderate reduction in the risk of armed civil conflict with policies that liberalize the domestic market.	
H_2: Policies that promote property rights reduce the risk of armed civil conflict.	
$H_{2.1}$: Middle weak states will face a substantially reduced risk of armed civil conflict with policies that secure property rights.	
$H_{2.2}$: The strongest states will receive only a moderate reduction in the risk of armed civil conflict with policies that secure property rights.	
H_3: Increased trade reduces the likelihood of armed civil conflicts.	
$H_{3.1}$: Trade substantially reduces the risk of armed civil conflict for weak states.	
H_4: Adopting free trade policies reduces the likelihood of armed civil conflict.	X
$H_{4.1}$: Free trade policies substantially reduce the risk of armed civil conflict for weak states.	X
H_5: A reduction in the government's share of the economy leads to a reduced risk of civil violent conflict.	
$H_{5.1}$: Middle weak countries will receive a substantial reduced risk of armed conflict with policies that reduce the government's share of the economy.	
$H_{5.1}$: The strongest countries will receive only a moderate reduced risk of armed conflict with policies that reduce the government's share of the economy.	

Strong property rights and high trade volume gave no reduced likelihood of experiencing a civil war. For government size the picture is a bit more complicated. For the whole set of observations it gives no reduced or increased risk of civil war. But testing the interaction hypothesis it seems that middle weak countries will receive a substantial reduced risk of armed conflict with policies that reduce the government's share of the economy. This effect disappeared when I controlled for the other types of economic freedom, but a significant interaction term between countries with low development and size of government remained. It has an opposite effect of that assumed by liberal peace theory. Weak countries seem to have a substantially increased chance of experiencing an onset of civil war when they reduce the size of the government. Under I have constructed a table showing the different measurements of economic freedom and how they relate to civil peace. (+) means a reduced likelihood of civil war, while (–) means an increased risk of civil war.

Tabel 15: Policy and civil war

Policy dimensions and trade volume	Weak states	Middle weak states	Strong states
Fewer domestic Market regulations	+	+	+
Strong property rights			
Trade volume			
Freedom to trade internationally	+	+	
Reduced Government share of the economy	–		

To sum up, my results have shown that only two out of four dimensions of economic policy actually have a direct positive contribution to civil peace. I have also shown that reducing government size increases the likelihood of civil war for the weakest countries.

7 Discussion of results

In chapter 6 I found that certain types of economic policy greatly reduce the risk of civil war. In this chapter 7 I will further interpret and analyze the results from chapter 6. I will try to relate my results to the main thesis that *policies and institutions that promote an open economy decrease the risk of violent civil conflict. This effect is highly dependent on the development of the state, and what kind of economic policy the state tries to implement.* The results I have presented shed light on some interesting relationships which might have implications for theory and policy. I will try to make some small contribution towards understanding the phenomena I has analyzed.

7.1 My results compared to the results of others

My results when testing the main hypotheses regarding the general contribution of liberal policy towards civil peace, are in line with the results of de Soysa and Fjelde (2010). Their results "robustly support liberal assertions about the development of market-friendly policies and social peace" (de Soysa & Fjelde, 2010:296).

Specifically, my findings support the direct positive effect of trade freedom on civil war. This is in line with the findings of Bussmann and Schneide (2007), which find that trade openness reduces the likelihood of internal conflict. I also found that the positive effect of free trade policies is strongest for less developed countries.

Further my results support for a reduced risk of civil war onset with a reduction in domestic market regulations. This is similar to the results produced by Steinberg and Saideman (2008) when testing the relationship between government allocation (similar to my concept of domestic market regulations) and ethnic rebellion. They also find that reduced government size is not significant in reducing ethnic rebellion, which I find to be in part true for intrastate conflict in general. Later in this chapter I will discuss the special case of weak states, where the reduction in government size is negative for civil peace.

