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Who Pays for War? Economic Inequality, Financial Strategies, and War

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of the requirements for the degree

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in

Political Science

by

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March 2019

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Chia-Chien Chang

Dedicated to my father, my mother, Keira,

bro Yi-Chiuan, and Prof. Li,Wen-Chih.

For inspiring and supporting me to seek, teach, and

give

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ABSTRACT

Who Pays for War? Economic Inequality, Financial Strategies, and War

by

Chia-Chien Chang

This dissertation explores the critical importance of domestic economic inequality, an understudied factor, in the choices states make to finance war. It asks how states choose among the five major financing instruments during wartime: (1) taxation, (2) reduction in non-military spending, (3) domestic borrowing, (4) foreign borrowing, and (5) money creation.

I develop a theory, which I term a "redistributionist theory of war finance," to explain the variation in how modern states finance war. I argue that the choice of war finance is made through triangular strategic interactions among three sets of domestic actors: the leadership, the wealthy elite, and the public, the rest of a state's population. I also argue that each war finance strategy is associated with specific redistributive consequences that create a cleavage between the wealthy elite and public. The redistributive consequences of war finance, and the risk of social instability, vary with the level of domestic economic inequality. Therefore, different levels of inequality (low, high, extremely high) shape state choices of war finance by affecting fiscal bargaining between the political leadership and societal actors during wartime.

Domestic economic inequality affects the choice of war finance strategy by influencing a political leadership's ability to achieve a successful fiscal bargain within society. When

inequality is low, the public's dependence on social programs is relatively mild, as is their demand for redistribution. On the other hand, the wealthy elites' expected tax burdens are also moderate. As a result, the political leadership is more likely to secure a consensus of "equality of fiscal sacrifice" without causing serious instability. Specifically, leaders can more successfully enact progressive taxation and reduce nonmilitary spending to pay for war. Conversely, when inequality is high, the redistributive conflict between competing coalitions is likely to be more serious. Unable to strike a bargain of fiscal sacrifices without severe social instability, the leadership is expected to rationally delay redistributive conflict by resorting to borrowing. A deficit-financing strategy enables leaders to defuse public discord while appeasing the wealthy elite with potential investment opportunities and lower tax burdens. Especially when domestic economic inequality reaches the highest level, leaders will have incentives to rely primarily on foreign borrowing to finance war efforts. Finally, because money creation is associated with two different redistributive effects, I expect there to be a U-shaped relationship between domestic economic inequality and the choice of money creation. A state is more likely to include monetary creation in its war finance portfolio if the income distribution of the state is either equal or highly unequal.

To examine my theory, I utilize a mixed-method research design with both quantitative and qualitative methods. First, I conduct a quantitative analysis of state war finance from 1950-2007. Second, I present two sets of comparative case-studies: (1) United States war finance in the Korean and Vietnam Wars; and (2) the Chinese and Japanese financing of the second Sino-Japanese War from 1937-1945. The findings support my theory. In showcasing the relationship between economic inequality and war finance, my dissertation identifies a novel mechanism in how inequality affects the distribution of financial burdens of war. It

also contributes to the understanding of fiscal, financial, and monetary policy choices in the exigencies of war.

Keyword: war finance, domestic economic inequality, redistribution, war

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——— *Marcus Tullius Cicero, 106 BC-43 BC* ———

"**I have endeavoured to snatch from the exigency of *war* positive social improvements. The complete scheme is proposed…embodies an advance toward *economic equality* greater than any which we have made in recent times.**"

——— *John Maynard Keynes, How to Pay for the War, 1940* ———

Chapter I. Introduction: The Changing Patterns of War Finance and Economic Inequality

Throughout history, how to pay for wars has long concerned scholars, military experts, and political leaders. In 2016, different presidential candidates revealed potential financing strategies for the United States, the country that possesses the largest military budget in the world and a daunting level of national debt. Vermont Senator Bernie Sanders, the "progressive revolutionary" in the Democratic Party primaries, sought to end the record of "no war taxation since the Vietnam war." He once advocated a war tax specifically levied on millionaires to pay for military spending (The Hill, 2015). Though less provocative, the Democratic Party nominee Hillary Clinton also laid out tax plans that introduce new, steeply progressive taxes. In stark contrast, the newly-elected GOP president Donald Trump engineered the "largest tax cuts" since the end of the Cold War while seeking an "historic" increase in military spending. To balance the defense boost, President Trump signaled sharp cuts in discretionary domestic and foreign-aid programs, ranging from Social Security and Medicare to funding for global health and environmental programs (WSJ, 2017).

Differences in war finance strategies do not appear only in the rhetorical battle for the American presidency. Since its establishment, the United States has utilized various *war finance portfolios* – combinations of different instruments – to fight different wars (Carter, Ondercin, and Palmer, 2015; Zielinski, 2016: 4-5). Besides the within-country variation in war finance, cross-country differences are also striking. For example, the United States financed the Iraq War of 2003 by domestic and foreign borrowing. The United Kingdom, however, managed to resort to reduce non-military spending. Basically, it relied on Her Majesty's Treasury's "Special Reserve Fund" that drew existing resources from the entire government budget (Chilcot, 2016).[1] The empirical patterns raise a question: what explains the variation in a state's choice in war finance? Since a state theoretically could utilize all available means, why does it primarily rely on some, while ignoring others?

Another related but more puzzling trend is the changing pattern of war finance since the late 20th century. Taxation almost always played a role, usually an essential role, in war finance until the late 1960s (Bakhtiari, 2016; Tilly, 1975; Zielinski, 2016: 107-111). Since the 1970s, the deficit-financing strategy (including domestic and foreign borrowing) has become the dominant means for paying for interstate conflicts, while taxation has basically disappeared from great powers' war finance portfolios. Again, the United States and the United Kingdom are two cases in point. The USA relied on taxation to finance 30% of war

[1] Cohen (1969, 1970), Carter (2015), Carter and Palmer (2015a, 2015b) have long pointed out the importance of reduction of non-military spending as a war finance strategy. States can finance wars by shifting government spending away from non-military toward military objectives. Civil public expenditures are either cut back, or simply expanded less than they might otherwise be. In this way, additional resources are released at home to support the war effort abroad (Cohen, 1969: 36). The United Kingdom's war finance strategy in the Iraq War of 2003 resembles such a method.

Furthermore, most of the literature tends to conceptualize various sources of war finance into three types: taxation, borrowing, and expanding the money supply (Flores-Macias and Kreps, 2013; Slantchev, 2012). Zielinski's work (2016) points out the problems, weakness, and imprecision of such a categorization scheme. She advances a more sophisticated typology by distinguishing domestic borrowing from foreign borrowing and adding an inclusive category: external extraction. For reasons of precision and parsimony, this research proposal uses a war finance typology that builds on the work of Cohen (1969, 1970), Zielinski (2016), and Carter and Palmer (2015b). States have five possible instruments to finance war costs: taxation, reduction of non-military spending, domestic borrowing, foreign borrowing, and money creation.

costs in World War I, 50% in World War II, 100% in the Korean War, and around 20% in the Vietnam War (Cappella, 2015; Kriner, Lechase, and Cappella: 2015: 2; Zielinski, 2016). The wars in Iraq and Afghanistan, however, have been funded by domestic and foreign debt (Bank, Stark and Thorndike, 2008; Flores-Macias and Kreps, 2013; Zielinski, 2016;). UK war finance reveals a similar pattern. Scheve and Stasavage (2016: Ch.5) compile comprehensive evidence to show that the UK utilized taxes with steep progressivity to finance the two World Wars.[2] Cooley and Ohanian (1997) and Ohanian (1997a, 1997b) report that about 60% of expenditures were financed with tax revenues. As for the war in Iraq, the UK never resorted to taxation. Instead, the UK relied on reduction in non-military spending (Chilcot, 2016)

How do we explain the great transformation of war finance in modern times? In the face of war pressure, the primary goal for a survival-driven state is to maximize its odds of victory given that war is commonly perceived as a costly lottery. Accordingly, every state confronted with a threat of war should also have a strong incentive to use all available means to maximize revenues for building greater coercive power. Empirical patterns show different policy outcomes: states rarely bet on a single financing instrument. Nor do they easily engage in exhausting all options to fight a war. Furthermore, until recent times, taxation has lost its salience. What has caused the variance?

[2] Scheve and Stasavage use several studies to show that by the end of WWI, the overall tax burden on the richest had increased more than fivefold. An additional and more dramatic increase occurred during WWII. Other belligerent countries (USA, France) also showed similar patterns (Scheve and Stasavage, 2016: Ch.5).

War Finance and Redistributive Conflict

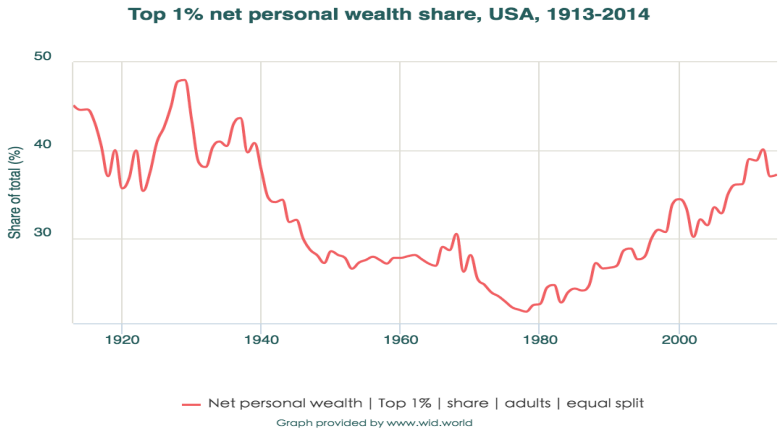
In this dissertation, I develop a theory, which I term a "redistributionist theory of war finance," to explain the variation in modern state war finance choices. I argue that the choice of war finance is made through triangular strategic interactions among three sets of domestic actors: the leadership, the wealthy elite, and the rest of the state population, the public,[3] which is poorer than the wealthy elite. I also argue that each war finance strategy is associated with specific redistributive consequences that create a cleavage between the wealthy elite and the public within a state. The redistributive consequences of war finance, and the risk of social instability, vary with the level of domestic economic inequality. Therefore, different levels of inequality (low, high, extremely high) influence state war finance choices by affecting fiscal bargaining between political leadership and societal actors during wartime.

Wars entail huge costs and sacrifices, in which the distribution of war burden becomes a source of social instability. Faced with the exigencies of war, political leaders needs to secure a fiscal bargain that sustains sacrifice among competing societal coalitions without generating serious upheavals. A wide range of war finance policies is at the leadership's disposal: including taxation, reduction in non-military spending, domestic borrowing, foreign borrowing, and money creation. Because domestic economic inequality affects the public's demand for redistribution, the balance of power between the wealthy elite and the public, and capacity for political mobilization, inequality becomes a critical factor that determines whose interests are more likely to be catered to in the political process and by what means.

[3] The "public" represents the majority of public whom are poor relative to the wealthy elite. From this point on, the rest of state population, which are poorer than the wealthy elite, will be referred to "the public."

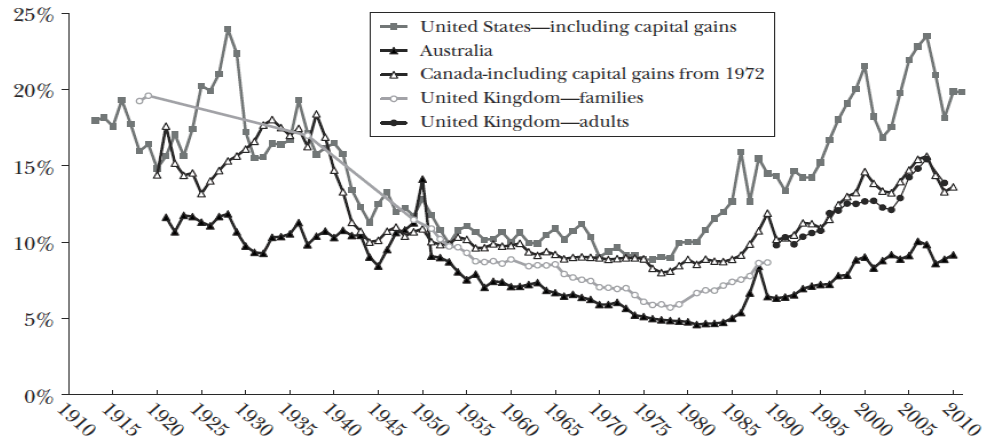
Empirically, the pattern of war finance since the 20th century closely corresponds to trends in economic inequality. If we take the United States as a representative example, the changing pattern of U.S. war finance coincides with changing patterns of domestic economic inequality. As pointed out previously, the United States relied heavily on taxation to fight in World War II and the Korean War. Then its war finance started to shift from taxation to borrowing during the Vietnam War. After 1980, the U.S. paid for wars, including the Afghanistan and Iraq Wars, primarily through borrowing. Domestic economic inequality in the U.S. (measured by top one percent wealth share) fell sharply during the Great Depression of 1929. The decline in inequality persisted until the Korean War. After the Korean War, the trend of economic inequality flattened out through the 1950s with a slight increase in inequality prior to the Vietnam War. The trend in inequality has clearly reversed since 1980. Since then, inequality has persistently increased until recently. Other OECD countries reveal similar patterns.

Figure 1-1. The top 1 Percent Wealth Share in the United States, 1913-2014



Source: World Inequality Database

Figure 1-2. Shares of the Top 1 Percent in Different Countries (Alvaredo, Atkinson, Piketty, and Saez, 2013: 6)



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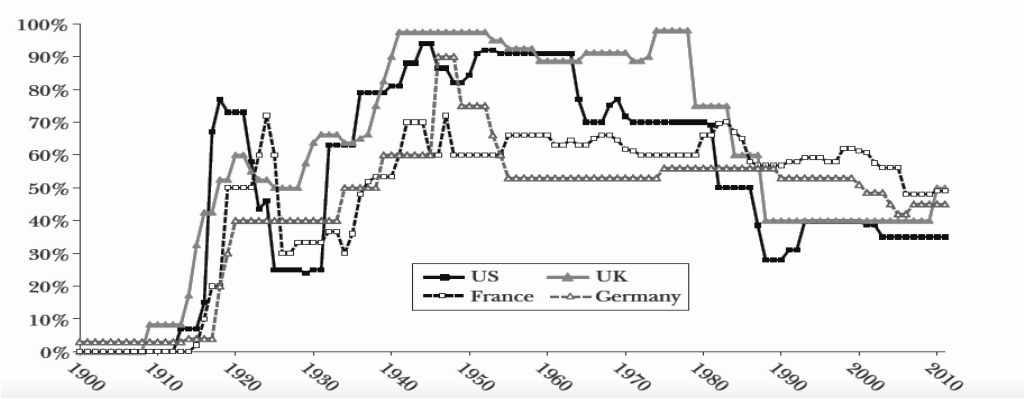
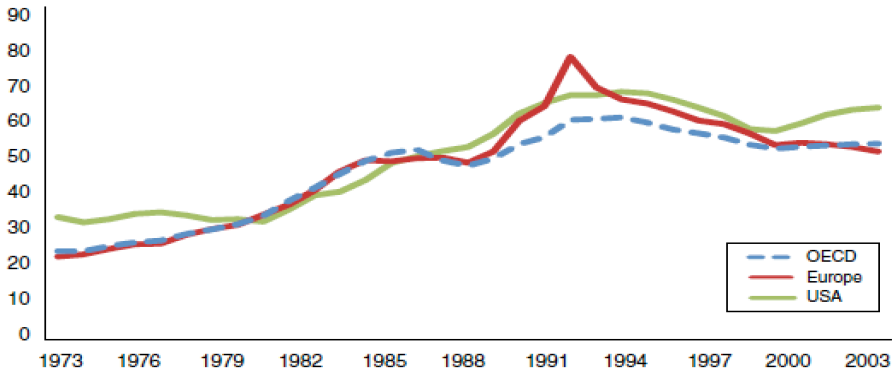


Figure 1-4. Debt as Percentage of GDP in OECD countries (1973-2003)



Source: Azzimonti et al., 2014: 2268

Domestic economic inequality,[4] however, is a factor left out of the literature on war finance.[5] The neglect of economic inequality is surprising since much of the literature explicitly or implicitly indicates that war finance policies have profound redistributive effects (Flores-Macias and Kreps, 201; Shea, 20133; Slantchev, 2012: 801; Zielinski, 2016: 8). For example, in Piketty's classic *Capital in the Twenty-First Century* (2014), he alludes to the crucial relevance of inequality to any analysis of war finance, an idea echoed by Scheve and Stasavage (2010, 2012, 2016).[6] Piketty and Scheve and Stasavage, however, primarily focus on domestic income inequality as a dependent variable, affected by interstate conflict. There are few works exploring how inequality operates as an independent variable, affecting state war finance choices. If war finance has strong distributional consequences, it is legitimate to ask whether inequality, a critical cause of redistributive pressure, has a causal impact on war finance.

[4] I explore the effect of domestic economic inequality, proxied by wealth and income inequality, on war finance in this dissertation. But I will keep in mind the suggestion of Acemoglu and Robinson (2006), who use the term "inter-group inequality" to better capture redistributive politics in the real world. Acemoglu and Robinson point out (2006: 35-37) that when political cleavage is not rich versus poor but along other lines, perhaps between ethnic or religious groups (the so-called "horizontal inequality"), the impact of inter-group inequality may not always perfectly translate into statements about standard measures of inequality and income distribution (the so-called "vertical inequality," such as labor share, Gini coefficient, or top income shares). Of course, as exploratory research, this dissertation concentrates on analyzing the impact of income inequality, just as Boix does in his study on democratization (Boix, 2003). I use "inter-group inequality," "domestic income inequality," or simply "inequality" interchangeably. The effects of other types of inter-group inequality are left to future research.

[5] There are two rare exceptional works that have implications for the causal relationship between domestic inequality and war finance: Jonathan Caverley (2014), and Kriner, Lechase, and Cappella (2015). See chapter 2.

[6] Piketty suggests that "much of the reduction in income inequality during 20th century was an 'accidental' product of war" (Quoted from Scheve and Stasavage, 2010: 533). It should be clear that Piketty's treatment is different from mine: while he treats inequality as a dependent variable, I examine the role of inequality as a cause of the choice of types of war finance.

Argument in Brief: Economic Inequality, Fiscal Sacrifices, and Strategic War Finance Choice

Due to the extraordinary revenue demand and risk of inflation propelled by war, drastic economic sacrifices and adjustments are usually required (Keynes, 1940; Kirshner, 2007: 1-8; Zielinski, 2016: 21-23). During war, people's consumption must be reduced, wages must be controlled, profits are expropriated, and necessities tend to be rationed. At the same time, the pressures for increasing taxation and cutting non-military spending both mount. The public, who benefit from social spending to a greater degree than wealthy elites, will try to preserve social welfare programs by calling for "the conscription of wealth" through steeply progressive taxation. In sharp contrast, the wealthy elite prefer to reduce non-military expenditures in combination with a borrowing strategy. Paying for war by borrowing serves wealthy elites' interest because such a financing instrument not only helps ease their tax burdens, but it also serves them as a capital investment. For the public, however, borrowing is nothing but a "second-best" option when new progressive taxes cannot be enacted. While the deficit-financing strategy offers the public a temporary relief for deep cuts in social programs, it nonetheless hurts them in the long term by driving up interest rates and putting future welfare expenditures in a straitjacket.

Domestic economic inequality affects the choice of war finance strategy by influencing the conditions that political leadership faces in achieving a successful fiscal bargain within society. When inequality is low, or when there is a persistently declining trend in inequality, the public's dependence on social programs is expected to be relatively mild as is its demand for redistribution. On the other hand, the wealthy elite's expected tax burdens are likely to be moderate. As a result, political leadership is more likely to secure a consensus of "equality of fiscal sacrifice" without causing much instability. Specifically, leadership could

more successfully enact progressive taxation and reduce nonmilitary spending to pay for war.

Conversely, when inequality is high, or when there is a persistently rising trend in inequality, the redistributive conflict between competing coalitions is likely to become more serious. Unable to strike a bargain of fiscal sacrifices without severe social instability, leadership is expected to rationally delay the redistributive conflict by resorting to borrowing. A deficit-financing strategy enables leaders to defuse the public's unrest while appeasing the wealthy elite with potential investment opportunities and lower tax burdens. Especially when domestic economic inequality reaches the highest level, leaders will have an incentive to rely primarily on foreign borrowing to finance war efforts. Finally, because money creation is associated with two different redistributive effects, there is expected to be a U-shaped relationship between domestic economic inequality and the choice of money creation. A state is more likely to include monetary creation in its war finance portfolio if the income distribution of the state is either almost equal or highly unequal.

Outline of the Chapters

The following chapters present the systematic study of the causal role of domestic inequality in the choice of war finance. In chapter II, I review the literature of war finance and the associated redistributive consequences of each war finance strategy, pointing out the importance of domestic economic inequality in the study of war finance.

In chapter III, I elaborate how domestic inequality affects states' war finance by presenting my theory — the redistributionist theory of war finance. I also derive testable hypotheses from my theory and present my research design. To test my hypotheses, I will utilize a mixed-method design with both quantitative and qualitative methods.

In chapter IV, I present the empirical findings of the relationship between inequality and interstate war finance in the 20th century. Two kinds of empirical evidence are used to illustrate the relationship. First, I statistically test my hypotheses and present the empirical results of a quantitative analysis on interstate war finance from 1950 to 2007. In the second section, I present a narrative analysis of selected countries' war finance strategies in World War I and World War II.

In chapters V and VI, I present two sets of comparative case-studies to show the validity of my theoretical causal mechanism — a triangular redistributive conflict contingent on the level of domestic economic inequality — in the choice of war finance. Chapter V utilizes a most-similar-systemic research design to compare U.S. war finance in the Korean and Vietnam Wars. I show that the difference between the Truman and the Johnson administrations' war finance strategies was driven in large part by the divergent trend in inequality. Prior to the Korean War, inequality in the United States had persistently declined. Therefore, Truman could enact war taxation and cut nonmilitary spending during the Korean War, a war finance strategy of "equal fiscal sacrifices." Prior to the Vietnam War, however, the trend in inequality in the United States had reversed and was starting to rise. Consequently, Johnson needed to rely more heavily on borrowing to save "the Great Society" while also fighting in Vietnam.

Chapter VI compares two neighboring countries' war finance in the same war — the Chinese and Japanese financing of the second Sino-Japanese War from 1937-1945. I show that different trends and levels of inequality caused China and Japan to choose divergent war finance strategies during the war. Because inequality in China during the 1930s was extremely high, China's wealthy elites became powerful and capable of halting the government's attempts to raise taxes or to enact other revenue reforms. As a result, the

Chinese top leadership, Generalissimo Chiang Kai-shek and the Nationalist government, had to rely on money creation and foreign borrowing to fight. In contrast, the war created a more powerful leveling effect in Japan, causing a dramatically and persistently declining trend in inequality. Therefore, Japan could more easily pay for war through taxation, saving campaigns, and spending cuts.

Finally, chapter VII presents my conclusions. In the last chapter, I summarize my main argument, the findings of each chapter, and major contributions to the field. I conclude with future research directions.

"To carry out war, three things are necessary — money, money, and yet more money."

—— Marshal Gian Giacomo Trivulzio, in a letter to Louis IIX of France, 1499 ——

Chapter II. War Finance Strategy and its Redistributive Consequence

1. War Finance Choices

All wars are costly. In order to mobilize sufficient resources to finance war efforts, political leaders utilize a variety of war finance strategies. Traditionally, most of the literature tends to conceptualize various sources of war finance into three types: taxation, borrowing, or expanding the money supply (Flores-Macias and Kreps, 2013; Slantchev, 2012). Rosella Cappella Zielinski (2011, 2012, 2016) presents a more sophisticated typology by distinguishing domestic borrowing from foreign borrowing and adding an inclusive category: external extraction. A common weakness of such a categorization scheme is that it overlooks the potential of states to divert existing resources away from non-military programs toward military objectives (Cohen, 1969, 1970; Rockoff, 2012: 24-31; Carter and Palmer, 2015a; 2015b). For reasons of precision and parsimony, this research proposal uses a war finance typology that builds on the work of Cohen (1969, 1970), Rosella Cappella Zielinski (2016), Carter and Palmer (2015b), and Rockoff (2012). States may be said to have five possible instruments to finance war costs: taxation, reduction of non-military spending, domestic borrowing, foreign borrowing, and money creation. Each is associated with specific costs and redistributive consequences.

Before analyzing each war finance instrument, I recognize that there is one additional important strategy — direct control — that has been constantly used in history to deal with war costs and mobilization (Rockoff, 2012: 24-39). When a nation is at costly war, its government usually manages economy centrally. States can use forced/compulsory saving, deferred payment and bond campaigns to release additional financial resources, as the US and UK did in World War II.[7] Furthermore, states also constantly control wages, prices of goods, profits of assets and capital during war, and even ration important materials and necessities. All these wartime measures were adopted both in democracies and autocracies (e.g. German, Japan and USSR in the World War II) (Scheldel, 2017: 115-173). I recognize that these centralized controls have important impacts on war costs and finance. However I do not include "direct control" into my typology of war finance strategy for three major reasons: first, centralized wartime economic measures are usually temporary and end with war (or soon after war), while war finance strategy has a lasting effect that lingers long after war. Archival records show that debates about how to pay for war have continued after war (Scheve and Stasavage, 2016; Daunton, 2008). Second, the analysis of the effect of direct control requires a correct estimate of what would have changed with regard to war costs (e.g. prices or wages) if controls had not been enacted, which goes far beyond the scope of my dissertation. Third, some of the major impacts of direct control can be captured by some of my categories of war finance strategy, such as taxation and reduction of non-military spending.

[7] During the World War II, Keynes recommended the Churchill war ministry adopt policies to compel citizens to save more in banks so that non-military consumption can be reduced, and additional financial resources could be released. Keynes also recommended policies to defer most of workers' wage payments until the war ended (workers can only retain an amount that maintain living standard,) (Keynes, 1940) Later, most of Keynes' war finance suggestions were adopted by the UK and US governments. In addition, in the two world wars, the US utilized various venues to promote war bond purchases with interest rates lower than standard premiums.

Although I do not include direct control into my war finance typology, with the recognition of its importance I nonetheless take its effect into account by treating direct control as a "background/contextual" factor. Since direct controls by and large affect the whole society, such measures impose sacrifices on both the rich and poor. Therefore, direct controls increase stresses and strains that render redistributive conflict more salient within society. Accordingly, the social conflict creates the structural constraint of political leaders' choices of war finance strategy.

(1) Taxation

Taxation is a form of direct extraction backed by a state's coercive power and is more likely to incite opposition than other financing instruments. Historically, when wealthy elites were forced to bear heavy tax burdens, they either demanded political leaders to share power or elites switched allegiance to rival leaders. In contrast, if taxes primarily fell to farmers, the peasantry or poor urban population, political leaders had to devote substantial resources to enforcement and risked provoking open rebellion (Slantchev, 2012: 788; Bueno de Mesquita et al. 2003: 65-66, 85-88).

Basically, there are two types of taxation (Zielinski, 2016: 12-15): 1) *direct taxes* are paid to the state directly by individuals and groups, such as firms, within society. Direct taxes cannot be shifted onto others. The major targets of direct taxation are income and property. 2) *indirect taxes*, such as sales, *ad valorem (*value-added*)*, excise, and customs taxes, are collected by intermediaries when citizens are engaging in a transaction. These taxes are "indirect" because they can be shifted onto others (usually the consumers). Economically speaking, financing through taxation avoids interest payments and deficits associated with borrowing. Yet high taxes are believed to be harmful to a country's economy because taxes

depress private investment and consumption. This is especially the case if a government also engages in spending cuts at the same time (Blanchard and Leigh, 2013). Finally, to extract sufficient tax revenues a state needs a developed administrative apparatus and capable bureaucracy (Zielinski, 2016: 24-26; Slantchev, 2012: 788).

One of the major effects of taxation is reduction of private sector consumption. The logic is straightforward: taxation decreases citizens' income, so they need to adjust their current consumption based on declining spending power. As a result, taxation has the potential to curb wartime inflation (Zielinski, 2016: 22-23; Fujihira, 2000; Bank, Stark and Thorndike, 2008).

A critical consequence of taxation is redistribution. Acemoglu and Robinson (2006: 36) use the standard model of redistributive taxation developed by Meltzer and Richard (1981)[8] to show that *progressive* taxation or even taxation at a *constant/uniform rate* redistributes wealth from rich elites to relatively poor citizens. Acemoglu and Robinson (2006: 36) further argue that as domestic income inequality increases, the burden placed on elites also rises. On the other hand, *indirect taxes* give the rich the potential to deflect tax burdens to the majority of consumers. Therefore, it may be a form of *regressive* redistribution.

Historically, wars have usually created opportunities for political leaders to tax the rich by direct taxes. In modern times, wars have even become associated with high political pressures to adopt progressive taxation. The reason is evident: wartime revenue demands tend to be large, and indirect taxes have usually been unreliable sources of war finance since

[8] The basic argument of Meltzer and Richard (1981) is, under the assumption that governments supply NO public goods, the common, primary goal of governments is redistribution. And taxation is the main strategy toward this object. The main reason is that any individual would like to maximize his income and welfare payments. In order to do so, he could work harder, or take advantage of redistribution by taxation (so that he doesn't need to work harder). Therefore, the "decisive voter," defined as the primary decision maker who sets tax rate (in autocracies, the dictators; while in democracies, the median voter), would set tax rates at the point that maximizes his personal income and welfare payments if the "decisive voter," earns less than the mean income of the whole society. In such a case, the "decisive voter" extracts others income to supplement to his welfare without working harder.

citizens can opt out of these taxes if they choose not to engage in related transactions (Zielinski, 2016: 12). In addition, relying on regressive taxation to fight wars is more likely to trigger unrest and potentially ignite mass opposition to incumbent leaders. This is especially detrimental to regime stability as well as national security during wartime when the army is sent to the front. Such concerns have led many to propose war taxation with steep progressivity, including John Maynard Keynes. In order to secure the British population's feeling of national solidarity and support for fighting WWII, Keynes eventually advocated progressive war taxation. Specifically, Keynes recommended that taxes be raised substantially to finance the war and that these taxes should be borne by the wealthy in the form of a capital levy after war. Keynes also strongly opposed financing the war by borrowing because it might disproportionately benefit the wealthy, who would be the principal holders of government debt. (Keynes, 1940; Cooley and Ohanian, 1997: 443-445).[9] Keynes was not a rare exception. Scheve and Stasavage (2010, 2012, 2016) and Vélez (2014) all show that states have a higher chance to heavily tax the rich when engaging in wars of mass mobilization.

Of course, I recognize the common fact that almost everyone, including both the rich and poor, is averse to being taxed. The survey experiment of Flores-Macias and Kreps (2017) does show that when subjects are informed that states plan to use taxes to finance the use of force, their support for war tends to decline. However, in the real world citizens do not always object to any tax increases. They evaluate taxation based on the distribution of

[9] Specifically, Keynes proposed a system of sharply rising levies on all income households in excess of a small minimum, with the highest income households paying 85 percent marginal rates. For the middle-income and working classes, these levies were to be regarded as compulsory savings, credited to a savings institution of the individual's choice, which would be rebated with interest after the war. The rebates were to be financed by a preannounced capital levy (wealth tax) (Keynes, 1940; Cooley and Ohanian, 1997: 444). Keynes pointed out (1940: iii, 1): "I have endeavoured to snatch from the exigency of war positive social improvements. The complete scheme is proposed…embodies an advance toward economic equality greater than any which we have made in recent times." "I propose a plan conceived in a spirit of social justice, a plan which uses a time of

burden, public-good provision and fairness in context. War usually creates solidarity among the poorer majority and workers and momentum for them to advance steeply progressive taxation. During the two world wars, the United Kingdom adopted a "super tax" and "Excessive Profits Duties (EPD)" that specifically targeted the rich. In 1919, the year right after WWI ended, income tax, super tax and EPD accounted for 70% of the UK government revenue. In 1945, these steeply progressive taxes accounted for 60% (Daunton, 2008: 46, 187). During the wars, the UK needed to create a more progressive tax system to secure public support for war. In order to win workers support, during World War I the Labour party even proposed to pay for war debts by "Capital-Levy," a tax that targeted the rentier class and wealthy (Daunton, 2008: 57, 66-69). This idea became popular and, along with other progressive agenda, contributed to the Labour party's first chance to lead the UK in 1924, and the to first electoral victory in the general election of 1929. The proposal of a capital levy even gained recognition from liberal economists like Pigou and Keynes. Though initially resisted, Keynes eventually incorporated this option into his famous war finance strategy (Keynes, 1940). The UK was not along in imposing this type of tax. The United States and the French government also adopted an excessive profit tax during war. Likewise, progressive war taxation was common in autocracies. Japan increased income taxes for individual and corporations after the outbreak of Sino-Japanese War of 1937-1945 (Scheidel, 2016: 119). Similar examples can also be found outside the OECD countries in modern times. Beginning in 2002, the Colombian government adopted a series of wealthy taxes among wealthiest taxpayers to finance its security effort against guerrilla and paramilitary groups. These wealth taxes were dubbed the "democratic security tax," which accounts for about 20% defense and security sector's total budget (Flores-Macias, 2014).

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general sacrifice, not as an excuse for postponing desirable reforms, but as an opportunity for moving further than we have moved hitherto towards reducing inequalities."

Just as Bank et al (2008) suggest, taxes are never popular, but, paradoxically, they are never "unpopular" during wars (Bank et al, 2008).

All of the evidence mentioned above should inform a possibility both to the rich elite and the poorer majority of citizens: if the state plans to finance war costs by taxation, the chosen taxation is more likely to be steeply progressive. The cleavage in war tax issue between the rich and poor will become more salient if we take into account non-military spending. Wartime revenue demands can create powerful pressures for cutting welfare expenditures. Because the poorer majority presumably benefit from welfare expenditures more than the rich, the poorer majority are more likely to support war taxation. The reason is twofold. First, progressive war taxation can mitigate the demand for cutting welfare spending with a price paid more by the rich. Taxation is thus an important redistributive strategy. Second, even if the poorer majority might also face a chance of paying higher taxes than before, they are more likely to find it worthwhile and fair because they gain more from welfare programs. Conversely, the rich may be expected to oppose war taxation for fear of a permanent increase of the size of the state paid disproportionately by the conscription of their wealth. Survey evidence shows that the rich, especially the "super wealthy," are actually much more likely than the general public to accept that the government should run a budget deficit if necessary when the country is at war. By contrast, the general public are more likely to support government efforts to balance the budget even when it is at war (Page, Bartels, and Seawright, 2013: 60). The underlying message is clear: the rich are likely to favor a temporary increase in deficit spending during wartime because they want to avoid permanent tax increases. They also have a higher chance of propelling the government to reduce deficits via cuts in welfare expenditures during peacetime. Conversely, the majority

of citizens are likely to prefer to minimize the risk of permanent cuts in welfare expenditures by supporting war taxation during war.

(2) Reduction of Non-Military Spending

States can finance wars by shifting government spending away from non-military toward military objectives. Civil public expenditures are either cut back, or else simply expanded less than they might otherwise be. In this way, additional resources are released at home to support the war effort abroad (Cohen, 1969: 36). As elaborated below, essentially, reducing non-military spending is a less obvious form of regressive taxation.

A government's non-military spending usually includes social welfare programs, infrastructure projects, debt-service, and government employee compensation (Cohen, 1969: 36-38; Carter and Palmer, 2015b: 3). Those public expenditures help provide both targeted transfers (e.g. wage subsidies) and public goods such as education, health care, social security, community development, and housing. Like progressive taxation or flat taxes, non-military spending has great potential to redistribute wealth from the rich to the poor. As Carter and Palmer (2015a: 147; 2015b: 5) point out, ordinary citizens usually benefit from social spending to a greater degree than wealthy elites who pay for the social welfare programs. The reason is straightforward: the wealthy have low demand for social welfare programs because they are more able to acquire those benefits (education, health, insurance, etc.) on their own. Even more crucial, the benefits that accrue to the majority of the relatively poor via social spending are financed through taxation disproportionately borne by wealthy elites. The redistributive consequence of non-military spending thus leads to a cleavage between wealthy and poorer citizens — while the former prefer slashing those programs, the latter desire continuing or even expanding them.

Why does reducing non-military spending to finance war function as the equivalent of regressive war tax? First, since the poor are more dependent on public social spending to obtain welfare and benefits, such an instrument of war finance effectively requires the poorer to sacrifice more for war. Second, wealthy individuals normally have a better chance to earn additional profits out of war. There are many wars in which particular segments of the business and commercial community might stand to gain. Take the Vietnam War, for example. Cohen (1969: 10-19) shows some industries (especially ordnance, aircraft, transportation, and warehousing) benefitted substantially from increased levels of military spending. With more disposable income, higher capital mobility and better information, the wealthy are more likely to make investments in those profitable firms. Third, the wealthy also have a better chance to avoid the most serious personal sacrifice — casualties. As Caverley points out (2014: 33), the less wealthy individuals are more likely to be drafted and join an all-volunteer force. Even under systems of universal conscription, Scheve and Stasavage (2010: 530, 53-535; 2012: 83-84) suggest individuals are usually conscripted on the basis of characteristics correlated with low income and wealth.

War creates economic turmoil for private sectors and puts great stress on living standards. As a result, the poorer majority of citizenry's demand for welfare expenditures would go up. For instance, the building of the UK's public health system — National Health Service (NHS) — could be traced back to World War II. Japan set up its Welfare Ministry in 1938, and launched its first-ever public housing projects in 1941 (Scheidel, 2016: 121). In the United States, two important public housing acts were passed prior to World War II and the Korean War and evolved during war (Housing Act of 1937, Housing Act of 1949). Lydon Johnson fought the Vietnam War while creating the "Great Society" at the same time. The conjunction of war and welfare state expansion thus causes a redistributive conflict between

the wealthy and less wealthy about reducing non-military spending to meet military objectives.

I recognize that there are two contextual factors that might affect the cleavage in welfare spending: time and regime type. First, it could be argued that welfare spending did not become a significant portion of government expenditures until the two world wars. However, this study focuses on war finance since World War I, a period when welfare programs gradually became salient. In addition, the social struggle for redistributive spending had already been serious in many countries at the onset of 20th century. Lindert (2004), Ansell and Samuels (2014: ch.7) all show that the social pressure for increasing welfare spending became strong from 1880-1930. Second, it could also be argued that regime type might have a mediating effect in that democracies tend to have higher social spending due to electoral pressures (Lindert, 2004). However, the demand for welfare and associated conflicts in autocracies are also strong. It may simply be that in autocracies social conflicts take another, much more violent, form: demonstrations or revolution. For example, the Russian domestic revolution in 1905 forced the Tsar to accept large programs of agrarian reform in 1906 to stabilize the countryside by raising the standard of living among peasants (Chapman et al, 2015: 139-141). Because interstate wars tend to create pressures for regime change, the social conflict for welfare expenditures may be expected to be severe. This is also why scholars find that welfare state expansion is associated with great wars (Scheve and Stasavage, 2016: 126-127). In short, the cleavage in non-military spending between the rich and poor is an old story, and it has become more and more influential since the beginning of 20th century, regardless of regime type. War makes the cleavage especially salient.

(3) Domestic Borrowing

Domestic borrowing refers to wealth voluntarily or involuntarily lent to the government. Unlike taxation, it is with the understanding that the borrowed funds will be paid back to individuals, groups or institutions within the state.

Domestic borrowing may create a tenacious deficit that will affect interest rates. When a government starts to borrow, it will raise the demand for loanable funds and drive up interest rates. Formally, this can be explained by the IS-LM model.[10] It should also be pointed out that Ricardian Equivalence instead argues that deficit financing of government spending does not affect real interest rate and real demand because the private sector views government borrowing and taxes as equivalent (Barro, 1989).[11] Ricardian Equivalence, however, has been challenged on the basis of its stringent assumptions.[12]

Domestic borrowing may cause regressive redistribution of wealth from the poor to the rich. Piketty offers the simplest reason: because public debt needs to be repaid, debt financing is in the interest of those who have the means to lend to the government. For wealthy elites, as Stasavage's model suggests (2003: 28), government bonds are one type of capital investment. With greater financial resource endowments, wealthy lenders are better able to benefit from public debt and reap the interest rate (Azzimonti, De Francisco and

[10] In the absence of capital mobility, an increase in the deficit increases the demand for goods and services and thus shifts the IS curve to the right (output also increases). The associated increase in income increases the demand for money, and so interest rates must rise to keep the money market in equilibrium. A rise in interest rates might reduce private investment, a so-called "crowding-out" effect (Mankiw, 2012: ch.12). On the other hand, in an open economy, the increase in interest rates could lead to higher international capital inflows, which drive the interest rate back to its original level. Capital inflows, however, increase pressure for currency appreciation (Gale and Orszag, 2004: 6-7). A critical assumption behind this argument is that the real money supply remains constant, meaning the central bank does not engage in any offsetting monetary policy.

[11] The mechanism is that if government debts increase, economic agents will rationally expect an increase in taxes in the future in order to pay the debt and its interest. In response, it would thus increase savings currently. Therefore, national savings— the sum of private and public saving— is unchanged. If a rising deficit fails to alter national saving, it has no impact on the real interest rate, real exchange rate, and aggregate demand as well as domestic output (Barro, 1989).

[12] To name a few: economic agents are perfectly rational and forward-looking; they are able to borrow and lend as much as they want at the market interest rate; and nobody immigrates or emigrates.

Quadrini, henceforth Azzimonti et al., 2014: 2269-2271, 2278-2280). Take US 10-year Treasury securities as a representative example. The average annual return has been 5.5 percent from 1980 to 2015 (Hager, 2016: 5) Effectively, public bonds become the instruments for wealthy elites to evade tax burdens, hedge market risks and earn more profits.

On the political front, I recognize that the rulers or political leaders of sovereign states often utilize various policy tools to forcefully renegotiate the terms of loans, reschedule payments, and restructure debt. This creates a commitment problem between political leaders and wealthy elites in the case of domestic borrowing where there is a risk that leaders may fail the responsibility of debt-repayment. However, political leaders face the risk of being deposed if they choose to default on debt, regardless of regime type (Digiuseppe and Shea, 2015). As Clinton's campaign manager, James Carville, famously remarked: "I used to think if there was reincarnation, I wanted to come back as the president or the pope or a .400 baseball hitter. But now I want to come back as the bond market. You can intimidate everybody!" (quoted in Hager, 2016: 9). In short, wealthy elites can derive profits as well as political influence from investing in public debts.

To political leaders, the risk of losing office driven by default will become the greatest when states confront severe crises, for instance, war.

(4) Foreign Borrowing

States can also finance war costs through external resources, including foreign borrowing, foreign aid/grants, or plunder. If states choose foreign borrowing, presumably they have two alternatives: borrowing from international private markets (from foreign invesors or international banks) or borrowing from other governments. There indeed exist nontrivial

differences between these two alternatives in terms of their associated costs,[13] but, for reasons of parsimony, I combine the two alternatives into a single war finance instrument, namely foreign borrowing.

As indicated by Rosella Cappella Zielinski (2014; 2016: ch.6), foreign borrowing has been the most prominent financing instrument in the category of external funding. From 1823-2003, 57% of belligerents took on some form of foreign debt to finance war costs. If we take into account only those wars occurring after 1950, 72% of belligerents resorted to foreign borrowing. Plundering other countries used to occur in war finance history, but it is no longer relevant, especially after 1950.[14] Because of this fact, I focus my analysis mainly on the use of foreign borrowing when external funding/extraction is being utilized for war finance.

As discussed previously, government borrowing will put upward pressure on interest rates since government deficits increase the demand for loanable funds. In an open economy, an increase in interest rates leads to higher international capital inflows, which drive the interest rate back toward the original level. Capital inflows, however, may increase the pressure for currency appreciation that leads to current account deficits.[15]

[13] The costs of borrowing from private markets are primarily economic, including interest on debt and the risk of credit rationing. On the other hand, the costs of interstate loans may include political costs. For example, the borrowing state may need to subordinate its sovereignty to its creditor. Moreover, the borrowing states may be forced to pursue political and military goals that are congruent with the interests of foreign state lenders.