For property rights the results are ambiguous and hard to interpret. Not controlling for GDP per capita, property rights seem to have a strong contribution towards civil peace. When I add a continuous GDP per capita variable is the effect disappears. This could indicate a spurious effect of property rights on civil peace caused by GDP per capita. Even more plausible there

exists an indirect effect from property rights through development, measured by GDP per capita. Evidence suggesting that "prosperity and property rights are inextricably linked"(O'Driscoll Jr & Hoskins, 2003, p. 1) is strong. This could make the effect of property rights very hard to measure.

Butler and Gates (2007) argue that inequality is highly dependent on the development of the states. One of the apparent weaknesses with my study is that I am not controlling for inequality. Further Butler and Gates (2007) present a rational choice model of the interaction between bias distribution of resources (inequality) and the positive/negative effect of property rights. The omitted inequality variable might account for some of my conflicting results. Future empirical research should try to uncover if there is a complex interaction between state capacity, inequality and property rights which my model fail to capture.

7.2 The multidimensionality of economic freedom

So far many scholars have investigated the relationship between civil war and a certain type of economic freedom, without controlling or even mentioning other forms of liberal policy. If the aim is to capture a broad concept of economic freedom, the analysis has assume that the chosen indicator measures a common trait within most free economies, and that this trait is connected to civil peace. My results indicate that different policy dimensions are related to civil war in different ways. de Soysa and Fjelde (2010) use the Fraser Institutes index of economic freedom to measure economic policies. This is a great improvement over single indicators of economic freedom. It eliminates the problem of measuring a complex phenomenon like economic freedom by using narrow operationalization such as trade ratio, trade openness, FDI and government size.

Multiple studies into globalization, trade freedom and civil war totally ignore domestic economic policies. To believe that economic policies on the domestic and the international level are insulated from each other and can be analyzed separately is at best naïve. This is especially important since the focus of the analysis is on a primarily nation-level phenomenon like civil war.

I have found evidence supporting the peace acquiring effect of policies promoting freedom to trade internationally and policies that reduced domestic market regulations. The two variables used to measure trade freedom and domestic regulations, both gave direct and

spurious/indirect effects in promoting civil peace. This indicates that studies into trade freedom and trade openness have been right in assuming there is a direct contribution from trade policies. But at the same time they may have gotten a stronger effect due to the spurious/indirect effect caused by reduced domestic market regulations. The same is true with regards to studies into domestic market regulations and civil conflicts.

The positive contribution from strong property rights and reduced government share of the economy for middle weak countries, did not survive the inclusion of other types of economic freedom. This indicates that enough of the positive effect of property rights and size of government is tunneled trough trade freedom and/or liberal market regulations. The negative effect of size of government for countries with low GDP per capita survives the inclusion of other economic freedom variables; this indicates that it has a direct effect on civil peace. I will discuss this result in the next sub-chapter.

To sum up, my results have shown that liberal economic policies can be measured along many different lines and resulting in quite different effects on the risk of civil war onset. This shows that economic freedom is a complex and multidimensional concept which must be measured with great care. One of the virtues of economic freedom is that it seems to reduce the risk of civil war onset. At the same time it can weaken already weak states to the point that they experience an increase in the risk of civil war onset. This apparent contradiction is induced by including widely different policies under the label of economic freedom.

7.3 The interaction between state capacity and economic freedom

Unable to find any statistical support for my argument that domestic market regulation is dependent on development, I have to conclude that possibly all countries benefit from such polices. This is good news for everyone. The force of the invisible hand is indiscriminate and brings civil peace to both the rich and the poor countries of the world. The results of my analysis support the liberal assumption that a freer market is a better market. However free trade policies only help the 50% poorest countries of the world. I have argued that this effect is due to a diminishing utility of international support.

Still the international community should be optimistic by the results linking free trade policies to civil peace, for the weakest countries. These countries are often plagued by conflict and instability, so peace promoting policies is essential.