[14] Rosella Cappella Zielinski (2016: 108) shows that from 1823-2003 there are 22 cases (23%) in which war plunder was documented. Only 2 states have used plunder to finance more than 25% war costs. These two cases are Germany during the First Schleswig-Holstein War (1848), and Chile during the Pacific War (1879-1883).

After 1950, only 5 cases took place, in which war plunder only comprised a very small percent of their war finance. The five cases are: the Peoples Republic of Korea during the Korean War (1950-1953), the Democratic Republic of Vietnam during the Vietnam War (1965-1975), the Democratic Republic of Vietnam during the Vietnamese-Cambodian Border War (1977-79), Chad during the war over the Aouzou Strip (1986-1987), and Iraq during the Gulf War (1990-91).

[15] The relationships among fiscal expansion (that increases interest rate), capital inflows, and exchange rate appreciation, as well as their joint effects on aggregate demand in 1) a small open economy and 2) a large open economy can be formally explained by the Mundell-Fleming model.

Government financing through foreign borrowing will raise domestic interest rates less than resorting to domestic borrowing. The reason, simply put, is that global financial integration creates a larger pool of loanable funds for most if not all financially exposed countries. Azzimonti et al. (2014: 2269) also argue that the availability of foreign borrowing may lower the elasticity of interest rates, i.e., if a country's interest rate in a more globalized market is less responsive to its debt level, the government should be able to issue more debt at the same yield.[16]

This effect suggests that domestic actors may have competing preferences regarding the foreign versus domestic composition of government debt.[17] And a social cleavage is likely to arise. If a government chooses borrowing to finance its spending, poor citizens and those whose income is primarily derived from wages, i.e., workers, would have reason to prefer that the government rely more on foreign borrowing. The poor and workers are more likely to borrow and be dependent on government transfers, so they can benefit from more access to cheaper borrowing in a lower interest rate environment. Besides, when domestic income inequality increases, the majority of indebted and relatively poor may be able to force wealthier citizens to bear a greater tax burden for paying external debts because the richer command a larger fraction of wealth. [18]

Conversely, wealthy elites are likely to prefer the composition of government debt to be primarily composed of domestic borrowing. Domestic public debt is more likely to involve

[16] The authors explain the mechanism. "In a globalized world, both the demand and supply of government debt come not only from domestic agents (investors and governments) but also from their foreign counterparts. Therefore, when governments do not coordinate their policies, each country faces a lower elasticity of the interest rate to the supply of their *own public* debt."(Azzimonti et al., 2014: 2269)

[17] There are several ways to break down the composition of government debt, including currency of issuance (foreign vs. local), issuance maturity (short-term and medium-to-long-term); marketability; and holder structure (non-residents, national central bank, domestic commercial banks, and the rest/domestic private investor). Each of them has important political and economic consequences (Ali Abbas et al, 2014) For the primary interest of this research, I focus on a simple dichotomy of government debt: domestic borrowing versus foreign borrowing.

regressive redistribution by allowing the rich to earn more. Additionally, external public debt is likely to cause a transfer of resources from domestic constituencies to the foreign lenders. If an indebted government is ultimately forced to raise taxes for external debt service, the rich, who bear greater tax burdens, are more likely to suffer greater loss.[19] Moreover, as noted, government borrowing from abroad is not likely to increase interest rates as much as domestic borrowing does.[20] Therefore, when foreign borrowing becomes a government's main financing strategy, rich investors will not accumulate as much wealth, or accumulate it as rapidly, as they might otherwise do (Drazen, 1992: 13, 19, 20).

Elite preferences regarding government foreign borrowing, however, are likely to change with the level of domestic income inequality. As income inequality becomes higher, wealthy elites are more likely to pursue government bonds as safe assets to hedge risks (Azzimonti et al., 2014: 2269-2270, 2278-2279, 2284-2285). Furthermore, the rich are also more likely to have incentives to take advantage of another channel, namely financial intermediation, to accumulate wealth. Specifically, they can utilize cheaper borrowing (because of additional foreign borrowing) to finance even larger increases in their holdings of domestic financial assets. In other words, the rich can act as financial intermediaries for foreign funds (Kumhof et al, 2012: 4-5, 16-17, 23-26).

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[18] A salient example can be found in the on-going Greek debt crisis in which the "anti-austerity" ruling party, Syriza, has advocated taxing the rich as its main strategy to pay external debts.

[19] Even if the government just confronts the *pressure* to raise taxes, the rich still suffer higher uncertainties and risk of losses.

[20] In a purely "*ceteris paribus*" scenario, when a government finances its spending completely through foreign borrowing, interest rates will remain unchanged because domestic loanable funds are not reduced (and there is no crowd-out effect). In fact, if a government has access to infinite cheap borrowing from international markets, foreign borrowing might put a downward pressure on domestic interest rates. In this scenario, the government increases domestic loanable funds by acting as a financial intermediary for foreign funds: it borrows externally at a lower interest rate (global interest rate) and then lends domestically to the capital-scarce private sectors. The logic is essentially similar to Bernanke's *global saving glut* hypothesis (2007), which argues that the US current account deficit and persistent low long-term interest rate from 1998-2007 are caused by a global excess of desired saving over desired investment. Savings have emanated from East Asia, emerging-markets and oil-producing economies. A notable difference is, in the *global saving glut* hypothesis, that international banks play the central role of financial intermediaries.

Following Kumhof, Ranciere, and Winant (2015), Kumhof et al. (2012), and Azzimonti et al. (2014), we can walk through the mechanisms by which income inequality affects the wealthy elite preferences regarding the composition of government debt as well as their attitude toward foreign borrowing. When domestic income inequality becomes high, the rich are initially more likely to use a large share of their increased income to accumulate financial wealth in the form of loans to citizens and the government. At this stage, the rich probably would prefer that the government mainly rely on domestic borrowing to finance public spending because in this way the rich could earn higher profits from higher interest rates. When inequality ascends to much higher levels (e.g. *extremely* unequal income distributions), it is likely to result in large increases of citizen debt-to-income ratios. Accordingly, the risk of default rises. Under such a new circumstance, the rich would start to adjust their investment strategy. First, they might demand more public bonds, as safe assets, to hedge their investment risks. Because foreign borrowing increases the likelihood that a government would issue more public bonds, the rich are also likely to support their government's borrowing from abroad. Second, as their incomes rise further and become more reliant on financial assets, they might also find a low interest rate environment attractive due to the opportunities of "leveraging" — wealthier investors borrow more so that they can invest further in other higher-return assets or increase more loans to the poor and the government. As a result, the rich are more likely to agree with the government's choice of foreign borrowing, which would keep interest rates lower than they might be when the government relies solely on domestic borrowing.

It is important to note, as public and private debts become higher, foreign borrowing might just delay the debt problem at the expense of an eventually much larger financial crisis (Kumhof et al, 2012: 5). Beyond a certain threshold, defaults on external debts might

be an equilibrium outcome since the rich are unwilling to pay, and the poor are incapable of doing so (Drezen, 1997).

(5) Money Creation/ Seigniorage

Money creation simply refers to the creation of more money by the government to pay for goods. When a government is out of cash and unable to secure credit for fighting a war, it may still have a choice to "create" money out of thin air. This is understood as a form of *seigniorage*, which most simply is defined as the difference between the value of money (the currency) and the cost to produce it. Historically, rulers or sovereign states that possessed monopolies on coining money could require existing currency be re-coined to earn fees or debase the currency. In modern time, a government borrows from the monetary authority (central bank) to increase the money supply through the process of "debt monetization." The process goes as follows. When a government's expenditure exceeds its revenues, it incurs a government deficit. Then, the government can issue bonds and ask the central bank to purchase the bonds by conducting an open market operation. The central bank then pays the government with money it creates, and the government in turn uses that money to finance the deficit. Later, when those government bonds come due, the government can issue new bonds and ask the central bank to purchase new bonds. In this way, the government can use new money (received from selling new bonds) to pay off the old bonds that are due. Notice that this process could go on and on, and the government could continue "borrowing" money from the central bank without needing to actually repay it.

Because money creation is the most immediately available war-financing instrument (Zielinski, 2016: 13), it is a potentially attractive choice for political leaders. However, there are two constraints. First, if there is an independent central bank, it may be difficult, if not

impossible, to enforce such means.[21] Second, money creation increases the risk of inflation. Unless there is significant unemployment,[22] prices will be bid up as the government and other economic agents use the extra money to compete for the same amount of scarce resources (Pigou, 1940). When inflation rises, people who hold cash will find their cash worth less. This is because the same amount of cash now can only buy fewer goods after inflation has risen. In other words, cash holders see their holdings decline in value (purchasing power) due to the effect of inflation. Inflation also makes savers and creditors receive less in real terms than they had contracted because as inflation rises, real interest rates decrease, and so do the real rates of returns for savers and creditors. When a government, in cooperation with the central bank, utilizes money creation to finance its deficits and causes a rise in inflation, it could be said to impose an "inflation tax" on cash holders, savers, creditors, and the population.

Why is the inflation risk of money creation so significant and imminent during wartime? The major reason is that almost every war is in itself inflationary (Kirshner, 2007: 2-8; Zielinski, 2016: 21-23). To fight a war, a state usually needs to procure large amounts of supplies and recruit many soldiers from the society. By doing so, the state is removing goods and labor from the market and decreasing their supply in the private sector. In the absence of government-imposed rationing, there will be an upward pressure on prices as the private sector competes for now-scarce resources (Zielinski, 2016: 21-22).[23] Empirically, as Kirshner suggests (2007: 2-8), the association of war with inflation and monetary disorder is almost as strong as a law-like regularity throughout the recorded history. Since war itself

[21] Even in cases in which central bankers are not independent, Poast (2015) suggests that they might still be likely to constrain leaders' choices to some extent, possibly through policy consultation.

[22] In economic terms, this means a situation of depression or a liquidity trap in which the nominal interest rate is close or equal to zero.

[23] A government can temporarily relieve the upward pressure on prices (or the inflationary tendency) by directly controlling the distribution of scarce resources, goods, or by any other artificial restrictions of demand.

already results in a high chance of inflation, using money creation to finance war costs is likely to increase the risk further.

A caveat, however: monetary creation does not automatically lead to inflation. It depends on whether there is room for further growth of production, or the economy is already at full capacity/full-employment. The critical point is that since history repeatedly shows wars are commonly accompanied by inflation, it is easy to encourage social anxiety and speculation about monetary disorder during wartime. So, even if the risk of inflation is moderate, social uneasiness might still concern political leaders about the efficacy of choosing money creation as the main war finance strategy. These concerns are likely to make risk-averse leaders cautious about resorting to money creation since the threat of inflation usually increases the likelihood of being removed from office or regime breakdown (Peltzman, 1990; Gasiorowski, 1995; Chiozza and Goemans, 2011).

Much more important, money creation might result in two contradictory redistributive consequences for the society (Coibion et al., 2012: 5-6). The first is a *regressive* redistribution of wealth from citizens to elites. Three mechanisms might be involved. 1) An *income composition channel*: while poor citizens rely primarily on labor earnings, rich elites receive larger shares of the income from business and larger financial income. If the creation of extra money increases profits more than wages, then the rich tend to benefit disproportionately. 2) A *financial segmentation channel*: an increase in the money supply is likely to redistribute wealth toward those agents most connected to and most frequently engaged in financial markets (Williamson, 2009). 3) A *portfolio channel*: low-income households tend to hold relatively more currency than high-income households, and if

These policy actions are known as rationing. Because rationing is often used to keep price stability, governments usually utilize rationing to complement to price controls.

money creation increases the risk of inflation or an expectation of future inflation, low-income households become more vulnerable (Albanesi, 2007).

There is, however, also likely to be a second effect working in the opposite direction — a *progressive* redistribution of wealth from the rich to the poor. Again, two mechanisms might be working. 1) A *savings redistribution channel*: when the creation of additional money leads to a decline in real interest rates or keeps real interest rates at low levels, poor borrowers could benefit from lower-cost borrowing at the expense of lenders. Even if nominal interest rates are at the lower boundary of zero, the government is still in theory able to use money creation to raise the price level and the expectation of future inflation (Bernanke, 2000). As prices rise and more money circulates, creditors are forced to accept repayment in debased currency. This is likely to give creditors incentives to spend (either consume or invest, or both.) Accordingly, poor borrowers are also more likely to gain nominal wage increases and use them to pay back debts and consume. 2) An *earnings heterogeneity channel*: labor earnings and the unemployment at the bottom of the income distribution are believed to be more sensitive to business cycle fluctuations. Hence, when a government uses money creation to stimulate the economy, low-income individuals are disproportionately more likely to be hired (Coibion et al., 2012: 5-6).

Because money creation may result in either progressive or regressive redistribution, preferences regarding such a financing instrument ultimately depend on two other contextual factors — (1) risk of inflation and (2) economic inequality.

When the risk of inflation is moderate, citizens are more likely to support government money creation to finance war costs because nominal wage earnings, their primary source of income, may increase accordingly, while debt burdens may diminish. In contrast, when the risk of inflation is higher, since citizens tend to hold more cash as a fraction of their

portfolios, they will suffer greater losses from inflation and are more likely to feel strongly deprived when money creation is chosen.

For wealthy elites, who are assumed to hold more financial wealth (Kumhof, Ranciere, and Winant, 2015), money creation decreases interest rates and thus reduces their returns on assets. Therefore, wealthy elites will uniformly oppose money creation regardless of the risk of inflation. However, when the risk of inflation is low, their opposition will be more moderate than it would otherwise be in the face of a high risk of inflation. The reason is straightforward: with greater access to financial instruments, wealthy elites can better hedge losses when the threat of inflation is modest.

Likewise, because high inflation can cripple a leader's tenure and disrupt social and economic orders (Carter and Palmer, 2016a: 700-701; Zielinski, 2016: 21-23), most leaders have a natural tendency to shy away from money creation when hyperinflation is imminent.[24]

Domestic economic inequality is the second factor that can affect preferences regarding money creation. Scholars point out that the growth of financial wealth and domestic economic inequality are mutually endogenous (Piketty, 2014; Kumhof, Ranciere, and Winant, 2015; Kumhof et al, 2012).[25] This suggests that if domestic economic inequality is associated with a change of income composition among wealthy elites, preferences will change accordingly. More specifically, when wealthy elites rely on wage earnings to accumulate income, as citizens do, they are more likely to share the same preference — supporting money creation. As domestic income inequality rises, elites have incentives to

[24] Of course, there are notable exceptions: Zimbabwe, or Venezuela.

[25] The core mechanism is elaborated by Piketty's (2014) famous equation of the cause of inequality in wealth distribution in modern times: "$r > g$", in which r stands for the average annual rate of return on capital (e.g. profits, dividends, interest, rents, and other income from capital), and g stands for the rate of growth of the economy: the annual increase in income (wage earnings) or output. Simply put, wealth inequality results when top earners gain income primarily through returns on financial assets, while the rest of society relies on wage

pursue financial income (because of their positive marginal propensity to save following a permanent income shock) with greater inequality resulting (Kumhof, Ranciere, and Winant, 2015: 1218). This is likely to make elites strongly opposed to money creation since such a financing instrument may reduce financial returns. Yet as domestic inequality increases and reaches higher levels, elites are likely to have equipped themselves with hedging tools and thus to be indifferent to the government's choice of such a financing instrument.

2. The Literature on War Finance Choices

The literature on war finance can be divided into three categories in terms of different analytical focuses: preferences of domestic interest groups, institutions, and international/structural factors.

(1) Preferences of Interest Groups and Partisanship

What affects states choices of war finance instruments? Gustavo Flores-Macias and Sarah Kreps (2013) take on this question by studying domestic interest groups' preferences with a focus on war taxation. In their study of American war taxation from 1789-2010, the authors point out that because the distributional consequences of war finance strategy are extraordinary and long-lasting, political elites (partisan leaders) tend to choose the method that favors their core constituencies. Specifically, after 1913, when tax generally meant *income taxes*, Democrats were more inclined to resort to progressive taxation as a form of war finance because workers, who usually benefit from progressive taxation, are core supporters for the Democrats.

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earnings. When the economic growth slows and the wages stagnate, the faster and larger returns on capital concentrate wealth in the hands of those in the top-percentiles.

While partisanship and ideological differences do play a role in politicians' decisions with regard to war finance, there are plenty of empirical anomalies that challenge Flores-Macias and Sarah Kreps' explanation. For example, the Obama administration never successfully adopted war taxes specifically to pay for military expenses in Afghanistan and Iraq. On the other hand, Eisenhower, the Republican president, asked the Congress to maintain high level of taxation to pay for the remaining military expenses of Korean War (Eisenhower, 1953). Furthermore, during the Vietnam War, Wilbur Mills, who was a Democrat and also the chair of the House Ways and Means Committee, did try to engineer a vote to block Johnson's request for a tax increase (Oatley, 2015: 75). Anomalies were not found just in the US. Winston Churchill, is usually considered a conservative who opposed any taxation. However, he was also found to support the war levy to pay for World War I debts (Daunton, 2008: 80). When Churchill served as the Chancellor of the Exchequer in Baldwin's Conservative government of 1924–1929, he tried to increase "death duties" (inheritance taxation). He also proposed "forced loans" and took other reforms that made tax system more progressive (Daunton, 2008: 132-133, 140-141).

All of these anomalies suggest that while the preferences of domestic interest group do play a role, their impact may be conditioned or mediated by some other factor, such as domestic economic inequality. As Flores-Macias and Kreps correctly point out, wartime fiscal and tax policies would have enduring distributional consequences that outlast the wars and carry over well into peacetime (Flores-Macias and Kreps, 2013: 833-834). Based on the same assumption, in a society with high inequality the poor should have a stronger incentive to take advantage of wartime opportunities and pursue their preferred war finance policies. On the other hand, the rich would confront higher pressure to redistribute and have a

stronger incentive to block or deflect the loss. The dynamics should have an impact on war finance.

Also focusing on distributional consequences and fiscal cleavages, Kenneth Scheve and David Stasavage (2010, 2012, 2016) suggest a different causal mechanism: the linkage between mass mobilization and fairness concerns, and its impact on state financial policy choices. The authors essentially argue that mass mobilization for warfare creates a demand for progressive taxation as a means of ensuring greater equality of sacrifice in the war effort.

The work of Scheve and Stasavage insightfully points out the salience of inequality by focusing on how war affects social fairness concerns, and thus war minimizes the distributional conflict between unequal groups. However, in Scheve and Stasavage's analyses domestic inequality is treated as a dependent variable: the conflict caused by domestic economic inequality would be resolved by total war due to fairness concerns, so that a social consensus on war finance policy can arise. Their works logically lead us to ask whether inequality has any independent causal impact on state financial policies during wartime. Would a highly unequal society face more or fewer obstacles in generating prevailing fairness concerns that precipitate a wartime fiscal consensus?

(2) Institutions: Regime Type and Central Bank

With regard to the literature emphasizing institutional dimensions, scholars focus on how institutional settings may shape state financial capacity as well as policy choices in the context of war. Inspired by the economic development studies, there is a burgeoning literature on the *democratic advantage theory*. In the war finance literature, Kenneth Schultz and Barry Weingast (2003) pioneered such a research agenda, arguing that democracies are more likely to choose borrowing in international power competition or fighting because they

may enjoy better access to credit and more favorable terms. The reason, the authors argue, hinges on checks and balances settings, which decrease the likelihood of default. Because democratic institutional mechanisms might serve as possible solutions to the commitment problem in debt repayment, those mechanisms increase creditors' incentives to lend at relatively low interest rates. Schultz and Weingast's argument is built on the classic work of Nobel laureate Douglass North, co-authoring with Weingast, on the evolution of constitutional arrangements in seventeenth-century England after the Glorious Revolution (North and Weingast, 1989). North and Weingast indicate that representative institutions allowed King William III to credibly commit himself to avoiding arbitrarily expropriating wealth through redefinition of rights in the king's favor. Based on similar rationale, Carter and Palmer (2016b) comprehensively analyze the impact of regime type on war finance strategy. They find that autocracies are more likely to reduce nonmilitary spending to finance war efforts. Beyond that, there is no difference between democracies and autocracies in the use of taxation, borrowing and money creation: both democracies and autocracies all try to avoid taxation and money creation while relying on borrowing.

The *democratic advantage theory* captures the positive credibility effect that democratic regimes can produce in sovereign borrowing. However, a prominent consensus in the literature on democratization also points out that democratic regimes have another characteristic: they tend to generate more redistributive policies (Acemoglu et al, 2015; Acemoglu and Robinson, 2006; Boix, 2003). The central reason is that democratic regimes are arguably inclined to produce social choices more favored by the majority of citizens. As a consequence, "Democratization, by extending political power to poorer segments of society, will increase the tendency for pro-poor policy naturally associated with redistribution." (Acemoglu et al, 2015: 1890). Since democratic institutions are associated

with redistributive policies such as progressive taxation and social transfer, they are equally likely to cause impacts on a state's choice of wartime fiscal policies. Because democratic regimes would have such "dual characteristics"—credibility and redistribution, it merits further exploration of how the interaction between these two effects in democracy would affect a state's choice of war finance strategy. In this case, the focus on domestic income inequality offers a critical angle.

Since the central bank is a core institution in the monetary and financial policy domains, its role in war finance also draws the attention of scholars. Paul Poast (2015) argues that the establishment of central banks helped solve the commitment problem of debt-repayment in war finance in the nineteenth and early twentieth centuries. With the central bank, lenders believed that the government will be at least "warned" in case of default,[26] making lenders more willing to purchase the debt at a lower interest rate (Poast, 2015: 69-73).

Poast's argument hinges on a critical premise: that the central bank is *capable of* and *willing to* impose some costs on sovereign-default. This premise may be counterintuitive since the sovereign still possesses greater power to manipulate the central bank, especially in the face of war. Two ancillary assumptions are thus necessary: first, a central bank "at least" increases the likelihood of credit boycott or other forms of punishment by minimizing the number of lenders; second, the central banker and private lenders share the same preference regarding financial stability and debt-repayment. Such assumptions actually indicate a potential impact that could be traced back to domestic inter-group inequality: in a highly unequal society in which the wealth is concentrated in a small group of elites, the political leader might prefer to select his central banker from the small group since they are the few

[26] Poast's idea is that central bankers were actually willing and capable of "punishing" sovereign defaults by enforcing a credit boycott (Poast, 2015: 71-72). However, given the fact that central banks enjoyed relatively little autonomy in the early history, it should be more reasonable to suspect that central bankers only exercised the power of "persuasion" and "consulting."

who are capable of lending. Therefore, establishing a central bank creates an opportunity for a leader to build a coalition with the elites and gain cheaper credit. If such a reasoning is empirically correct, then we will observe the same pattern that states with central banks are able to borrow at lower costs, as pointed out by Poast. However, the causal impact is driven by domestic income inequality, rather than solutions to a credibility problem or collective action problem in sovereign borrowing.