Having found that some types of economic freedom delivers peace I discovered that there are limits to what the market can achieve. Without a government to manage the most vital tasks a state becomes more prone to violent conflict. First testing the effect of government size with respect to civil war, seem to indicate that there were no positive or negative effects of reducing government size with regards to civil peace. Including interaction terms for strong and weak states unmasked that this was potentially an erroneous results. The effect was produced by the fact that strongest states had no benefit of reducing the size of the government. The weakest states were adversely affected by such policies, while middle weak countries reduced their risk of civil war onset with a reduction in government size.

The concept of state capacity gives a great argument for why the level of development matters to countries trying to reduce the size of the government. States that are weak need to use a greater ratio of its resources to fulfill basic tasks. The government also needs to allocate enough resources to pacify the population. Failing one or both of these responsibilities might be catastrophic for civil peace. On the other hand if the government has a strong economic base and more resources it can safely reduce government involvement in the economy, and leave more tasks for the market to solve.

If polices aimed at reducing the governments share of the economy, increase the risk of civil war onset for the weakest countries, it gives credibility to some anti-liberalization fears. Keen (2005) argue that the Sierra Leonean privatization of important government enterprises, the reduction of government workers and the cut in public spending robbed the state of resources and created grievances that contributed to the break out of civil war in the country. The results from my large N-study reflect similar concerns.

7.4 Capitalist civil peace?

In the literature review I presented the position that there exists a capitalist peace between nations in the international system. If such a peace exists, does it encompass the domestic interaction between individuals and groups within capitalist states? The results I present point

to a large reduction in the risk of civil onset with the implementation of certain economic policies associated with capitalism.

Economic development and state capacity are difficult to cultivate and so far many countries in the international system have failed to improve their position significantly. The fixed effects models seem to indicate that few countries have managed to use economic development to reduce the risk of civil war over time. Liberal policies on the other hand have a positive contribution towards civil peace within countries over the period I have analyzed.

This gives hope that economic policy is the shortcut to peace in many developing countries. The force of market integration, strong international institutions and external support, could improve the condition of civil peace for the weakest countries. Trade freedom may create incentives between nations for securing stability, not only between, but also within countries participating in the international market. Further a healthy domestic market may compel citizens to support the government and thus reduce the likelihood of civil conflict.

However there is one problem with the notion of a capitalist civil peace, it lacks coherence. The meaning of capitalism might be disputed, but many would agree that it is connected to the size of the government. My results indicate that the reduction of government size is not connected with civil peace, but seems to have an adverse effect on the weakest countries. For the idea of a domestic capitalist peace to be coherent and conceptually accurate it must also encompass liberalization of the government, and here the effect is counter to the expectation of a domestic capitalist peace. The notions of a liberal civil peace face the same problems. Therefore conceptual work should be undertaken to refine and more accurately describe the benefits of market participation and civil peace.

7.4.1 Theoretical implications

I have presented three theoretical arguments connecting liberal policies and civil peace. The first is the belief that economic freedom makes peaceful economic transactions more profitable than predatory behavior. Reasonable individuals and rational actors will recognize this. Thus abstaining from violence, and instead investing in the continuation of the state. I called this the rational pacifism argument. Rational pacifism was also used to explain why countries in the world market may invest in civil peace for weak countries to keep them in the market, and thus increasing the value of the market.

Next I presented the view that reducing the government share of the economy makes the government a less attractive target for potential rebels. Due to the risks and cost of recruiting combatants, the perceived gains should make an impact on the decision and opportunity to organize against the state. I called this the diminished prize argument.

Finally I have presented the view that less government involvement in the economy might increase the security for groups not in control of the government. With reduced fears that the government might use its power to discriminate, weaker groups should have fewer reasons for trying to capture or succeed from the state. I called this the de-politicization of the economy argument.

Since reducing the size of the governments doesn't contribute to civil peace, I think the argument for diminished prize of capturing the state fit poorly. If rebels where interested in capturing states that monopolize the domestic economy, then this should be especially true in poor countries where economic opportunities are scarce. Instead the least developed countries seem to benefit from having a large government.

The two other explanations both seem relevant in light of the results I have presented. Testing these competing theories of why some forms of economic deliver civil peace still remains.

7.4.2 Policy implications

I will finish this discussion by presenting some policy implications of the results presented in my thesis. The first is that policy makers and those who wish to influence policy makers should understand the complex and contradicting nature of economic policies. There is no package of liberal policies that unequivocally contribute to civil peace. I have presented evidence supporting that some types of economic policy help foster peace, but not all types. This is especially important when dealing with the weakest countries in the international system.

Secondly the international community should first and foremost focus on integrating weak states into the international market regime. Here the focus should be on trade policy and not on trade volume. There is no need to bundle together trade freedom with other liberalization policies, that might create resentment in the target country. The effect of trade freedom

directly reduces the likelihood of intrastate war, and is not contingent on other type's economic policies being implemented.

8 Conclusion

The results I have presented are very much in favor of my main thesis: policies and institutions that promote an open economy decrease the risk of violent civil conflict. This effect is highly dependent on the development of the state and what kind of economic policy the state tries to implement.

I have tested and compared different dimensions of economic freedom and found that they have different contribution to civil peace. Policies that promote trade freedom and domestic market regulations are the champions of liberal civil peace. While no such positive effect was exhibited by either strong property rights or reduced size of the government. Even more remarkable was my findings that weak states increase their vulnerability by reducing the size of their government. At the same time weak states receive superior benefits from adopting free trade policies.

The debate over whether economic globalization promotes peace or conflict is easier to understand in light of my results. Protagonists of the spread of capitalism have been right in believing that liberal economic policies contribute towards peace. Still the critics of capitalism have been right in pointing out that liberalization of the public sector can undermine the strength of the government; and thus invite challenges against the state.

By differentiating between the diverse forms of economic policies, there is hope that critics and supporter of capitalism can come together and create pragmatic plans for peace. Since economic development strategies so far have met with only limited success, the role of promoting and implementing good policies will be extremely important in the future.

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Appendices

Appendix 1

Countries included in my study

Albania	Germany	Niger
Algeria	Ghana	Nigeria
Angola	Greece	Norway
Argentina	Guatemala	Oman
Armenia	Guinea-Bissau	Pakistan
Australia	Guyana	Panama
Austria	Haiti	Papua New Guinea
Azerbaijan	Honduras	Paraguay
Bahamas, The	Hungary	Peru
Bahrain	Iceland	Philippines
Bangladesh	India	Poland
Barbados	Indonesia	Portugal
Belgium	Iran, Islamic Rep.	Romania
Belize	Ireland	Russian Federation
Benin	Israel	Rwanda
Bolivia	Italy	Senegal
Bosnia and Herzegovina	Jamaica	Serbia
Botswana	Japan	Sierra Leone
Brazil	Jordan	Singapore
Bulgaria	Kazakhstan	Slovak
Burkina Faso	Kenya	Republic
Burundi	Korea, Rep.	Slovenia
Cameroon	Kuwait	South Africa
Canada	Kyrgyz Republic	Spain
Central African Republic	Latvia	Sri Lanka
Chad	Lesotho	Sweden
Chile	Lithuania	Switzerland

China	Luxembourg	Syrian Arab Republic
Colombia	Macedonia, FYR	Taiwan
Congo, Dem. Rep.	Madagascar	Tanzania
Congo, Rep.	Malawi	Thailand
Costa Rica	Malaysia	Togo
Cote d'Ivoire	Mali	Trinidad and Tobago
Croatia	Malta	Tunisia
Cyprus	Mauritania	Turkey
Czech Republic	Mauritius	Uganda
Denmark	Mexico	Ukraine
Dominican Republic	Moldova	United Arab Emirates
Ecuador	Mongolia	United Kingdom
Egypt, Arab Rep.	Montenegro	United States
El Salvador	Morocco	Uruguay
Estonia	Mozambique	Venezuela, RB
Ethiopia	Myanmar	Vietnam
Fiji	Namibia	Zambia
Finland	Nepal	Zimbabwe
France	Netherlands	
Gabon	New Zealand	
Georgia	Nicaragua	