(3) International/Structural Factor: Reserve Currency Status and Financial Globalization

Lastly, an emphasis on international factors is also common in the literature on war finance. The work of Rosella Cappella (2013) on sterling's role in the 19th century *Pax Britannica* provides an important example of exploring the impact of reserve currency status on war finance. Rosella Cappella argues that reserve currency status may enhance the state's borrowing capacity. The reason, based on Cohen (2015:73-74), is because when a country's national money is used for international purposes, borrowing capacity could be effectively enhanced "by the willingness of outsiders to accept and hold the currency as a store of value…. Outsiders in effect take the currency as a form of IOU…. It is viewed simply as providing an attractive asset that foreigners can use for a variety of cross-border purposes." Such a structural power (in Cohen's term, the *power to delay*) should encourage a state to more heavily rely on borrowing instead of politically costly taxation.

Focusing on the hegemon in modern times, the American hegemony, Oatley (2015: 6-14, 151-153) argues that the US government has predominantly relied on the deficit-financing strategy (domestic and foreign borrowing) to pay for postwar military buildups because of the combination of two factors. First, domestic institutions: American political institutions

divide and decentralize political authority. This decentralized system creates many veto players and is prone to gridlock. Therefore, it greatly restricts the US government's ability to raise taxes or reduce non-military spending. Second, international financial power: American's financial power enables the United States to borrow from the rest of the world in large volumes, for extended periods, at low interest rates. Essentially, Oatley's idea about the international financial power echoes Cohen's notion of monetary power. It is worth pointing out that Oatley primarily emphasizes the *power to delay*, one "hand" of monetary power defined by Cohen (2015).

Oatley's focus of the interplay between domestic institutions and international financial power illuminates a potential lens for studying the impact of inequality. In Oatley's analysis of domestic institutions, he articulates how institutional constraints — the decentralized political system — provide domestic actors with many opportunities to block undesirable war finance choices (either taxation or reduction of non-military spending). However, an unanswered question is why domestic actors would sometimes prefer a costly gridlock and swelling deficits (e.g. the Vietnam War, Reagan military Buildup, and War on terrorism), while other times they can reach a consensus to balance the budget (the Korean War). Oatley's answer to the challenging case —the Korean War — is that there was simply no difference in preference between the Truman administration and the Congress (Oatley, 2015: 82). This answer is unsatisfactory. A more complete analysis needs to show under what conditions do actors' preferences conform to each other, and what drives them to conflict. A potential condition could be domestic economic inequality. As the Meltzer-Richard model (1981) implies, higher inequality is expected to cause a stronger demand for redistribution and a greater financial burden on the wealthy. Under such circumstances, the wealthy elite are expected to eagerly oppose taxation, while the relatively poor citizenry

would fervently resist reduction of non-military spending. This could encourage both actors to intensively block unwanted policy outcomes by taking advantage of the decentralized political system. Moreover, a large amount of literature points out that increasing political polarization in the United States might be causally attributed to rising income inequality (Bartels, 2009; McCarty, Poole and Rosenthal, 2006; Garand, 2010; Voorheis, McCarty and Shor, 2015). Therefore, economic inequality may increase the likelihood of gridlock in the decentralized political system. Likewise, rising inequality may also polarize parties and the whole society. Taken together, inequality creates the conditions that lead governments to resort to borrowing.

There is another missing story in Oatley's analysis on the international financial power. Oatley's conceptualization of financial power, the ability for a country as a whole to borrow (Oatley, 2015: 86-89 98-103), echoes Cohen's idea of the *power to delay* (Cohen, 2015). However, Oatley indicates that a state's financial power is fundamentally derived from *structural variables* — economic size, financial development, its location in the network structure of the international financial system. In other words, Oatley's conceptualization actually mixes two distinct hands of financial/monetary power as articulated by Cohen (2015: ch.3) — *the power to delay* and *the power to deflect*. Due to the mix, Oatley does not adequately address how America's financial power facilitates its attempt to deflect the costs of adjustment[27] to other countries when external imbalances occur. To be sure, Oatley does

[27] Cohen (2015: 56-64) distinguishes between two distinctly different kinds of adjustment cost when countries try to deal with current account imbalance — one *continuing*, the other *transitional*. According to Cohen, the *continuing cost* of adjustment may be defined as the cost of the new payments equilibrium *prevailing after all change has occurred*. One example of the continuing cost of adjustment could be economic sacrifices imposed on deficit countries once the adjustment process is complete. In this new equilibrium, deficit countries receive less output than they used to enjoy. For instance, assume that a deficit country devaluates it currency to adjust its deficits. After currency devaluation, the country will need to pay more to import the same amount of foreign goods it used to import because now the relative prices of foreign goods increase. Thus, the deficit country may need to reduce its consumption of foreign goods (continuing sacrifices after adjustment).

The *transitional cost* of adjustment, by contrast, may be defined as *the cost of the change itself*. It is about the sacrifices imposed by the *adjustment process*. The critical question is *who bears more the burdens of*

mentions that the US government sought to deflect the adjustment costs by manipulating its trading partner's economic and security dependence (Oatley, 2015: 107-126). However, such an analysis do not explain what constitutes the power to deflect and why. Does strong military power or economic predominance a necessary and sufficient condition for deflecting adjustment costs? What is the causal mechanism that military power or economic predominance may work through to affect the power to deflect? Any complete analysis on financial power needs to properly address those questions.

The focus on international financial power raises another question — does financial globalization have any impact on state choices in war finance? In the light of civil war literature, Kirshner (2007) implies that financial globalization may inadvertently offer opportunities and safe havens for non-state organized violence (e.g. terrorist groups) that operates outside the normal financial network. (Kirshner, 2007: 221-222). A logical extension is that increasing capital mobility may transform war finance strategy, making states more likely to rely on debt-financing in fighting. If such a rationale is correct, it will open another angle for scholars to analyze the impact of domestic income inequality. For example, Azzimonti et al (2014) argue that that the growing stocks of government debt in industrial countries since the early 1980s could be explained by a combination of two factors: 1) the international integration of financial markets; and 2) the rising domestic income inequality (Azzimonti et al, 2014: 2267). Their basic rationale is that rising income inequality is associated with higher uninsurable income risks because the rich tend to spend their additional income on high-risk investment and lending. As a result, the rich would also

adjusting the imbalance. For example, if a trade imbalance exists between two countries, the imbalance could be adjusted either by policies of domestic deflation or currency devaluation in the deficit country. The imbalance could also be adjusted by domestic expansion or currency revaluation in the surplus country. Or, the imbalance could be adjusted by join efforts of both countries. Apparently, in this process of adjustment, which country is forced to enact larger number and more painful adjustment policies bear more *transitional cost*.

have a higher demand for public debt as a safe asset. And financial globalization creates more opportunities for the governments to issue more debt at the same yield.

Kumhof et al (2012) and Kumhof, Ranciere, and Winant (2015) also argue that a sharp increase in income inequality is likely to incentivize the rich to engage in financial intermediation and leveraging in order to accumulate more wealth. In contrast, the poor and the middle class are likely to resort to heavily borrowing for maintaining a standard of living. These two trends might increase the pressure on governments to borrow more from abroad.

To sum up, Azzimonti et al (2014) and Kumhof et al (2012) may offer an important implication for war finance: domestic income inequality is likely to create stronger preferences for higher private and public debts, and financial globalization produces more opportunities and incentives for governments to borrow. These two factors jointly would make debt-financing a dominant strategy to pay for war effort.

(4) The Holistic Approach: Preference of Leader, Public Support and State Capacity

Lastly, Rosella Cappella Zielinski (2011, 2012, 2016) studies war finance by using a holistic approach that combines multiple factors at different levels. Rosella Cappella Zielinski's argument has three essential elements. First, Rosella Cappella Zielinski indicates the importance of political leaders' preferences regarding public support for war. Every leader wants to secure his political survival, so public support for war plays an important role in the war finance decision. If public support for war is low, a leader would try to avoid taxation (or any other methods of direct extraction) because it directly imposes costs on citizens and draws most attention to the war effort. In contrast, high public support in favor

of the conflict reduces the political costs to leaders of choosing taxation (Zielinski, 2016: 19-21).

Second, a political leader cares also about the risk of inflation. If the risk of inflation is low, a leader would be more likely to resort to borrowing (either domestic or foreign borrowing) or monetary creation that is prone to increase the risk. In contrast, if the inflation threat is imminent, a leader would be more likely to choose taxation (Zielinski, 2016: 21-23).

Third, Rosella Cappella Zielinski suggests that leaders' preferences are bounded by bureaucratic capacity and resource endowment. Specifically, a state with low bureaucratic capacity of extracting domestic revenue limits the likelihood of taxation. Furthermore, if a state is unable to procure enough currency reserves to purchase war inputs from abroad, it will need to rely on external borrowing (Zielinski, 2016: 23-26)

Rosella Cappella Zielinski's focus on political leaders and bureaucrats is insightful. However, empirically the relationship between public support and war finance strategies is more complex. Historically, political leaders usually promote patriotism and public support for war through various means, including progressive taxation. For instance, during the two world wars the UK created a more progressive tax system to secure public support for war. This was also the rationale behind Winston Churchill's support for using a war levy to pay for the debts of World War I (Daunton, 2008: 57, 80) Since the relationship between public support and war finance strategy is dynamic and mutually endogenous, a more complete analysis may need to point out under what conditions can leaders more successfully neutralize the constraint of public support on war finance choices, and/or under what conditions can leaders utilize war finance strategy to generate public support. A potential condition could be domestic economic inequality. Scholars point out that domestic

economic inequality tends to cause political polarization (Bartels, 2009; McCarty, Poole and Rosenthal, 2006), heightens social instability and pressures (Turchin, 2016), and makes politics more discordant and contentious/fractious (Doner, and Schneider, 2016: 620) Domestic inequality thus may mediate the relationship between public support and war finance strategy. Likewise, domestic economic inequality could also affect bureaucratic capacity by intensifying internal conflicts and *bureaucratic politics* within bureaucracy.

3. Economic Inequality and War Finance Strategy

This chapter has demonstrated the importance of incorporating domestic economic inequality as an independent variable into war finance studies. While most of the literature overlooks the causal impact of domestic inequality, there are two rare exceptional works that highlight the causal relationship between domestic inequality and war finance.

Kriner, Lechase, and Rosella Cappella Zielinski (2015) tackle the question head-on. They build on Flores-Macias and Kreps' experimental research (2017), which argues that the introduction of a war tax significantly reduces support for war in the American context. Kriner, Lechase, and Rosella Cappella Zielinski (2015) replicate most of the experimental design, but manipulate the treatment of introduction of different type of taxation. They show that war taxation targeting the very wealthy not necessary reduce American public support for the use of force. Rather, Americans assess war taxation both through the lens of economic self-interest (whether they are rich and whether they need to pay for most of the costs) and by using partisan heuristics. Kriner, Lechase, and Rosella Cappella Zielinski suggest that social cleavage within a society has a great impact on the choice in war finance, and economic inequality can intensify the cleavage.

Focusing on the variation of democracies' foreign policies, Caverley (2014: 12-15) argues that inequality encourages democracies to build capital-intensive militaries, which lower the costs of arming and military conflict for the median voter. Therefore, economically unequal and heavily capitalized democracies are more likely to engage in aggressive foreign policy and fight wars. In Caverley's term, domestic inequality creates the seed of *democratic militarism*. Caverley's argument hinges on two propositions. 1) The Meltzer-Richard model, which argues that the median voter demands more redistribution as inequality grows. 2) Military spending, as progressive taxation or welfare programs, has the potential for redistribution. The rationale behind is that while military spending increases security (a public good that benefits everyone), it is usually paid disproportionately by the rich (Caverley, 2014: 29). In essence, Caverley suggests that economic inequality creates a strong incentive for the median voter (i.e. the majority of citizens) to ask for more spending on capital-intense militaries.

Caverley insightfully depicts a potential role for inequality in democratic foreign policymaking. However, his argument is unsound due to a problematic proposition.[28] First, it is unconvincing to assume that the relatively poor citizens would prefer to advocate increasing military spending to further their redistributive goal, especially when military spending is likely to crowd out non-military spending that offers more redistributive benefits for the poor. Second, if military spending is financed mainly by domestic borrowing and reducing non-military spending rather than by progressive taxation, it will cause *regressive* redistribution that hurts the poor citizens. This may discourage them from supporting deficit-financing military spending. Fundamentally, such problems in Caverley (2014) are rooted in the neglect of analyzing war finance choices — he never addresses how states raise revenues

[28] The fundamental problem is rooted in his second proposition.

for war efforts. Nor does he elaborate the role of inequality in determining states' war finance strategies. To further a more sound understanding, I hope to fill the gap by exploring how domestic inequality affects states' choices of war finance strategies.

"**In order to concentrate all our energies and resources on winning the war, and to maintain a fair and stable economy at home, I recommend that the Congress adopt a realistic tax law—which will *tax all unreasonable profits, both individual and corporate*, and reduce the ultimate cost of the war to our sons and daughters.**"

——— *Franklin D. Roosevelt 1944* ———

"**We can fight in Vietnam while also *building a Great Society***"

——— *Lyndon B. Johnson, 1966* ———

"**It costs a lot to fight this war… Whatever it costs to defend our country, we will pay… To achieve these great national objectives—to win the war, protect the homeland, and revitalize our economy—our budget will *run a deficit* that will be small and short term, so long as Congress *restrains spending* and acts in a fiscally responsible manner ... most Americans thought tax relief was just about right…For the sake of long-term growth and to help Americans plan for the future, let's make these *tax cuts* permanent.**"

——— *George W. Bush, 2002* ———

Chapter III. A Redistributionist Theory of War Finance

How does domestic economic inequality affect a state's war finance strategy? To answer this question, I first model the choice of war finance as a result of triangular strategic

interactions among three sets of domestic actors—the political the leadership,[29] the wealthy elite,[30] and the rest of a state's population, the general public.[31] From this discussion I deduce a number of theoretical propositions about how domestic inequality affects such strategic interactions. I then outline an empirical strategy to test my hypotheses.

1. Main Argument

(1) Assumptions about the Leadership, the Wealthy Elite, and the Public

Political leaders are assumed to care about their own political survival. Political survival can be threatened by external threats or domestic challenges. In the face of security threats, leaders have an incentive to increase military buildups because the risk of being removed from office would hike sharply if they are defeated or perform incompetently in a war. Domestic challenges to an incumbent leadership include losing the support of key supporters, the rise of an opposition, or social unrest. Such challenges are more likely when a leadership lacks the resources to maintain social stability. Moreover, domestic challenges become imminent when leaders choose policies that incite resentment or resistance. In

[29] I use "the leadership" to represent one or more central individuals with the political authority in a country to raise revenue and allocate government funds to pursue chosen policies, including private uses of the monies as well as uses aimed at the general welfare. The top priority for those individuals, aka political leaders, is to hold office. Holding office and securing their political survival is one of the core conditions for accomplishing any of their goals (B. D. Mesquita, 2003:7-8, 38-39). Political leaders are different from rich people, the affluent, or the wealthy elite because leaders' interests are enmeshed in state apparatuses. Therefore, maintaining national security and accumulating political power & autonomy are leaders' main concerns because these factors affect their chances of holding office (political positions). From now on I will use the political leadership, political leaders, and leaders interchangeably.

[30] I use "the wealthy elite" to represent the small group that control a disproportionate shares of wealth within the society. As pointed out in previous footnote, the wealthy elite are different from political leaders because the interests of wealthy elites are, first and foremost, defined by their own wealth and property. The central goals of wealthy elite are to protect their own wealth and to maximize it. The wealthy may also want to acquire power occasionally. But for the wealthy, gaining power is not a goal but an instrument. The ultimate objective is to secure and increase their own economic well-being. From now on I will use the terms "the wealthy," "wealthy elite," and "elite" interchangeably.

[31] The "general public" represents the majority of general public whom are poor relative to the wealthy elite. From this point on, the rest of state population, which are poorer than the wealthy elite, will be referred to "the general public" or "the public" interchangeably.

mature democracies, these challenges may result in demonstrations, riots or electoral defeats. In nascent democracies, they can lead to leadership turnovers or even regime breakdowns. In authoritarian regimes, these may cause a coup d'état.

It follows that a leadership's choice of war finance is affected by two factors: (1) whether its war finance strategy will raise funds sufficient to win a war, and (2) concerns about social instability caused by the chosen war finance instruments. To maximize revenue for war while minimizing social instability, a political leadership must navigate competing social coalitions to reach a fiscal bargain—a war-finance strategy. As noted in the previous chapter, each war finance instrument is associated with specific redistributive consequences. Those redistributive consequences become the obstacles to particular fiscal bargains by affecting levels of instability and the amount of expected revenue.

I begin with two sets of assumptions regarding social actors. First, I assume that every individual in a society cares about his or her well-being and tries to maximize his/her own self-interest. Accordingly, individuals access the necessary information and make retrospective evaluations of the incumbent leadership to see whether their welfare has increased through the leadership's effort (Moene and Wallerstein, 2003: 489; Achen and Bartels, 2002). If the leadership acts against their interests, they will have an incentive to engage in a collective action that challenges the leadership.

The second set of assumptions is based on the common notion of Boix (2003) and Acemoglu and Robinson (2006: 22-23) that there is a national political conflict between the rich and the poor. I thus divide the whole society into two groups: the wealthy elite, who are the relatively rich; and the public, the rest of the society who are relatively poorer than the rich.

A wealthy elite is affected by two factors. First is the financial burden of the war effort that they expect to bear. Such a factor may be indirectly affected by domestic economic inequality. For example, if domestic inequality is high, meaning the wealthy elite controls a disproportionate amount of resources, they are likely to become the main target payer. Second is the probability that they can successfully mobilize to resist any undesired policy or pursue compensations. Due to potential collective action problems, such a factor is associated with the size of the wealthy elite, its relative power, and how homogeneous are its interests. For analytical parsimony and tractability, I follow the literature (Acemoglu and Robinson, 2006; Boix, 2003; Ansell and Samuels, 2014) and assume that the wealthy elite's likelihood of mobilizing and prevailing in the policy process is proportional to the resources they control. This factor is directly and positively associated with domestic economic inequality.

The public also care about two things. (1) Since the majority of citizens are poor relative to the wealthy elite, they are inclined to ask the wealthy elite to make more financial contributions in fighting a war due to fairness concerns or the pursuit of preferable wealth redistribution. Their demand for redistribution becomes stronger with an increase of domestic economic inequality. (2) The public, however, suffer a more serious collective action problem due to their relative lack of resources. When interacting with political leadership and wealthy elites, poor citizens' relative resource constraints affect their organizational capacity for political mobilization. Just as in the case of the wealthy elite, domestic economic inequality has a critical impact on such a factor. In a nutshell, low inequality means that there is only a modest asymmetry between the resources controlled by the wealthy elite and those controlled by the public.

Finally, I make two ancillary assumptions about social actors' preferred strategy in response to undesired policy outcomes. First, for the wealthy elite, who command more abundant financial resources, they can be expected to prefer to utilize financial strategies (bribery, credit rationing, lobbying, capital flight) to prevent the government from choosing war finance instruments unfavorable to them. In other words, the wealthy elite's influence works mostly through manipulating the leadership's funding for war. Second, the public is less likely to rely solely on financial strategies. Instead, it needs to leverage the "voice strategy," including political campaigns, voting, street protests, riots, or threatening rebellion.[32] In other words, the public could affect the leadership's regime security by causing social instability.

Below, I articulate how domestic inequality may affect the factors identified above and eventually influence actors' preference orders and interactions regarding strategic choices for war-finance.

(2) The Externalities of Inequality

Domestic economic inequality is a source of social and financial instability. Inequality usually causes political polarization that makes politics more contentious (Bartels, 2009; McCarty, Poole and Rosenthal, 2006: 10-13). Inequality also tends to reduce social trust and social capital and may lead to political and societal gridlock (Rothstein and Uslaner, 2005). More important, economic inequality is likely to precipitate severe struggles for redistribution. Building on Meltzer and Richard's canonical model (1981), Boix (2003), and Acemoglu and Robinson (2006) show that greater inequality heightens the public's demand

[32] In authoritarian regimes, unsatisfied citizens can pose a threat of rebellion or revolution; in democracies, unsatisfied citizens can pose a threat of deposition or vote of confidence. Of course, citizens can also mobilize political campaigns against an unsatisfactory incumbent leaders or simply use ballots to punish them.

for redistributing wealth from the wealthy. Higher inequality, however, increases the wealthy elite's aversion to redistributive policies because they need to pay more to "appease" the public. With a high level of inequality, the wealthy elite are more able to foil the redistributive policies favored by the poor because the wealthy possess a disproportionate share of resource endowments. As a result, the redistributive conflict will breed two distinct political mechanisms that generate social instability. The first mechanism is *clientelism* that works against the resourceless public.[33] Clientelism paves the way for elite capture, economic entrenchment, and corruption. The second mechanism is *populism*, defined as unorganized and often violent populist movements with personalistic leadership that addresses broad but unorganized discontents. Populism works against the established powerful elites through disruptive and unsustainable movements (Doner and Schneider, 2016: 622-623). Polarization, loss of social trust, clientelism, and populism all contribute to further social instability (Turchin, 2016).

Economic inequality also causes financial instability by increasing debt leverage in the private sectors. Piketty (2014) offers the most straightforward reason:

> There is absolutely no doubt that the increase of inequality in the United States contributed to the nation's financial instability. One consequence of increasing inequality was virtual stagnation of the purchasing power of the lower and middle classes in the United States, which inevitably made it more likely that modest households would take on debt, especially since unscrupulous banks and financial intermediaries, freed from regulation and eager to earn good yields on the enormous

[33] Clientelism is defined as an asymmetric relationship between groups of political actors(described as patrons, brokers, and clients) and their supporters. Clientelism involves the exchange of goods and services for political support, often involving an implicit or explicit quid-pro-quo and corruption (Stokes, et al. 2013).

savings injected into the system by the well-to-do, offered credit on increasingly generous terms (Piketty, 2014: 297).

Piketty's sharp warning is further elaborated by Kumhof, Rancière, and Winant (2015), and Ahlquist and Ansell (2017). Kumhof, Rancière, and Winant (2015) argue that when inequality rises, meaning the rich (top income earners) control a larger share of national income, the rich will have an incentive to put their increased wealth and savings into the financial sector to earn more financial returns. The rich do so because investing financial wealth offers higher returns and helps them concentrate more wealth, an idea echoed with Piketty's famous inequality equation: $r > g$.[34] Because now financial companies receive additional capital from the rich, many of them will likely be prompted to lend more to the poor public (bottom income earners). By accumulating financial wealth through lending booms, the rich enable the poorer public to temporarily limit the drop in their consumption, but the resulting increase of the poor's debt-to-income ratio generates greater financial fragility.

But why can't the public simply reduce consumption to avoid being indebted? Ahlquist and Ansell (2017) articulate another critical mechanism. With a higher level of inequality, the rich gain additional income to compete for important "positional goods" such as desirable housing and quality education. The competition drives up prices. Accordingly, middle-income and poorer groups, whose real wages are relatively stagnant, will need to borrow much more to maintain the same level of consumption of critical positional goods.

[34] Piketty's (2014) argues that the cause of inequality in wealth distribution in modern times can be simply summarized as: "$r > g$", in which r stands for the average annual rate of return on capital (e.g. profits, dividends, interest, rents, and other income from capital), and g stands for the rate of growth of the economy: the annual increase in income (wage earnings) or output. Simply put, the wealth inequality is caused by the fact that the top-percentile rich group earns income primarily through the returns on financial assets, while the rest of society rely heavily on wage earnings. When the economic growth slows down and the wages stagnate,

Otherwise, they will be left behind since those positional goods (quality housing and education) are usually the key to better standards of living and opportunities for social mobility. In short, inequality feeds into financial instability, which eventually makes society prone to financial crises.

Because domestic economic inequality generates social and financial instability, it constitutes the upper bound for the revenue that each war finance instrument can extract. More important, inequality directly contributes to the intensity of political struggle for redistribution. Therefore, inequality affects the preferences for war finance, and strategic interaction, of leaders, the wealthy, and the public.

(3) Leadership, Wealthy Elite, and Public War Finance Preferences

Wealthy Elite

In a baseline scenario, the wealthy elite may have the greatest incentive to oppose war taxation because they usually have to bear much heavier financial burdens when taxes rise.[35] Accordingly, wealthy elites can be expected to prefer any forms of financing that could deflect their burdens, and the reduction of non-military spending precisely serves their best interest. Likewise, government borrowing is also in the wealthy elites' interest because a deficit-financing strategy not only eases the burdens on the wealthy but also serves them as a type of capital investment (Stasavage, 2003: 28).

In addition, a deficit-financing strategy can indirectly increase the wealthy elite's bargaining power and lead to cuts in government spending. This idea is articulated as the "starve-the-beast" budgetary strategy: a higher budget deficit will force politicians to enact

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the faster and larger growth rate of returns on capital would help concentrate the wealth in the hands of the to top-percentile rich group.

spending cuts (Bartlett, 2007). Alan Greenspan nicely explained the rationale on July 14, 1978 at a hearing of the Senate Finance Committee: "the basic purpose of any tax cut program in today's environment is to reduce the momentum of expenditure growth by restraining the amount of revenues available and trust that there is a political limit to deficit spending" (Senate Finance Committee 1978, 172). Milton Friedman made this point even more succinct in his *Wall Street Journal* commentary (Friedman, 2003):

> How can we ever cut government down to size? I believe there is one and only one way: the way parents control spendthrift children, cutting their allowance. For government, that means cutting taxes. Resulting deficits will be an effective – I would go so far as to say, the only effective – restraint on the spending propensities of the executive branch and the legislature. The public reaction will make that restraint effective… Tax cuts may initially raise the deficit above the politically tolerable deficit, but their longer term effect will be to *restrain spending*.

If a government resorts to borrowing, the wealthy would prefer the composition of government debt to be predominantly domestic borrowing rather than foreign borrowing. This is because external public debt is likely to cause a transfer from domestic wealth holders to the foreign lenders. Besides, when government spending is financed mainly through foreign borrowing, rich investors do not accumulate as much wealth or as rapidly as they might otherwise.[36] Lastly, the wealthy are unlikely to support a policy choice of money

[35] As Acemoglu and Robinson (2006: 36) point out, if a state raises either progressive or even flat taxes to finance its spending, it will put greater financial burdens on the elite relative to the majority of citizens in absolute terms.

[36] This is due to the effect on interest rates. As explained in the previous chapter, government borrowing from abroad does not increase domestic interest rates as much as domestic borrowing does. Hence, domestic lenders will earn lower returns when government debt is predominated by foreign borrowing.

creation because it lowers interest rates and makes their earnings uncertain. The baseline preference order of wealthy elites is: reduction of non-military spending > domestic borrowing ≥ foreign borrowing > money creation > taxation.

The Public

In the baseline scenario, the public can be expected to prefer the government to provide as many social welfare programs and infrastructure investments as possible. They will also naturally prefer that the wealthy elite shoulder more financial burdens. Accordingly, as long as it is understood that wealthy elites have to pay most of the taxes, the public prefers a strategy of using steeply progressive taxation to finance war costs while strongly opposing the choice of reducing non-military spending. At first glance, it might seem counterintuitive to suggest that the public would prefer taxation. The core reason is that wars usually create the best opportunities to tax the rich and promote a progressive tax system. Besides, the public's support for taxation, including taxing both the rich and themselves, can legitimate their request for limiting cuts in welfare expenditures and foster political alliances.[37] As for a deficit-financing strategy, because public debts not only put an upward pressure on interest rates but also have the potential to regressively redistribute wealth from the poor to the rich, the public has an incentive to prevent their government from overly relying on domestic borrowing to pay for war. Furthermore, as indicated by the "starve-the-beast" hypothesis, a deficit-financing strategy may create pressure for reducing welfare spending in the future.

[37] Please see the relevant discussion of taxation in chapter 2. Also, citizens may even gain more representation through the "accountability-enhancing." Lisa Marin (2014) argues that taxation would increase citizens' preferences over government accountability and thus could contribute to better governance. The causal impact works through the cognitive mechanism: "by taking away earned income, taxation pushes loss-averse citizens below their reference point, increasing the utility citizens lose from corruption and making them more likely to enact costly sanctions against non-accountable officials." Marin conducted the laboratory experiments in Uganda and found confirming evidence.

As a result, the public has an incentive to support progressive taxation to pay for war immediately.

If new progressive taxes cannot be levied, the public will be forced to accept government borrowing as a "second-best" option for preventing immediate cuts in social welfare programs. In this case, the public will prefer that the government rely more on foreign borrowing because government financing through foreign capital may raise interest rates less than resorting to domestic borrowing. Lastly, the public has reason to support money creation to pay for war because they are more likely to benefit from a lower interest rate, driven down by money creation. The baseline preference order of the public thus is as follows: money creation = progressive taxation > foreign borrowing ≥ domestic borrowing > reduction of non-military spending.

Leadership

When a country is fighting a war, the leadership's tenure is at risk. To maximize the chance of defeating external threats, leadership must navigate social cleavages to strike a fiscal bargain that secures both revenue extraction and national morale. In essence, a key priority of leadership is to maintain political and financial stability. Therefore, leaders can be expected to pay special attention to both the macroeconomic and the redistributive consequences of each war-finance strategy.

In the baseline scenario, when it comes to deciding whether to include money creation into the war finance portfolio, the political leadership is expected to take two effects into account: the risk of inflation and political awareness. Almost every war is inherently inflationary, and history shows wars are commonly associated with monetary disorder (Kirshner, 2007: 2; Cappella, 2016: 40-45). Although monetary creation does not

automatically lead to inflation,[38] it is easy to spark social anxiety and speculation about monetary disorder during wartime. So, a higher risk of inflation is likely to deter leadership from depending greatly on money creation. Conversely, if the risk of inflation is mild, money creation could be a convenient leadership strategy because citizens may not be aware of it immediately. This characteristic naturally brings a "time-dimension" into the leadership's calculation. In the initial stages of war, if the leadership resorts to money creation, it can be expected to do it secretly. As time goes by, however, the consequences of money creation are likely to rise to the surface. Such consequences may include inflation or wealth redistribution that can easily devolve into social conflict. Finally, political leadership must also pay attention to institutional constraints, such as an independent central bank. With an independent central banker in the decision-making process, a political leader is likely to confront increased costs in pursuing money creation, including administrative and political costs.

If a war is not expected to end swiftly, the political leadership is unlikely to rely solely and persistently on money creation because it almost always causes financial instability. Accordingly, the leadership would have to consider other war finance strategies.

In deciding whether to resort to taxation to pay for war, leaders take into account the potential reactions of both wealthy elites and the public. If the wealthy oppose war taxation through *exit* (e.g., through capital flight or tax evasion) or *voice* (e.g., lobbying against or allying with other potential challengers), leaders may risk failing to collect enough revenue for war.

When reducing non-military spending, leaders pay special attention to public discontent. If the majority of the public fervently challenges reducing non-military spending by voting,

[38] It depends in particular on how much slack (unemployment) there is in the economy.

protesting, or revolting, leaders may confront heightened social instability. Social instability usually has a negative impact on the fighting capacity of a state. It may also lead to revenge voting (in democracies) or rebellion (in authoritarian regimes). It is especially dangerous during wartime because of its easy translation into regime instability, given that a sizable portion of the armed forces (the state's major coercive force) is sent to the front.

In the case of domestic or foreign borrowing, political leaders are concerned with the political and economic costs of debt. The economic cost of debt includes rising interest rates and the risk of credit rationing. An unsustainable amount of debt also increases financial instability (Rogoff and Reinhart, 2011). More important, leadership cares about the political cost of debt. First of all, government debt puts constraints on state capacity. As the "starve-the-beast" hypothesis argues, large amounts of government debt are likely to create pressure for cutting government spending or limiting state expenditure choices. A further extension is that being indebted is likely to cause a threat to state autonomy and power. This of course worries leaders. In addition, chronic government indebtedness endangers political legitimacy. For example, during WWI Woodrow Wilson argued: "borrowing money is short-sighted finance. We should pay as we go. The industry of this generation should pay the bills of this generation" (Kreps, 2018: 1-2). This idea was echoed by economist Oliver Sprague, who alluded that borrowing was an unjust way to wage war (Rockoff, 2012:112).

Lastly, political leadership carefully evaluates the balance of power (resources and capacity for mobilization) between the wealthy and the public. Such a power balance is likely to affect the amount of funds being raised either through domestic or foreign borrowing and the likelihood of social instability caused by these two war finance strategies.

The baseline preference order of a political leadership is more complicated and dynamic. Holding other things constant, the leadership would normally prefer to create money over

the short term. As war progresses, it would hope to resort to taxation to build state capacity. Because it cares about its own power and autonomy, it might resort to domestic and foreign borrowing only when taxation is difficult to enact. Lastly, leaders are likely to avoid spending cuts, *ceteris paribus*, because those cuts tend to erode public support for the governments. In addition, reducing the size of government programs may decrease state apparatuses' power and capability. Therefore, the leadership's preference order is: short-term money creation > taxation > domestic borrowing > foreign borrowing > reduction of non-military spending.

Table 3-1 summarizes the discussion of the baseline preference order for each set of actors.

Table 3-1 The Baseline Preference Order for Each Set of Actors

Actor	Baseline Preference Order								
Leadership	Money Creation (short-term)	>	Taxation	>	Domestic borrowing	>	Foreign borrowing	>	Reduction of Non-Military Spending
Wealthy Elite	Reduction of Non-Military Spending	>	Domestic borrowing	≥	Foreign borrowing	>	Money creation	>	Taxation
Public	Money Creation	=	Progressive Taxation	>	Foreign borrowing	≥	Domestic Borrowing	>	Reduction of Non-military Spending

(4) Inequality, War Finance Preference and Strategic Interaction

In this section, I spell out how different levels of inequality (low, high, and extremely high) affect the interactions of actors and war finance strategic choices.

War Finance at a Low Level of Inequality: Taxation, Social-Spending Cuts, and Money Creation

When domestic economic inequality is relatively low, the public's demand for redistribution as well as welfare programs can be expected to be relatively moderate, so the financial burdens placed on the wealthy are likely to be less painful. Furthermore, a low level of inequality also means that resources, including money and power, are not predominantly concentrated in the hands of wealthy elites. Therefore, wealthy elites have fewer resources for successfully mobilizing, and their chance of prevailing in policy-making processes may decline. By contrast, the majority of the public is more capable of overcoming collective action problems to pursue their societal goals.

In such a circumstance, the public has a strong incentive to advocate for progressive war taxation while opposing a deficit-financing strategy. Progressive taxation redistributes wealth, which benefits the poorer majority of the public in the long term, while government borrowing creates opportunities for the wealthy to shift fiscal burdens onto the citizenry in the future. Besides, citizens will resist reductions in non-military spending, though their resistance may be minor because demand for welfare programs is likely to be lower when inequality is low. Lastly, the majority of the public may support money creation because it serves their short-term interests. Following the creation and flow of more money, their private debt burdens may be eased, and nominal wages may rise.

The wealthy elite may advocate reductions in non-military spending because they foresee relatively weaker opposition from the citizenry. Besides, even though the wealthy also prefer government financing through domestic borrowing, they may not eagerly advocate such a choice because they are concerned about stronger citizen resistance and problems committing to debt repayment. That is, if the government defaults, the wealthy elite may be unable to effectively punish it since they control fewer resources. Furthermore, although the wealthy oppose progressive taxation, their opposition becomes less significant because financial burdens may not be too daunting especially when non-military spending is being cut. Lastly, the wealthy elite may not support money creation because it tends to decrease nominal interest rates as well their profits. Their resistance, however, may be weak since they may also benefit from the economic booms stimulated by money creation.[39]

Political leaderships choose war-finance strategies based on their monitoring and evaluation of inequality and domestic redistributive conflicts as well as the estimated threat environment. A low level of inequality implies relatively minor social and financial instability. Leaders are thus more likely to prefer war taxation while avoiding a deficit-financing strategy and, given a manageable risk of inflation and institutional constrains, may choose money creation as well. Leaders expect that such choices may win public support without provoking the wealthy. Moreover, they will also consider reductions in non-military spending when inequality is low since they envisage modest public opposition because of the public's relatively low reliance on or demand for welfare programs. Besides, the majority of the public is expected to be appeased by the adoption of progressive war

[39] A low level of inequality may be associated with certain conditions that might minimize wealthy elites' opposition to money creation. First, inferred from the literature on inequality (Piketty, 2014; Kumhof, Ranciere, and Winant, 2015; Kumhof et al., 2012), a low level of inequality implies that there is no significant difference between the income composition of wealthy elites and that of the general citizens. If, just as the majority of citizens do, the wealthy elite accumulate income mainly through wage earnings, they may also benefit from the economic booms stimulated by money creation. Second, a low level of inequality is associated

taxation. By cutting non-military expenditures, wealthy elite opposition to taxation and money creation would also be further mitigated due to smaller financial burdens. To sum up, a low level of inequality paves the way for a political leadership to strike a fiscal bargain that achieves "equality of sacrifice" between the wealthy elite and the public.

To sum up, these considerations suggest the following testable hypotheses:

Hypothesis 1: The lower the level of domestic economic inequality, the more likely it is that a state would resort to war taxation to finance war efforts.

Hypothesis 2: The lower the level of domestic economic inequality, the more likely it is that a state will pay for war costs by reducing non-military spending

Hypothesis_Money$_{(1)}$: The lower the level of domestic economic inequality, given a manageable risk of inflation, the more likely it is that a state will resort to money creation to finance war efforts, ceteris paribus.

War Finance at a High Level of Inequality: a Deficit-Financing Strategy

When domestic economic inequality rises and reaches a high level, the public's demand for welfare programs is likely to grow. Hence, the financial burdens placed on the wealthy elite increase. This may give wealthy elites a stronger incentive to forestall any potentially progressive redistribution policies. In addition, a high level of inequality implies that the resources concentrated in elite hands are greater. Therefore, the wealthy elite would have a better chance of successfully mobilizing and prevailing in pursuit of their interests. By

with low inflation (Romer and Romer 1999, Easterly and Fischer 2001, Erosa and Ventura, 2002; Albanesi, 2007).

contrast, the public suffers a more severe collective action problem due to resource constraints should they try to further their societal goals.

In such a circumstance, the wealthy elite would be likely to staunchly oppose war taxation while eagerly advocating domestic borrowing and reducing non-military spending. Paying for war by borrowing serves the wealthy elite's interests because such a financing strategy not only eases their tax burdens but also provides a reliable form of capital investment for them. More important, a deficit-financing strategy can create the constraint that put future welfare expenditures in a straitjacket.[40] Furthermore, the wealthy elite will resist money creation because it puts their financial returns at risk.

The public is likely to oppose reductions in non-military spending since they now have a stronger demand for and dependence on welfare expenditures. By the same token, they may also strongly favor a "soak-the-rich" war finance strategy, e.g., wealth taxes, inheritance taxation, or income taxes with steep progressivity. However, if the public expects that the wealthy elite, who are much more powerful now, would fiercely resist the adoption of taxation or effectively mobilize to urge social spending cuts in retaliation, the majority of the public may accede to the wealthy elite's preferred choice—domestic borrowing. Although government resort to domestic borrowing would incur loss for the majority of the public by raising interest rates, such a war finance instrument may still be preferable as a "second-best" option if it can relieve pressure to reduce non-military spending. In this case, the public would prefer that the government rely more on foreign borrowing because government financing through foreign capital may raise interest rates less than resorting to domestic borrowing. Lastly, even if the majority of the public may benefit from the creation

[40] As pointed out earlier, this is the "starve the beast strategy, STB

of money (given the inflation risk is manageable), they are unlikely to eagerly support such a policy for fear of an intense confrontation with the wealthy elite.

The power asymmetry between the wealthy elite and public, and the externalities of inequality, suggest the political leadership's best strategy. High inequality breeds more intense social and financial instability. As a result, leaders are less likely to approve taxation and money creation for fear of losing revenue or the possibility of regime instability caused by retaliation from stronger wealthy elites. Likewise, leaders are also more likely try to avoid reduction in non-military spending since the public's grievances may endanger the stability of the country. Being under siege from intensified social cleavages, political leaders would rationally delay redistributive conflict by resorting to borrowing. A deficit-financing strategy allows leaders to defuse the majority's unrest while appeasing the wealthy with potential investment opportunities and lower tax burdens. Political leaders, however, may give priority to domestic borrowing given the elite's resource strength and leverage.

From this theoretical discussion, I propose the following hypotheses:

Hypothesis 3: The lower the level of domestic economic inequality, the less likely it is that a state would include a deficit-financing strategy (domestic or foreign borrowing) in its war finance portfolio.

Hypothesis 3.1: A state will prefer domestic borrowing to foreign borrowing when its inequality is increasing to an intermediate or a high but not an extremely high level.

Hypothesis_Money$_{(2)}$: When domestic economic inequality increases, a state is less likely to resort to money creation to finance war efforts.

Extremely Unequal Societies: Foreign Borrowing and Money Creation

When domestic economic inequality rises even further and reaches what might be considered an extreme level, both the resources monopolized by elites and their expected financial burdens become great. Therefore, the wealthy elite now have an even greater incentive to oppose war taxation. By the same token, it would appear to be in their best interest to advocate a deficit-financing strategy and reduction in non-military spending. Furthermore, with an extremely high level of inequality, the wealthy elite may find government financing through foreign borrowing more rewarding than resorting to domestic borrowing because foreign borrowing offers more investment opportunities through mechanisms of hedging (Azzimonti et al., 2014) and financial intermediation (Kumhof et al., 2012; Kumhof, Ranciere and Winant, 2015). Lastly, the wealthy elite may not oppose the choice of money creation because, with their capacity to diversify investment portfolios, they could better protect themselves from the negative redistributive consequences of such a war finance instrument.

An extremely unequal income distribution also implies that, the public's demand for redistribution and dependence on welfare programs is strong. Therefore, the majority of citizens may have the greatest incentive to oppose reduction of non-military spending while supporting steeply progressive taxation or taxes on the wealthy to finance war costs. There is a formidable obstacle, however, to achieving their goals—their resources and capacity for mobilization may already have hit their nadir. Under such a circumstance, the public is more likely to prefer foreign borrowing, a financing strategy also welcomed by the wealthy elite. In this way, the pressure to cut non-military spending may be diminished. In addition, foreign borrowing may offer the majority of citizens access to cheaper borrowing in a lower interest rate environment. In contrast, they may be less willing to support a strategy of

domestic borrowing due to its upward pressure on interest rates. Furthermore, if the risk of inflation is mild, the majority of the public might also support the policy choice of money creation because such a war finance strategy could lower interest rates, ease debt burdens, and increase wages. Finally, it is worth pointing out that although the public is at a clear resource disadvantage, and their collective actions are more likely to fail, they still have a strong desire to mobilize, including protesting (in democracies) or rebelling (in authoritarian regimes). This is because extremely high inequality naturally leaves the majority dissatisfied with their lot. At the highest level of inequality, social grievance are easily translated into disruptive, unorganized social movements such as populism or riots, which inevitably cause regime crisis during wartime.

Inferred from the power asymmetry between wealthy elites and the public, and the risk of regime instability caused by social grievance, the political leadership is unlikely to resort to taxation for fear of retaliation from wealthy elites. Nor is it likely to reduce non-military spending in order to avoid violent public resistance. Leadership is more likely to rely on foreign borrowing since it may benefit either elites or the public. Lastly, given an acceptable risk of inflation and tractable institutional constraints, leaders may have incentives to create money because it is acceptable for both indebted citizens and wealthy elites with diversified financial portfolios.

In essence, a leadership-sponsored deficit-financing strategy at either a high level of inequality or in an extremely unequal society is a rational response to prevent social conflict, financial instability, and regime crisis during wartime. In Streeck's term (2014), this is a strategy of "buying time" and delaying the impending regime crisis.