Appendix 2

Variables used in the imputation

	(1)				
	Count	mean	sd	min	max
Urban	5009	50.84662	24.22001	2.36	100
Total revenue	3878	.239183	.115474	.0129114	.9335
Literacy	3878	4.003919	.6687676	-.9393035	4.60518
Birthrate	3878	30.17187	12.94209	0	60.7848
Oil	3878	-4.04659	2.104135	-6.526378	2.591075
Tractors	3525	4.320735	2.324367	-4.465333	9.903487
FDI	4396	3.436778	.3041648	-12.4633	6.386106

Reserve	4823	20.92476	2.420068	-2.433833	28.52829
Import	4781	3.472431	.6128377	-2.080293	5.320797
Agriculture	4401	2.446104	1.077454	-1.866049	4.307695
Services	4434	51.14316	13.05378	7.209728	86.43987
Inflation	4435	4.746108	.3455496	0	10.10692
Transfer abroad	3659	25.65843	.1323915	19.80698	25.98105
Female/male schooling	4009	91.15149	14.86059	15.032	146.752
Mortality infants	2239	2.934411	1.121906	.4054651	5.35091
Life expectancy	4816	64.11564	11.185	26.41012	82.93147
Agricultural import	4008	.5916428	.8175823	-6.754387	3.479126
Agricultural export	4015	1.474793	.9964456	.0008995	4.55202
Manufacture imports	4009	66.66355	12.14041	4.320894	126.3198
M. Import from developing country in region	3083	2.639873	.9526032	0	4.393156
M. Import from developing country out of region	3983	2.41592	.7992707	0	4.283014
M. Export developing in region	3088	2.402586	.9878061	0	4.457125
M. export developing out region	3898	2.320572	.9438161	0	4.295738
M. export thigh	4700	73.04706	18.13221	1.175728	127.946
M. import high	4722	71.62266	16.57134	5.965896	106.5866
Ores and metal import	4008	.7008042	.7629705	-3.824038	3.698065
Food export	4018	2.84502	1.09855	.0155369	4.920772
Fuel export	3875	1.696075	1.397207	0	4.613028
Overall score	1940	60.45129	10.17574	22.7	88.9
Business free om	1940	65.57443	14.27865	20	100
Fiscal freedom	1940	69.7432	14.48231	29.8	99.9
Trade freedom	1934	66.09685	15.54155	12.6	90
Government spending	1908	67.46635	22.32312	.1	99.3

Monetary freedom	1895	74.74876	12.22792	10	95.4
Investment freedom	1940	55.23711	18.09936	10	90
Financial freedom	1940	53.47423	18.86932	10	90
Property rights	1940	52.36598	23.41015	5	95
Freedom from corruption	1940	42.51495	24.01315	4	100
N	5023				