From this theoretical discussion, I offer the following hypotheses:

Hypothesis 4: When domestic economic inequality reaches the highest level, a state is most likely to finance war costs mainly through a deficit-financing strategy that predominantly relies on foreign borrowing.[41]

Hypothesis_Money$_{(3)}$*: When domestic economic inequality reaches the highest level, given a manageable risk of inflation, a state is more likely to resort to money creation to finance war efforts.*

Synthesizing *Hypothesis_Money*$_{(1)}$, *Hypothesis_Money*$_{(2)}$, and *Hypothesis_Money*$_{(3)}$, then we gain a general hypothesis regarding money creation in war finance:

Hypothesis 5: There is a U-shaped relationship between domestic economic inequality and the choice of money creation. A state is more likely to include monetary creation in its war finance portfolio if the income distribution of the state is either very equal or extremely unequal.

(5) Summary of Inequality, War Finance Preferences, Strategic Interactions and Testable Hypotheses

To recapitulate, I have five main testable hypotheses:

Hypothesis 1: The lower the level of domestic economic inequality, the more likely it is that a state would resort to war taxation to finance war efforts.

Hypothesis 2: The lower the level of domestic economic inequality, the more likely it is that a state would pay for war costs by reducing non-military spending.

[41] In other words, foreign borrowing will be preferred to domestic borrowing at the highest level of

Hypothesis 3: The lower the level of domestic economic inequality, the less likely it is that a state would include a deficit-financing strategy (domestic or foreign borrowing) in its war finance portfolio.

Hypothesis 3.1: A state will prefer domestic borrowing to foreign borrowing when its inequality is increasing to an intermediate or a high but not an extremely high level.

Hypothesis 4: When domestic economic inequality reaches the highest level, a state is most likely to finance war costs mainly through a deficit-financing strategy that predominantly relies on foreign borrowing.

Hypothesis 5: There is a U-shaped relationship between domestic economic inequality and the choice of money creation. A state is more likely to include monetary creation in its war finance portfolio if inequality in the state is either very low or very high.

The causal links between inequality and war finance preference are summarized in Tables 3-2 and 3-3. Figure 3-1 summarizes my main theoretical argument. It provides a schematic layout of how economic inequality interacts with actor preferences and strategic interactions to create a war finance strategy. When inequality is low, the public's dependence on social programs is likely to be mild—so is their demand for redistribution. On the other hand, the wealthy elites' expected tax burdens are also likely moderate. As a result, the leadership is more likely to secure a consensus of "equality of fiscal sacrifices" without causing serious instability. Specifically, the leadership can be expected to more successfully enact progressive taxation and reduce nonmilitary spending to pay for war. Conversely, when inequality is higher, redistributive conflict between competing coalitions becomes more serious. Unable to strike a bargain of fiscal sacrifices without severe social instability,

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inequality.

leaders will rationally delay the redistributive conflict by resorting to borrowing. A deficit-financing strategy allows leaders to defuse the poorer majority's unrest while appeasing the wealthy with potential investment opportunities and lower tax burdens. When domestic economic inequality reaches its highest levels, leaders will have incentives to rely primarily on foreign borrowing to finance war efforts. Lastly, there is a U-shaped relationship between domestic inequality and the choice of money creation. When inequality is very low, leaders are likely to resort to money creation because elite resistance is expected to be weak. When inequality is very high, the wealthy will equip themselves with abundant financial tools to diversify the cost of money creation. Therefore, leaders are likely to choose it without severe resistance.

Figure 3-1: Economic Inequality and War Finance Strategies

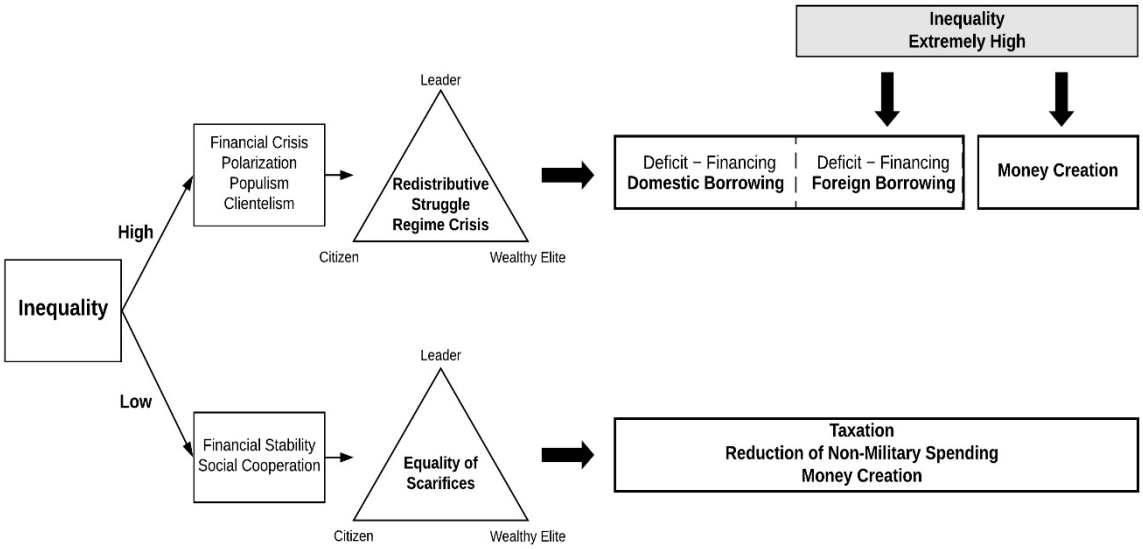


Table 3-2: Economic Inequality and Actor Preference Order of War Finance

Economic Inequality	Actor	Preference Order
High	Political Leadership	Foreign Borrowing = Domestic Borrowing ≥ Money Creation (Short-Term) > Reduction in Non-military Spending ≥ Progressive Taxation
	Wealthy Elites	Reduction in Non-military Spending > Domestic Borrowing ≥ Foreign Borrowing > Money Creation > Progressive Taxation
	Public	Progressive Taxation = Foreign Borrowing > Money Creation > Domestic Borrowing > Reduction in Non-military Spending
Low	Political Leadership	Progressive Taxation = Reduction in Non-military Spending ≥ Money Creation (Short-Term) > Domestic Borrowing > Foreign Borrowing
	Wealthy Elites	Reduction in Non-military Spending > Domestic Borrowing > Foreign Borrowing > Money Creation > Progressive Taxation
	Public	Progressive Taxation = Money Creation ≥ Foreign Borrowing > Domestic Borrowing > Reduction in Non-military Spending

Table 3-3: Economic Inequality, Actors' Preferences for War Finance, and Actions

Economic Inequality	Political Leadership					Wealthy Elites					Public				
High	Progressive Taxation	Reduction in Non-Military Spending	Domestic Borrowing	Foreign Borrowing	Money Creation	Progressive Taxation	Reduction in Non-Military Spending	Domestic Borrowing	Foreign Borrowing	Money Creation	Progressive Taxation	Reduction in Non-Military Spending	Domestic Borrowing	Foreign Borrowing	Money Creation
	Avoidance	Avoidance	Strong Approval	Approval	Avoidance	Strongest Opposition	Strong Support	Strong Support	Conditiona Support	Strong Opposition	Strong Support	Strongest Opposition	Conditional Support	Conditional Support	Support
Low	Progressive Taxation	Reduction in Non-Military Spending	Domestic Borrowing	Foreign Borrowing	Money Creation	Progressive Taxation	Reduction in Non-Military Spending	Domestic Borrowing	Foreign Borrowing	Money Creation	Progressive Taxation	Reduction in Non-Military Spending	Domestic Borrowing	Foreign Borrowing	Money Creation
	Approval	Approval	Disapproval	Disapproval	Conditional Approval	Weak Opposition	Support	Weak Support	Weak Opposition	Weak Opposition	Support	Weak Opposition	Weak Opposition	Weak Support	Support

(6) Assumptions Behind My Theory

Assumptions about Actor Rationality and Scope Conditions

My theory argues that war finance choices result from a triangular strategic interaction among domestic actors in the context of inequality. It assumes that actors behave based on pure material self-interests. In other words, in my theory actors are assumed to act based on the "logic of consequence" rather than the "logic of appropriateness." As March and Olsen (1998) point out, the logic of consequences sees political actions and outcomes as the

product of rational calculating behaviors designed to maximize material utility in a set of predetermined preferences. Conversely, the logic of appropriateness understands political actions and outcomes as the product of rules, roles, identities, and norms that stipulate appropriate behavior in a given situation. Although I recognize the importance of the logic of appropriateness, my theory is mainly based on the rationalist assumption of a logic of consequence.

It raises a question: Are actors equally informed and engaged in every decision regarding war finance at all times? One may argue that it is only leaders who matter in the choice of war finance, and they are better positioned to manipulate public opinion to support his decisions. Others could also argue that wealthy elites have more resources to affect policies, and they can withhold or distort information. In essence, such arguments question the validity of the notion that all actors, including members of the public, are assumed to be rational, material-interest-driven actors.

For reason of parsimony, my theory stipulates that actors behave largely in accordance with the bounded-rationality assumption (March and Simon, 1970). These rational individuals act purposefully in the pursuit of their self-interests. They try to gather necessary information and utilize all the available means to maximize material well-being. They cannot know the future with certainty, but they are capable of estimating the possible outcomes with probabilistic reasoning (Caverley, 2014: 22-23).

In addition, I make a more conservative assumption about the behaviors of the public and elites. While I recognize that the public, and some wealthy elites as well, may sometimes know little or nothing about the details of the policy choices facing the political leadership, I assume that they make retrospective evaluations, supporting the incumbent leadership if their welfare has increased and punishing it during critical moments, such as times of crises

(Moene and Wallerstein, 2003: 489; Achen and Bartels, 2002). Knowing the behavioral patterns of public and elites, leaders estimate the consequence of each war finance strategy and make a decision that maximizes their utility.

In short, my theory assumes that actors behave as rational, material-interest-driven individuals who behave based on the logic of consequence. They do their best to access as well as assess necessary information regarding their material welfare, and utilize various channels, including party platforms or street demonstrations, to engage in war finance decision-making. Such an assumption is not only theoretically plausible but also empirically substantiated. For example, Aldrich et al. (2006), surveying the empirical literature on the connection between American public opinion and foreign policy, conclude that the American public has coherent foreign policy attitudes with great influence on foreign policy making. In addition, Flores-Macias and Kreps (2013) use evidence from American war taxation choices to show that the preferences of domestic actors frequently factored into policy-making.

My theory of how, causally, domestic economic inequality affects war finance strategy raises another question: Does my argument only apply to long, costly wars that need significant financing? While my theory implies that inequality affects financial policies in every war and even at the mobilization stage, I accept Cappella's observation that war duration affects war finance (Cappella, 2016: 15-17). Shorter wars usually limit a state's available choices of war finance instruments. In addition, the shortest wars are likely to come to an end much before they draw social actors' attention and incite any responses. In my research design, I will follow Capella's focus on confining my analysis to "long wars," defined as wars that last longer than six months.

Furthermore, Scheve and Stasavage (2010, 2012) indicate that the choice of progressive taxation is associated with mass warfare — conflicts of mass mobilization in which a substantial proportion of the population are enlisted or conscripted for fighting. In the light of their research, does my theory better explain choices of war finance strategy in *total wars* or wars with *high stakes*? Likewise, one may also question whether my assumption regarding actor rationality can be better justified in such wars since social actors are more likely to be informed in such situations. While my theory makes a general argument about the relationship between domestic economic inequality and war finance strategy, I expect that inequality will cause a stronger effect in in *total wars* or wars with *high stakes*. The reason, consistent with my theory, is that such wars are presumably costlier, so the associated conflicts over redistribution in war finance are likely to be larger.

Lastly, my dissertation mainly focuses on interstate war finance since the beginning of the 20th century. I recognize that the redistributive consequence of each war finance strategy may change over time, as may their availability and importance over time. Fortunately, the redistributive implication of each war finance strategy has, by and large, been set since the beginning of the 20th century and has not changed much. For example, war taxation in the 20th century was usually progressive. And non-military spending has gradually become a crucial part of government expenditures at the same time. My dissertation mainly explains the pattern of war finance in this period.

Assumptions about the Impact of Regime Type

My theory mainly focuses on how domestic economic inequality affects war finance choices. The mainstream political science literature suggests that regime type affects

redistributive politics. I recognize the impact of regime type but argue that economic inequality has an independent effect on war finance even after we control for regime type.

As articulated by the Meltzer-Richard model (1981) and the *redistributionist theory* of democratization (Acemoglu and Robinson, 2006; Ansell and Samuels, 2014; Boix, 2003), political regime type may be assumes to play an important role in the making of redistributive policies. Therefore, it is necessary to take regime type into account. In the light of *selectorate theory* (Mesquita, et al., 2003), regime type may be said to affect states' war finance strategy by influencing the preferences of political leadership. Selectorate theory argues that every political leader pays special attention to the preferences of members within his or her winning coalition, which has the power to determine whether to remove the leader (by voting in democracies or by coup in authoritarian regimes). In democracies, B. D. Mesquita et al(2003) argue that to remain in office democratic leaders require the support of a larger portion of the population (a larger winning coalition). In contrast, authoritarian leaders only need the support of a smaller group of elites (a smaller winning coalition). Selectorate theory suggests a simple proposition. In a democracy, the political leader pays more attention to the preferences of citizens because they are more likely to be selected into the winning coalition and become the majority. In contrast, in authoritarian regimes, in which the size of winning coalition is small, the leader is more likely to be concerned with the interest of wealthy elites.

Based on selectorate theory, regime type is likely to affect the political leadership by influencing its vulnerability to two previously mentioned factors—the amount of funds it expects to raise and social instability. Specifically, democratic leadership is more likely to be vulnerable to social instability caused by public grievances because public discontent is more likely to cost leaders their tenure in a democracy. Conversely, an authoritarian leader

is more likely to fail at collecting enough revenue when faced with wealthy elite opposition. Dictators need money to produce private goods to maintain the loyalty of a small winning coalition (Mesquita, et al., 2003). They also need sufficient financial resources to sustain an army, the critical repressive means for a dictator's political survival. Furthermore, as Chiozza and Goemans point out (2011), a defeat not only significantly reduces the tenure of authoritarian leaders, but it also increases the likelihood that those leaders will be sent to prison or exiled. Therefore, dictators will be more concerned about extracting sufficient revenue for war. Accordingly, they will be more sensitive to the dissatisfaction of elites

Basically, my theory assumes that inequality still plays an independent role after regime type is controlled for. My theory also assumes that the introduction of the regime variable does not fundamentally change the propositions of leadership preference outlined previously. The major difference is that democratic leaders are likely to be more resistant to reducing non-military spending, while authoritarian leaders are more likely to be averse to taxation on the wealthy (Carter and Palmer, 2015; Morrison, 2009). This might yield a marginal modification regarding the preference order of political leadership when income inequality is at a low level. In this situation, although non-military spending would be reduced for paying war costs, the democratic leadership would not cut welfare expenditures as much as a dictatorship would. On the other hand, although democracies and autocracies both pay for war thorough progressive taxation when inequality is low, authoritarian leaderships do not tend to tax the rich as heavily as democracies.

Assumption about the Impact of Central Bank Independence

It is necessary to take into consideration the role of independent central banks in war finance since, in modern times, states commonly charter their monetary authorities to issue

currency and conduct monetary policy (managing money supply and interest rates). The literature on central bank independence shows an independent central bank is likely to increase the constraints on politicians' discretionary fiscal policymaking (Bernhard, Broz and Clark, 2002). My theory recognizes the impact of central bank independence but argues that economic inequality has an independent effect on war finance even after we control for the effect of an independent central bank.

The mainstream literature defines central bank independence as the lack of an obligation to manage money supply for the benefit of fiscal policy. In other words, independent central banks are not obliged to directly lend or print money to finance budget deficit. In the United States, this idea is best illustrated in the Fed-Treasury Accord, established since 1951. In principle, independent central banks cannot resort to money creation under the pressure of political leaders.

My theory recognizes the impact of independent central banks but argues that economic inequality can cause an independent effect on war finance strategic choices and can affect central bank independence. Take the US case as an example, after the announcement of the Fed-Treasury Accord, President Harry Truman immediately forced Thomas McCabe to resign as the Fed Chair. And the Fed still assisted the Truman administration's war finance during the rest of Korean War. During the Vietnam War, the Johnson administration also tried to manipulate the Fed to assist US war finance even though the Fed had already established its independence. These cases suggest one mechanism of how inequality might interact with central bank independence — high inequality might imply that financial communities are stronger and more cohesive. As a result, a central banker is expected to gain more help from financial elites to counter other actors' influences.[42]

[42] More detailed analyses about U.S. war finance in the Korean and Vietnam Wars are in chapter 5.

2. Research Design: A Mixed-Method Design

To test my hypotheses, I will utilize both quantitative and qualitative methods. In chapter 4, I provide two sets of evidence. First, I will use a country-year dataset on state finance from 1950 to 2007 for my empirical analyses. Ideally, I would hope to include interstate war finance during each year since the beginning of the 20th century. There is, however, a serious shortage of reliable country-year data prior to 1950. The only dataset that collects relevant information for war finance since 1823 is Rosella Cappella Zielinski's war finance dataset (2014, 2016). It is worth pointing out that her war finance dataset is highly informative. Rosella Cappella Zielinski's war finance dataset does not, however, provide raw numbers of country finance in *each war year*. So I am unable to simply use her dataset to conduct a systematic cross-national comparison. Because I do not want to exclude the cases from 1914 to 1950 entirely, I use her dataset and other sources to conduct a second set of analyses: narrative analyses of selected countries' war finance strategies in World War I and World War II.

In chapter 5 and 6, I conduct two sets of comparative case-studies: (1) two cases of American war finance: United States war finance strategy in the Korean and Vietnam Wars; and (2) Chinese and Japanese financing of the second Sino-Japanese war from 1937 to 1945.

(1) Quantitative Section: Interstate War Finance of 1950-2007

Because of the complexities and dynamics of war finance, scholars tend to narrow their focus in three ways. First, some scholars analyze only *one specific war* (Balderston 1989, Razaghian, 2004).[43] Second, other scholars analyze the war finance history of *one specific*

[43] Specifically, Balderston (1989) collects data on the wartime tax rates, amounts of public debt, money supply, and inflation rates in Britain and German from 1914-1918; Razaghian (2004) compares the Confederacy's and the Union's financial policies during the US Civil War (1861-1864).

country (Carter, Ondercin, and Palmer, 2015).[44] Third, still other scholars explore the choice of just *one specific strategy* (Schultz and Weingast, 2003; Flores-Macias and Kreps, 2013; Shea, 2014).[45] Due to their specific focuses and associated limitations, these sources do not provide data that would be suitable for my more extended analysis.

To the best of my knowledge, Carter and Palmer's war-finance dataset (2016) best suit the scope of my research. Carter and Palmer construct a panel (time-series cross-sectional) dataset documenting the financing of interstate wars from 1950 to 2007. In their dataset, the unit of observation is "country year"—each finance strategy adopted by a principal belligerent in a given year. There are three obvious advantages in Carter and Palmer's dataset. First, they include the choice of non-military spending, a strategy commonly missing in the quantitative war finance literature. They calculate non-military spending by using two datasets: Penn World Tables, version 8.0 (Feenstra, Inklaar, and Timmer, 2013) and the COW National Material Capabilities data. Second, by using "country-year" as the unit of observation, the size of their dataset significantly increases and has 8,485 country-year observations (with a multiple imputation technique). Third, the time span of their data, as well as the countries included, almost perfectly matches commonly-used inequality datasets (*SWIID and the World Top Income database*). [46]

There is another war finance dataset compiled by Rosella Capella Zielinski (2014, 2016). Rosella Capella Zielinski uses the Correlates of War (COW) dataset and various sources to

[44] Carter, Ondercin, and Palmer (2015) study the war finance strategies adopted by the United States in each "quarter" of interstate war years between 1816 and 2012

[45] Flores-Macias and Kreps (2013) study war taxation choices in the United States from 1789 to 2010. Shea (2014) analyzes borrowing choices (including domestic and external borrowing) from 1823 to 2007. Specifically, Shea (2014) explores whether borrowing costs affect war outcomes and whether regime type interacts with the choice of borrowing.

[46] Almost every inequality dataset collects time-series (yearly) data, for example, the World Development Indicators, All the Ginis Dataset, and the two datasets my dissertation uses: the SWIID, and the World Top Income database. A more detailed description of each dataset is provided in the next section of "explanatory variables."

construct her war finance dataset from 1823 to 2003.[47] Her dataset is comprehensive in scope and time span. However, there are three major problems in Zielinski's dataset that limit its suitability for my dissertation. First, the dataset does not include the *reduction in non-military spending* variable. Second, In Rosella Capella Zielinski's dataset, the unit of observation is "country-war"—the war finance strategy adopted by a principal belligerent over the entirety of a war. In other words, the data are cross-sectional (e.g., US war finance in the Iraq war **in total** would be counted as **one data point**). In total, there are only 95 cases in her dataset, meaning the sample size is too small for a qualified large-N study. Also, because the author uses "a given country's total war finance in a given war" as the unit of observation (a given data point), the comparability of each data point becomes extremely low. Finally, based on the dataset released so far, Rosella Capella Zielinski's data are percentage shares. She calculates what amount of each war finance instrument a state used as a percentage of the total in a given war. Then, she transforms the data into an ordinal scale. This methodological choice seriously exacerbates the aforementioned problems of comparability and small sample size. It also makes her war finance data incompatible with most if not all available inequality datasets. Therefore, although Rosella Capella Zielinski's dataset is highly informative and offers valuable insight to my case studies, it is unsuitable for my quantitative analysis.

An Empirical Strategy: Fixed-Effects Model of Interstate War Finance, 1950-2007

Because Carter and Palmer's data are time-series cross-sectional data, there may be methodological problems regarding unobserved unit heterogeneity. For example, a case (a

[47] The standard of Zielinski's dataset is that it includes all interstate wars, from 1823 to 2003, whose participants are principal belligerents for over than six months. It excludes wars of less than 6 months because war financing for shorter wars is usually different from that of longer wars. When counting war cost, it only counts the war costs borne by the belligerents (Cappella, 2011: 20).

country at T_1) may choose a war finance strategy simply because of its unique characteristic (a unit-specific heterogeneity problem). To control for country fixed-effects, I will follow the literature and use linear regression with fixed country effects. The fixed-effects model can help deal with the unit-specific heterogeneity. Second, as pointed out previously, there may be an endogeneity problem in my statistical models. Thus, I will use the lagged-dependent variable approach to deal with this methodological problem. Specifically, in my fixed-effects model I will include a lagged value of the dependent variable as a predictor. For example, if my dependent variable is taxation at T_1 (the left-hand side), my regressors will include explanatory variables, control variables, and the lagged dependent variable, taxation at T_0 (the right-hand side).

Dependent Variables

I have five *separate* dependent variables, so I use five *separate* fixed-effects models to estimate the choice of each war finance instrument. The data for the five dependent variables are drawn from Carter and Palmer (2016). The first variable is *tax ratio*, which is measured as a government's total tax revenue as a percentage of GDP.

The second variable is *non-military spending*. It captures a government's total expenditures dedicated to non-military spending and offers information about when non-military spending is reduced. Carter and Palmer collect and calculate these data by using Penn World Tables, version 8.0 (Feenstra, Inklaar, and Timmer, 2013) and the COW dataset's National Material Capabilities data.

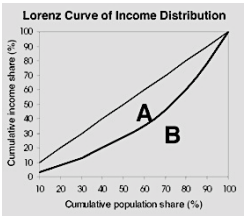
The third dependent variable, *domestic debt*, identifies the degree to which a government finances a war by domestic borrowing. *Domestic debt* represents a state's annual, general

(logged) budget deficit in millions of US 2000 dollars. Carter and Palmer collect these data from the *Global Financial Database* (2012).

The forth dependent variable is *external debt*, capturing a state's annual, general (logged) external debt in millions of US 2000 dollars. The data are drawn from Lane and Milesi-Ferretti's updated and extended version of *External Wealth of Nations* dataset (2007).

The fifth dependent variable is *money creation*. There is a problem in Carter and Palmer's dataset. They use "change in inflation rate" as an imperfect proxy indicator to measure money creation. This is incorrect. As repeatedly stressed throughout this research, money creation does not automatically lead to inflation. It depends on how much slack (unemployment) there is in the economy. Besides, even if we may observe changes in inflation during wartime, we cannot definitively attribute them to money creation because during wartime there are various confounding factors that may contribute to increases in inflation. Therefore, they may significantly over-count the choice of money creation. My research follows Bodea and Hicks (2015), which uses the yearly percentage change in M2, an intermediate monetary aggregate that includes the currency in circulation and very short term deposits.

Explanatory Variables



As for the most important explanatory variable, economic inequality, I will use two major, commonly-used indicators: the Gini coefficient; and the top personal wealth and income shares data (specifically the top 1 percent wealth and income share). The Gini coefficient is the most widely used measure of inequality. It varies between 0, which reflects complete equality, and 1, which indicates complete inequality (one person has all the income or consumption in a society, while all

others have none). Graphically, the Gini coefficient is represented by the area between the Lorenz curve (the curve line) and the line of equality (The 45-degree line, which indicates the perfectly equal distribution of income and Gini = 0). On the right is a figure that plots the cumulative proportions of income (Y-axis) against the cumulative proportion of individuals (X-axis) in a society. To calculate, the Gini coefficient is the ratio of the area between the line of equality and the Lorenz curve as a proportion of the area of the triangle defined by the line of equality and the borders of the figure (the World Bank; Ansell and Samuels, 2014: 19). In notation, Gini = A / A+B.

I draw the data for the Gini coefficient from The *Standardized World Inequality Indicators Database* (*SWIID*), constructed by Frederick Solt (2009). The *SWIID* covers 192 countries for as many years as possible from 1960 to the present. This database uses the Luxembourg Income Study and various sources to construct a comprehensive cross-national panel of Gini coefficients that are standardized across sources and measures. It is considered to have the greatest comparability of income inequality data while maintaining the widest possible coverage across countries and over time. Another advantage of this this dataset, pointed out by Acemoglu et al. (2015), is that it provides both the net Gini (Gini coefficients after taxes and transfers), and the gross Gini coefficients.

I also utilize another indicator of inequality developed by the Atkinson, Piketty, Saez and other coauthors. Piketty first collects the data in the *Concentration of Wealth in Europe and in the USA (1810-2010).* These data include the shares of the top wealth and income (1% & 10%) in the total national income of UK, US, France, and Sweden (1810-2010). Piketty's dataset also includes data on the shares of top income of Germany, Japan, Canada, Australia, New-Zealand, Denmark, Italy, Holland, and Spain from 1900 to 2010. Furthermore, the data on the top income shares of India, South Africa, Indonesia, Argentina, China, and Colombia

from 1900 to 2010 are also available, although the data on China can only be traced back to 1984 (Piketty, 2014). Using Piketty's measures (e.g. top 1%, 5%, 10% wealth and income shares, capital gains), an international team has formed a dataset, the *World Top Incomes Database*. It should be noted that the focus of Piketty's data is slightly (but noticeably) different from that of the *SWIID*. Piketty puts most emphasis on the shares of the top 1% of wealth and income in the total national income. The reason is that "the Gini coefficient is more sensitive to transfers at the center of the distribution than at the tails." Therefore, focusing only on the change of Gini coefficients may underestimate the real economic inequality (Atkinson, Piketty, and Saez, 2011: 10).[48] Because the top percentile wealth and income shares directly capture the power resource of the very wealthy (the "super-rich"), Piketty et al.'s dataset is especially crucial to my theoretical argument.

To sum up, in my statistical models I plan to add the two variables (Ginis, and Top Wealth and Income shares) as the main explanatory variables. Each explanatory variable is lagged by one period because I expect its impact not to be contemporaneous. Specifically, for a country in a given war occurring at T_0 (e.g. US in the Korean war of 1950), the value of explanatory variables will be taken at T_{-1} (e.g. US' Ginis, Top wealth and income shares). I will use a one-year lag for my explanatory variables, but will also follow the inequality literature to experiment with the average of five-year lag as well. For example, the average of the Gini coefficient from 1945-1949 is the value of US Gini variable for the Korean war of 1950. This treatment can help minimize one potential problem regarding endogeneity that

[48] Atkinson, Piketty, and Saez (2011: 5) point out that if we draw a Lorenz curve, defined as the share of total income accruing to those below percentile p, as p goes from 0 (bottom of the distribution) to 100 (top of the distribution), then the top 1 percent would scarcely be distinguishable on the horizontal axis from the vertical endpoint, and the top 0.1 percent even less so. The most commonly used summary measure of overall inequality, the Gini coefficient, is more mathematically sensitive to transfers at the center of the distribution than at the tails.

the choice of war finance strategy may cause inequality, rather than be the consequence.[49] Some scholars, however, argue that it is necessary to know whether there would be a contemporaneous effect. So I will also experiment with an average explanatory variable over the entire war (e.g., the average of US Gini coefficient for 1950-53 for the Korean war).

Finally, because I use the *level* of inequality (High–Low) to explain state war finance strategy choices, I will generate a new measure of the level of inequality based on the aforementioned dataset. First, I will take the data on the explanatory variables (e.g., Gini, and Top Income and Wealth shares) for my sample and create a frequency distribution. Then I will estimate the mean, median, and standard deviation. The threshold between high and low will be the median. Second, I will use one standard deviation *above* the median as another potential threshold. Third, I will follow the inequality literature to identify the thresholds. Specifically, for my sample the threshold of extremely high refers to Gini (or Top Wealth and Income shares) values at the 90th percentile of my sample. I also experiment with the 75th percentile.

Control Variables

I will also include a series of control variables. The first will be *political regime type*. Because both the redistributionist theory of democratization and selectorate theory point out that democracies and authoritarian regimes might be different in redistributive politics, I will control for the effect in two ways. The first is to add a regime variable into my models. I draw the data from Polity IV data set (Marshall and Jaggers, 2008). Second, I will experiment with separate models with different subsamples—one with democracies and the other with authoritarian regimes.

[49] So, if the endogeneity problem is serious, the correlation I observe may be that the war finance strategy (I.V.) would affect level of inequality (D.V.), which is different from my argument that level of inequality is an

Economic development may affect both my dependent and independent variables, so I will include *GDP per capita* in my statistical models. The data will be drawn from Vanhanen (2014) and Boix et al. (2013).

Capabilities affect the amount of resources as well as financing instruments a state could utilize in an interstate war. I will include *capabilities*, measured as a state's Composite Index of National Capabilities score. The data will be drawn from the COW dataset (Correlates of War, 2010).

Alliance relationships may also have an impact on a state's war finance strategy. I will include *alliance* and will draw the data from the *ATOP* dataset (Leeds et al. 2002).

Lastly, because central banks play an important role in the choice of money creation, I will include *central bank independence* (CBI) in my statistical analyses. The data will be drawn from Bodea and Hicks (2015). They construct a new CBI dataset (78 countries, 1973–2008) based on Cukierman et al.'s (1992) index.

Finally, one may suspect that the characteristics of war are likely to cause confounding effects. For example, wars with high stakes and total wars may confound the impact of inequality on war finance. To account for such a contextual condition, I plan to divide my sample in two ways. First, I will focus my analysis on wars fought over *territorial issues* because scholars generally agree that territorial disputes are more likely to escalate and involve higher fatalities (Carter and Palmer, 2015b: 32). Second, I will focus my analysis on wars with fatal militarized disputes, which are militarized disputes with at least twenty-five battle deaths (Shea, 2013). Both kinds of data can be drawn from the Correlates of War (COW) dataset (Correlates of War, 2010).

I.V. that affects the choice of war finance strategy (D.V.)

A Narrative Analysis of Selected Countries' War Finance in the two World Wars

As indicated earlier, systematic, cross national and comparable data on interstate war finance before 1950 are scant. However, interstate war finance cases in the two World Wars are valuable for my study. Therefore, I will utilize Rosella Capella Zielinski's dataset and other sources to offer narrative and descriptive evidence on major belligerents' war finance strategies in the two World Wars.

(2) Qualitative Section: Comparative Case-Study of the Causal Mechanism

Lastly, it is widely accepted that war is a complicated and dynamic phenomenon, and so is the choice of war finance. Even though we may discover some broad empirical patterns and correlations from our quantitative analyses, it is still hard to make a causal inference for two reasons. First, there are various confounding factors and unobserved variables. The likelihood of endogeneity is high. And second, real world cases are still far from enough to meet the standard criterion of a proper large-N study.

To evaluate the validity of my causal mechanism—a triangular distributional conflict contingent on domestic economic inequality—in the choice of war finance, I plan to do two sets of comparative case-studies. The first set includes two specific cases: I compare United States' war finance strategy in the Korean and Vietnam Wars. The second set of comparative case studies will compare the Chinese and Japanese financing of the second Sino-Japanese war from 1937 to 1945.

The First Pair: Within Case Comparison — The United States in the Korean War and Vietnam Wars

In the first set, I will compare the policy choices of a single country at different times. By doing this I may potentially minimize the problem of unit-specific heterogeneity: a government may choose a particular war finance strategy simply because of a country's unique characteristics. Furthermore, a reason to choose the United States in particular is that we can control the critical confounding factor in war finance: state capability. While fighting a war, it is common for a state to choose a particular strategy simply because there are no other available means to choose. In the US case, the confounding influence of such a factor should be minor since the United States has been a superpower since the early 20th century. In addition, we can control for the confounding influence of regime type. Of course, there is another advantage in choosing the US case: data availability.

The reason to choose the Korean and Vietnam Wars is because these two wars represent two war finance cases under different trends of inequality. And they resulted in completely different outcomes of the war finance strategic choices. The US financed the Korean War entirely by a combination of progressive taxation and reduction in non-military spending. It is a case of "equality of sacrifices" at a time when inequality happened to be persistently declining. The Vietnam War marked a turning point in both inequality and war finance. With economic inequality starting to rise, the US found itself unable to cut non-military spending. Nor could the US enact sufficient tax increases. The political leadership found itself more and more dependent on a deficit-financing strategy. In the literature on war finance, there is still no convincing theory to explain this variance. Each of these two could be seen as a representative case of war finance. I recognize that the comparison may risk the problem of selection on dependent variable. However, I still choose these two cases because

they vary widely in independent variable (inequality). More important, in the field of methodology, it is generally acceptable to select cases on dependent variable in order to examine the causal mechanism of a known empirical regularity with a strong theory (King, Keohane, and Verba, 1994).

The Second Set: Comparative Case Studies — China and Japan in the Sino-Japanese War

The reason to compare these two country cases is to control for other confounding factors that we are unable to control for in the first pair. There might have been differences in historical contingencies in the first set. Therefore, in the second comparison, I will study two neighboring countries in the same war. I therefore hope to minimize the influence of historical contingency. In addition, to control for geographically confounding factors, learning effects, and situational factors, I will follow the spirit of the matching technique to choose neighboring countries that fought with each other. Lastly, these two cases could hardly be considered as mature democracies at that time.[50] By selecting these two cases, I can control for the impact of regime. Furthermore, the findings from the second comparative set, the non-democratic pair, are likely to contrast with the first set of comparisons, the democratic cases.

We should pay for defense as we go because that is the way to distribute the cost of defense fairly. We cannot escape paying the real cost of defense [the *Korean War*] now… We could try to escape the financial cost of defense by borrowing—but that would only transfer the financial problem to our children, and would increase the danger of inflation with its grossly unfair distribution of the burden. The sensible and honest thing to do now is to tax ourselves enough, as we go along, to pay the financial costs of defense out of our current income.

——— *Harry Truman, Special Message to Congress Recommending a "Pay as We Go" Tax Program, February 2, 1951.*———

There's a lot of money to pay for this [the *Iraq War*]. It doesn't have to be U.S. taxpayer money. We are dealing with a country that can really finance its own reconstruction, and relatively soon.

——— *Paul Wolfowitz, Deputy Defense Secretary, Congressional Testimony, March 27, 2003.*———

Chapter IV. Inequality and Interstate War Finance in Modern Times

The pattern of interstate war finance since World War I highlights the empirical relationship between economic inequality and strategic war finance choices. In this chapter, I present two kinds of evidence to illustrate the relationship.

[50] There is no doubt that Imperial Japan before 1945 was an autocracy. The Republic of China, led by Sun Yat-sen and Chiang Kai-shek and their Nationalist party before 1949, can only be considered a nascent, mixed regime since it was not fully democratized during World War II.

In the first section, I statistically test my hypotheses and present the empirical results of a quantitative analysis on interstate war finance from 1950 to 2007.

In the second section, I present a narrative analysis of selected countries' war finance strategies in WWI and WWII. As indicated in chapter III, systematic cross national and comparable data on interstate war finance before 1950 are scant. However, war finance choices during the two world wars are too important to be excluded. Therefore, I used multiple sources, including Rosella Capella Zielinski's work (2016) and other accounts, to collect narrative and descriptive evidence on the war finances of major belligerents in the two world wars.

1. Quantitative Analysis of Interstate War Finance from 1950 – 2007

I now follow my research design articulated in chapter III to analyze a full sample of all county years in the international system from 1950 to 2007, and I utilize both fixed-effect regression models and a lagged dependent variable approach to examine economic inequality and war finance.

(1) Economic Inequality, War and Taxation

Hypothesis 1: The lower the level of domestic economic inequality, the more likely it is that a state would resort to war taxation to finance war efforts.

Table 4-1 shows the results of my analysis of the relationship of inequality, war, and taxation. First and foremost, the interaction term of war and inequality (interstate war ×

inequality measure, the grey cells) has a negative coefficient, and it is statistically significant in all of my models, including the pooled model (model 1) and those with controls on unit heterogeneity. This suggests that there is an interaction effect for war and inequality on tax reduction. To interpret the interaction effect properly, I follow Brambor et al. (2006) to graphically depict the marginal effect of inequality.

Table 4-1 Economic Inequality, Interstate War, and Taxation

	D.V. Tax to GDP Ratio					
	Model 1	Model 2	Model3	Model4	Model 5	Model 6
Interstate War	6.511.	2.013*	8.773*	2.049**	1.842*	2.191**
	(3.555)	(0.786)	(3.467)	(0.762)	(0.795)	(0.765)
Top Income $_{t-2}$	-52.887***	3.497			-1.268	
	(5.348)	(2.293)			(1.197)	
Interstate War × Top Income $_{t-2}$	-63.750*	-14.813*			-14.873*	
	28.416	(6.231)			(6.198)	
Gini $_{t-2}$			-0.127.			
			(0.070)			
Interstate War × Gini $_{t-2}$			-0.210*			
			(0.095)			
Top Wealth $_{t-2}$				5.971*		1.643
				(2.492)		(1.506)
Interstate War × Top Wealth $_{t-2}$				-8.327**		-9.397**
				(3.157)		(3.126)
GDP per capita	2.553***	0.097	-0.04	0.363.	0.097	0.099
	(0.331)	(0.071)	(0.253)	(0.196)	(0.071)	(0.171)
Polity	0.054	-0.015	0.025	0.083	-0.015	-0.005
	(0.072)	(0.015)	(0.031)	(0.053)	(0.015)	(0.032)
Tax Ratio $_{t-1}$		0.817***		0.755***	0.984*	0.981***
		(0.025)		(0.058)	(0.009)	(0.018)
Country Fixed-Effect	No	Yes	Yes	Yes	No	No
N	554	534	1336	119	534	119
R^2	0.31007	0.72015	0.01063	0.6771	0.97207	0.97833
R^2_a	0.30378	0.70228	-0.044944	0.6472	0.97175	0.97717
F-statistic	49.2567	214.878	2.71618	37.7453	3056.51	842.719
(Probability > F)	(< 2.22e-16)	(< 2.22e-16)	(0.01893)	(< 2.22e-16)	(< 2.22e-16)	(< 2.22e-16)

Significance Codes: p < 0.1: '.'; p < 0.05: '* '; p < 0.01: '**'; p < 0.001: '***' (two-tailed test)

Figure 4-1 A Marginal Effect of Inequality on Taxation, Conditional on War

Figure 4-1 A shows how economic inequality affects taxation by interacting with war. The Y-axis denotes the effect of inequality on taxation, while the X-axis denotes how war (denoted as 1) or peace (denoted as 0) influences such an effect. When a country is at peace, a higher level of inequality decreases the country's taxation. Furthermore, when the country enters into war, the inequality's effect of reducing taxation becomes significantly much greater. This confirms my hypothesis that the lower the level of domestic economic inequality, the more likely it is that a state would resort to taxation to finance war efforts.

I now use a more direct way to show how inequality affects a state's choice of taxation when the state is fighting a war. In Figure 4-1B and 4-1C below, I only focus on states that are fighting wars, and show the relationship between inequality and the choice of taxation.

Figure 4-1B & 4-1C Inequality and Tax to GDP Ratio

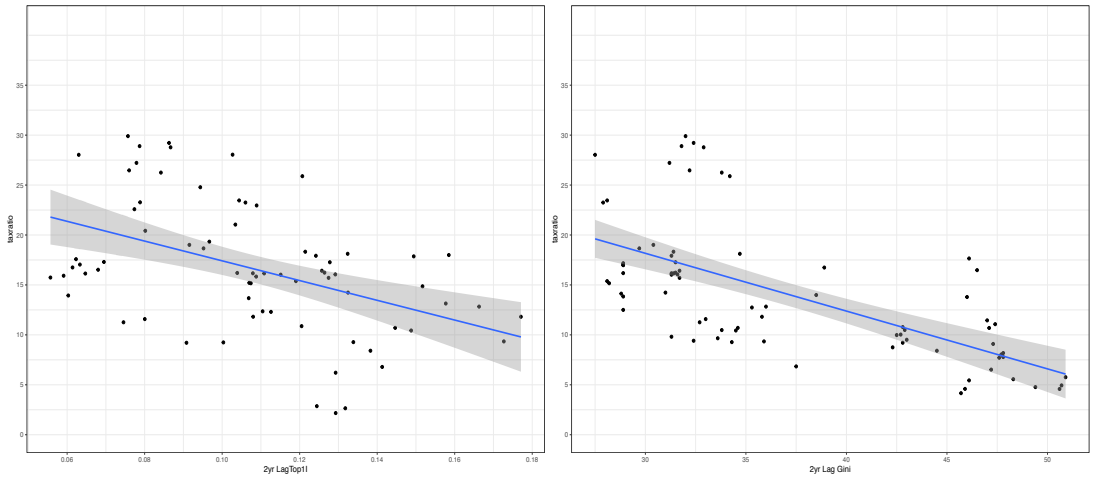


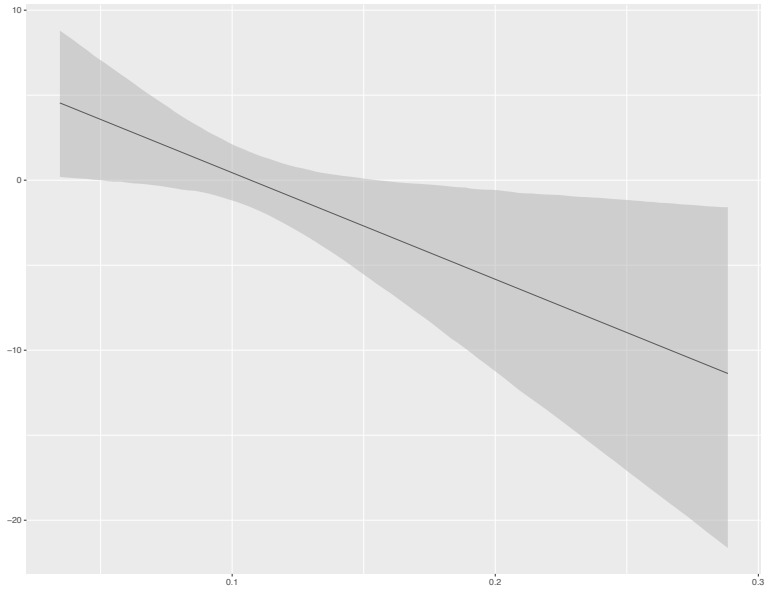
Figure 4-1B and 4-1C show that when a state is fighting a war, a higher level of prior inequality (X-axis)[51] is associated with a lower tax-to-GDP ratio (Y-axis), suggesting that higher inequality causes states to reduce reliance on taxation to fight wars, ceteris paribus. I change the measure of inequality by either using the top 1% share of income (the left) or the Gini coefficients (the right), and both results are similar: There is a negative relationship between prior inequality and war taxation. The finding is consistent with my hypothesis on war taxation that the lower the level of domestic economic inequality, the more likely it is that a state would resort to war taxation.