Appendix 3

Variables in my study

	Count	mean	sd	Min	max
Onset of civil conflict	4963	.0338505	.1808625	0	1
Incidence	4963	.1489019	.3560276	0	1
Time since last civil conflict ($2^{(-year/2)}$)	4963	.0435024	.1851318	1.18e-38	1
Regulation of Credit, Labor, and Business	1714	-.0050901	1.167314	-3.60481	2.83519
Property Rights	1681	.0008176	1.720162	-4.99655	4.05345
Size of Government	1797	-.0109391	1.546149	-5.97681	3.95319
Freedom to Trade Internationally	1756	-.0020432	2.002296	-6.46339	3.53661
Trade/GDP	4645	4.100135	.6261555	-1.175052	6.082428
GDP per capita	4677	.0368095	1.610885	-3.190856	3.363541
High GDP	4677	.1999145	.3999786	0	1
Medium GDP	4677	.2946333	.4559265	0	1
Low GDP	4677	.5054522	.5000237	0	1
GDP growth	4538	.0114862	1.193242	-39.49699	25.62018
Relative Political Capacity (RPC)	3876	-.0340122	.450289	-1.008078	3.192652
Tax Ratio	3876	-.0064669	.0803817	-.166604	.4589035
Ethnic Fractionalization	4960	.0101599	.2580789	-.437336	.490864
Religious Fractionalization	4954	.0120835	.2361539	-.433081	.423719
Ethnic Fractionalization Squared	4960	.0666945	.0584948	4.15e-06	.2409475

Religious Fractionalization Squared	4954	.0559034	.0482838	.0000104	.1875592
Scalar Index of Polities (SIP)	4595	.0691552	.378187	-.486622	.4937895
Scalar Index of Polities Squared	4595	.1477767	.0768118	1.73e-06	.243828
Observations	4963				

Appendix 4

	Model A-1 Coef./se	Model A-2 Coef./se
onset civil war		
Trade/GDP	0.757	0.912
	(0.146)	(0.223)
GDP pr cap.	0.710***	0.783*
	(0.068)	(0.091)
GDP growth	1.060	1.059
	(0.056)	(0.056)
Population	1.427***	1.453***
	(0.103)	(0.108)
Ethnic	4.992**	5.656**
	(2.871)	(3.333)
Ethnic sq.	0.020*	0.037+
	(0.034)	(0.066)
Religion	0.215**	0.218**
	(0.118)	(0.118)
Religion sq.	0.012*	0.008*
	(0.026)	(0.016)
Democracy	1.032	1.423
	(0.334)	(0.429)
Democracy sq	0.466	0.374
	(0.615)	(0.497)
Incidence	0.783	0.772
	(0.273)	(0.270)
Peaceyears	2.410*	2.319*
	(0.846)	(0.843)
Trade freedom		0.833*
		(0.066)
Observations	4763	4763
Countries	140	140
Conflicts	163	163
Type	logit	logit

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Appendix 5

	Model FE R~s Coef./se	Model FE R~s Coef./se	Model FE T~e Coef./se	Model FE S~e Coef./se
onset civil war				
Regulations	0.776+			
	(0.118)			
Prop.Rights		1.017		
		(0.132)		
Trade freedom			0.874	
			(0.075)	
Size of Government				0.985
				(0.110)
GDP pr cap.	1.027	0.821	1.001	0.836
	(0.416)	(0.316)	(0.397)	(0.318)
Population	1.469	1.123	1.609	1.156
	(0.696)	(0.505)	(0.806)	(0.534)
GDP growth	1.037	1.035	1.036	1.035
	(0.067)	(0.066)	(0.067)	(0.066)
Democracy	1.744	1.543	1.808	1.544
	(0.779)	(0.673)	(0.806)	(0.674)
Democracy sq	0.095	0.074+	0.082	0.074+
	(0.147)	(0.115)	(0.127)	(0.114)
Incidence	0.258***	0.263***	0.265***	0.263***
	(0.075)	(0.076)	(0.077)	(0.076)
Peaceyears	1.716	1.752+	1.701	1.750+
	(0.571)	(0.580)	(0.565)	(0.580)
Observations	2211	2211	2211	2211
Countries	60	60	60	60
Conflicts	163	163	163	163
Type	xtlogit	xtlogit	xtlogit	xtlogit

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Appendix 6

Hosmer-Lemeshow test

Logistic model for onset2bhi, goodness-of-fit test

(Table collapsed on quantiles of estimated probabilities)

```
      number of observations =      3414
            number of groups =        10
     Hosmer-Lemeshow chi2(8) =      6.96
                Prob > chi2 =      0.5411
```