Figure 4-1D takes another angle to capture the impact of economic inequality and the interaction effect in table 4-1. Now, the Y-axis of Figure 4-1D denotes the effect of war on taxation, while the X-axis denotes how inequality influences war's effect. As Figure 4-1D

[51] I use a 2-year lag to depict the relationship between a prior level of inequality and a state's reliance on taxation as the main war finance strategy (or other war finance strategy variables). Specifically, the dependent variable (Y-axis) in the statistical model is a state's annual tax-to-GDP ratio in a given year *A*, while the independent variable (X-axis) is a state's inequality "2 years previous to" that given year *A*. I use a 2-year lag because, as I pointed out in chapter III, my theory makes a reasonable assumption that it takes time for inequality to create a cumulative impact on war finance. Therefore, I make such a model choice, although I recognize that inequality also causes a contemporaneous effect. I also use "one-year lag" and "same-year" data on inequality in my model and the results do not change: There is a negative relationship between inequality and tax-to-GDP ratio.

and Table 4-1 show, war has a positive effect on taxation. This is consistent with Scheve and Stasavage's finding (2016) that war leads states to enact progressive taxation. My finding shows, however, a more nuanced picture: the impact of war is conditioned on levels of inequality. When inequality is low, war can prompt states to increase taxes. As inequality goes up, though, the taxation effect of war begins to decline accordingly. When inequality reaches a high level (for example, the top 1% share of income goes beyond 15%), war's effect on taxation is significantly reduced.

Figure 4-1 D Marginal Effect of War on Taxation, conditional on Inequality



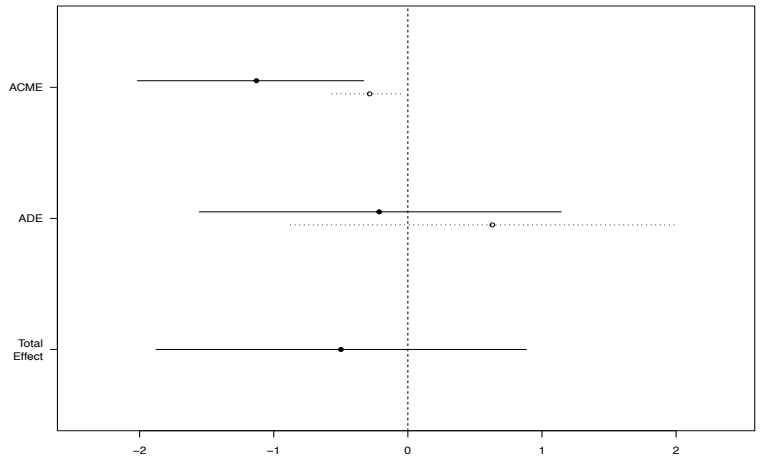
To illustrate the impact of inequality on the taxation effect of war, we can further leverage the method of "causal mediation analysis," developed by Tingley et al. (2014). The core logic of causal mediation analysis, simply put, is to show whether the causal effect of a "treatment A" (explanatory variable A) is mediated by "mediator B" (mediating/intervening variable). My previous discussion in chapter 3 suggests that inequality could be a mediating variable for the causal effect of war on taxation. To examine the mediation effect, I follow

Tingley et al.'s procedure, and the "mediation package" they design, to first create a mediator model by modeling the mediator (inequality) as a function of the treatment (war), and pre-treatment covariates (GDP per capita, polity). Next, I create an outcome model by setting "taxratio" as my dependent variable. The explanatory variables of the outcome model include the mediator (inequality), treatment (war), and other covariates/control variables. Then, I use the mediator model and outcome model to estimate the average causal mediation effect (ACME) and average direct effect (ADE). Table 4-1a shows the result.

Table 4-1a Causal Mediation Analysis of Inequality, War and Taxation.

	Estimate	95% Confidence Interval (Lower Bound)	95% Confidence Interval (Upper Bound)	p-value
ACME (Control)	-0.2826	-0.5770	-0.0747	0.00***
ACME (Treated)	-1.1251	-2.0586	-0.3263	0.00***
ADE (Control)	0.6500	-0.7807	2.1379	0.38
ADE (Treated)	-0.1925	-1.5335	1.1814	0.76
Total Effect	-0.4751	-1.8439	0.9945	0.49
Prop. Mediated (Control)	0.2878	-4.1989	4.0664	0.49
Prop. Mediated (Treated)	1.1839	-16.0098	18.4000	0.49
ACME (Average)	-0.7038	-1.2710	-0.2086	0.00***
ADE (Average)	0.2288	-1.0633	1.5955	0.75
Prop. Mediated (average)	0.7358	-9.7948	11.4511	0.49
Sample size used: 1168. With Quasi-Bayesian Confidence Intervals				

Figure 4-1E Causal Mediation Analysis of Inequality, War and Taxation.



The causal mediation analysis shows that the estimated ACMEs are statistically significantly different from zero but the estimated average direct and total effects are not. The results suggest a mediated causal mechanism of inequality, war, and taxation: War tends to generate a greater demand for revenues, which in turn creates pressure for taxation. A higher level of inequality, however, is likely to impede the political choice of increasing taxes. As a result, political leaders need to rely much more on alternative war finance strategy. In other words, the effect of war on generating revenue demand is mediated by high inequality to actually become a trigger for any war finance strategy other than taxation. I graphically show the causal mediation effect in figure 4-1E. In the figure, the bold line depicts the effect of treatment (war), while the dash line depicts the effect of interaction between the treatment (war) and mediator (inequality). This figure indicates that both the effect of war and the interaction effect are significantly mediated by inequality. I also conduct a test to see whether the treatment (war)–mediator (inequality) interaction is statistically significant. The method is to see whether the ACME of the treated group—the ACME of the control group—is not equal to 0. The result (ACME(1) - ACME(0) = -0.84251, p-value = 0.002) shows the interaction effect is significant.

To sum up, economic inequality decreases state reliance on taxation during war due to two properties of the interaction effect between war and inequality: (1) inequality's effect of reducing taxation becomes even larger during war; and (2) higher inequality significantly restrains war's independent effect of increasing taxation. Because of such a restraining effect, states would face higher pressure of resorting to alternative war finance strategy. Taken together, those findings are consistent with the implication of my hypothesis 1 — higher inequality causes states to be less likely to heavily rely on taxation to pay for war.

(2) Economic Inequality, War, and Non-Military Spending

Hypothesis 2: The lower the level of domestic economic inequality, the more likely it is that a state would pay for war costs by reducing non-military spending.

Table 4-2 Economic Inequality, Interstate War, and Non-Military Spending

	D.V. Non-Military Spending, % Total Government Expenditures				
	Model 1	Model 2	Model3	Model4	Model 5
Interstate War	-1.914*	-0.461.	-4.963*	-1.480**	-0.434
	(0.789)	(0.267)	(2.396)	(0.560)	(0.268)
Top Income $_{t-2}$	7.818***	-2.370***		-3.576*	-4.381***
	(1.438)	(0.503)		(1.636)	(0.791)
Interstate War × Top Income $_{t-2}$	19.532**	4.915*		9.331.	4.276.
	(7.165)	(2.433)		(5.114)	(2.458)
Gini $_{t-2}$			0.010***		
			(0.007)		
Interstate War × Gini $_{t-2}$			0.091***		
			(0.016)		
GDP per capita	1.007***	0.092***	0.693***	1.757***	0.373***
	(0.075)	(0.027)	(0.032)	(0.077)	(0.042)
Polity	0.011	-0.008.	(0.045)***	0.044***	0.003
	(0.012)	(0.004)	0.003	(0.013)	(0.006)
Nonmilitary Spending $_{t-1}$		0.942***			0.862***
		(0.009)			(0.013)
Country Fixed-Effect	No	No	Yes	Yes	Yes
N	1191	1167	3539	1191	1167
R^2	0.17083	0.91143	0.28359	0.34839	0.85782
R^2_a	0.16733	0.91097	0.25076	0.32337	0.85224
F-statistic	48.8289	1989.55	267.826	122.543	1128.21
(Probability > F)	(< 2.22e-16)	(< 2.22e-16)	(< 2.22e-16)	(< 2.22e-16)	(< 2.22e-16)

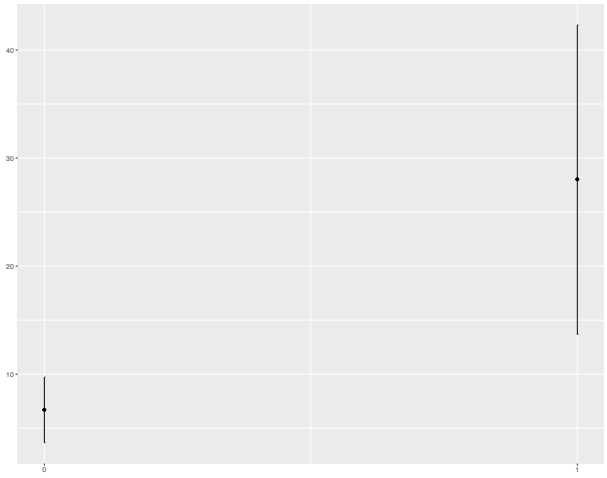
Significance Codes: p < 0.1: '.'; p < 0.05: '* '; p < 0.01: '**'; p < 0.001: '***' (two-tailed test)

Table 4-2 shows the result of my analysis of the relationship of inequality, war, and non-military spending. First and foremost, the interaction term of war and inequality (interstate war × inequality measure, the grey cells) has a positive coefficient, and it is statistically significant in all of my models. This suggests that there is an interaction effect of war and inequality on nonmilitary spending. To properly interpret the interaction effect, I graphically depict the marginal effect of inequality in figure 4-2 A.

Figure 4-2 A shows how economic inequality interaction with war affects nonmilitary spending. The Y-axis denotes the effect of inequality on nonmilitary spending, while the X-

axis denotes how war (denoted as 1) or peace (denoted as 0) influences such an effect. When a country is at peace, a higher level of inequality increases the country's nonmilitary spending. Furthermore, when a country enters into war, the inequality's effect on expanding nonmilitary expenditures becomes significantly much greater. This result suggests that if a state is fighting a war, the higher the level of inequality, the less likely it is that that the state would cut nonmilitary programs to finance war costs. This confirms my hypothesis 2 that the lower the level of domestic economic inequality, the more likely it is that a state would pay for war costs by reducing nonmilitary spending.

Figure 4-2 A Marginal Effect of Inequality on Non-Military Spending, Conditional on War



I can also use a more direct way to show how inequality affects a state's choice of reducing nonmilitary spending when the state is fighting a war. In Figure 4-2B and 4-2C below, I only focus on states that are fighting wars, and show the relationship between inequality and the choice of nonmilitary spending.

Figure 4-2B & 4-2C Inequality and Non-Military Spending

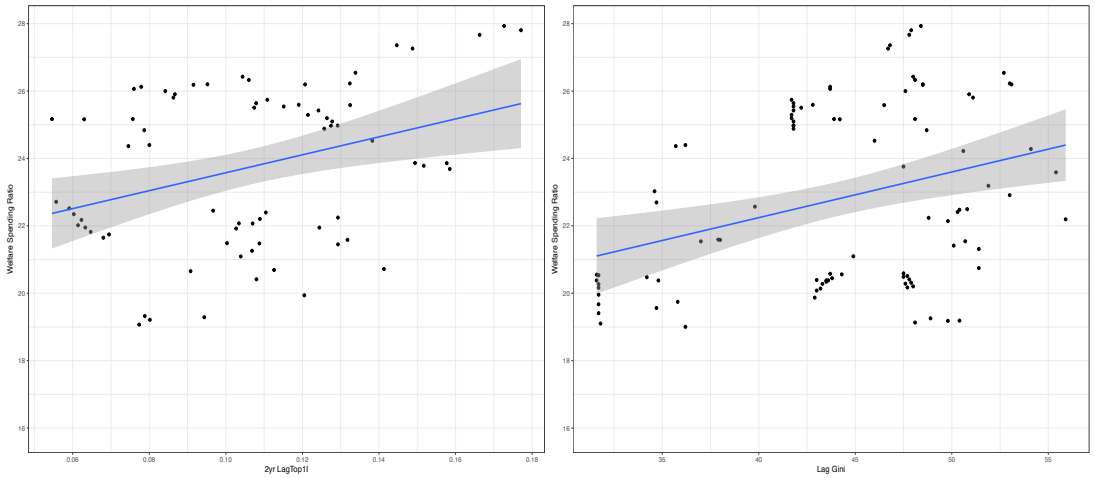
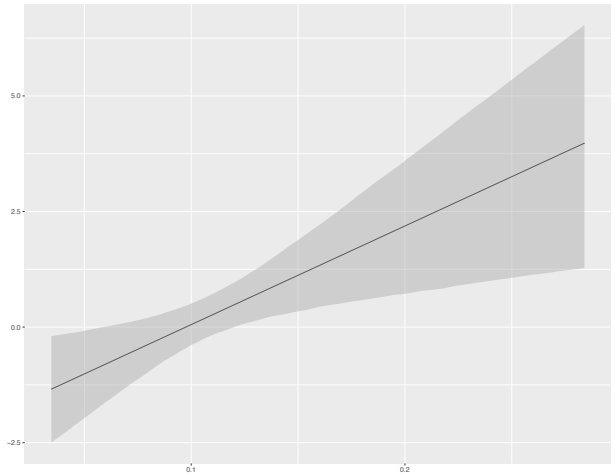


Figure 4-2B and 4-2C indicate a positive relationship between inequality and nonmilitary spending. When a state is fighting a war, a higher level of economic inequality is associated with a larger percentage of a government's total expenditures dedicated to nonmilitary spending. In other words, higher inequality actually hinders states from reducing nonmilitary spending to pay for war. This finding is consistent with my hypothesis on reductions in nonmilitary spending: The lower the level of domestic economic inequality, the more likely it is that a state would finance war costs by reducing non-military spending.

Below, figure 4-2 D uses another angle to capture the impact of economic inequality and the interaction effect in table 4-2. Now, the Y-axis denotes the effect of war on non-military spending, while the X-axis denotes how inequality influences war's effect. As Figure 4-2 D and Table 4-2 show, war has a negative effect on nonmilitary spending. However, the impact of war is conditioned on levels of inequality. When inequality is low, war prompts states to ask citizens for sacrifices by reducing nonmilitary expenditures. As inequality goes up, however, the effect of war on nonmilitary spending begins to decline accordingly, and is significantly reduced when inequality reaches a high level (for example, the top 1% share of income goes beyond 15%).

Figure 4-2 D Marginal Effect of War on Non-Military Spending, conditional on Inequality



To conclude, higher economic inequality hampers states from reducing nonmilitary spending to pay for war because: (1) inequality's effect on increasing nonmilitary spending becomes even larger during war; and (2) higher inequality significantly squeezes war's independent effect on spending reductions. Jointly, those findings are consistent with the implication of my hypothesis 2 that higher inequality impels states to shy away from resorting to reductions in nonmilitary spending to pay for war.

(3) Economic Inequality, War, and Deficit-Financing Strategy

Hypothesis 3: The lower the level of domestic economic inequality, the less likely it is that a state would include a deficit-financing strategy (domestic or foreign borrowing) in its war finance portfolio.

Table 4-3 shows the result of my analysis of the relationship of inequality, war, and borrowing. First and foremost, the interaction term for war and inequality (interstate war × inequality measure, the grey cells) has a positive coefficient, and it is statistically significant

in all of my models. This suggests that there is an interaction effect for war and inequality on deficit expansion. To properly interpret the interaction effect, I graphically depict the marginal effect of inequality.

Table 4-3 Economic Inequality, Interstate War, and Deficit-Financing Strategy

	D.V. Budget Deficit to GDP Ratio				
	Model 1	Model 2	Model3	Model4	Model 5
Interstate War	-11.955**	-14.537**	-4.963*	-19.321***	-30.419**
	(4.526)	(5.203)	(2.396)	(5.345)	(9.167)
Top Income $_{t-2}$	14.661	-21.877*			
	(18.168)	(8.950)			
Interstate War × Top Income $_{t-2}$	90.918*	119.695**			
	(36.536)	(41.599)			
Gini $_{t-2}$			0.051		
			(0.036)		
Interstate War × Gini $_{t-2}$			0.124*		
			(0.063)		
Top Wealth $_{t-2}$				15.267	1.643
				(23.752)	(1.506)
Interstate War × Top Wealth $_{t-2}$				67.669**	120.783**
				(20.474)	(34.570)
GDP per capita	-0.792	-0.310	-0.515***	-2.310*	-0.991
	(0.601)	(0.544)	(0.147)	(1.063)	(1.688)
Polity	-0.138	-0.018	0.009	-0.249	-0.046
	(0.104)	(0.116)	(0.016)	(0.182)	(0.300)
Deficit Ratio $_{t-1}$	0.882***	0.957***		0.675***	0.700***
	(0.020)	(0.014)		(0.030)	(0.044)
Country Fixed-Effect	Yes	No	Yes	Yes	No
N	255	255	3321	54	54
R^2	0.90028	0.9499	0.0056948	0.94437	0.86443
R^2_a	0.88793	0.94869	-0.042999	0.93299	0.84713
F-statistic	340.06	783.7	3.62545	124.493	49.949
(Probability > F)	(< 2.22e-16)	(< 2.22e-16)	(0.00284)	(< 2.22e-16)	(< 2.22e-16)

Significance Codes: p < 0.1: '.'; p < 0.05: '*'; p < 0.01: '**'; p < 0.001: '***' (two-tailed test)

Figure 4-3 A Marginal Effect of Inequality on Borrowing, conditional on War

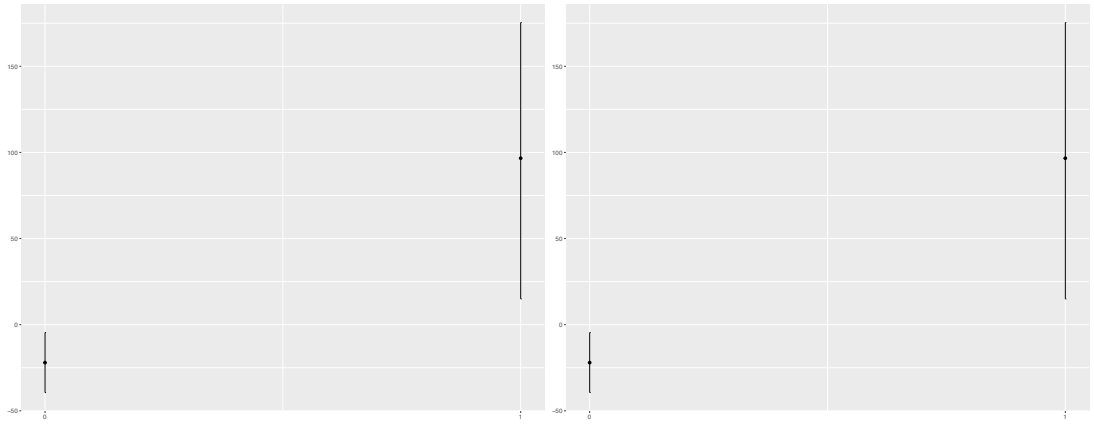


Figure 4-3 A shows how economic inequality affects borrowing by interacting with war. The Y-axis denotes the effect of inequality on borrowing, while the X-axis denotes how war (denoted as 1) or peace (denoted as 0) influences such an effect. The left picture uses the top 1% share of income as the measure of inequality, while the right one uses the top 1% share of wealth. No matter which measure is used, the result shows that when a country is at war, a higher level of inequality significantly increases the country's borrowing. This confirm my hypothesis that the higher the level of domestic inequality, the more likely it is that a state would include a deficit-financing strategy in its war finance portfolio.

I now use a more direct way to show how inequality affects a state's choice of borrowing when the state is fighting a war. In Figure 4-3B and 4-3C below, I only focus on states that are fighting wars, and show the relationship between inequality and the choice of borrowing.

Figure 4-3B & 4-3C Inequality and Budget Deficit to GDP Ratio

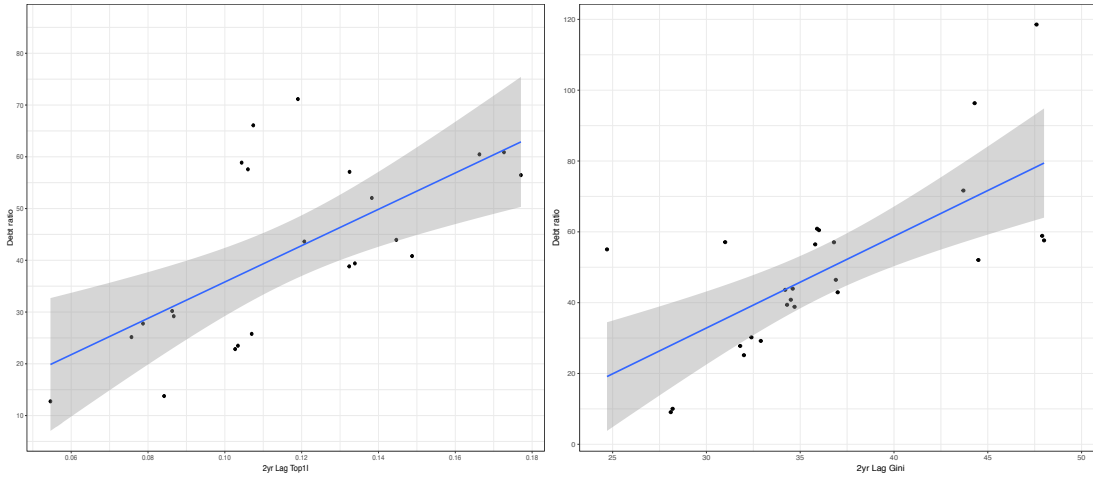


Figure 4-3B and 4-3C show a positive relationship between inequality and deficit-financing strategies. When a state is fighting a war, a higher level of economic inequality is associated with a higher deficit-to-GDP ratio (Y-axis), indicating that, ceteris paribus, higher

inequality prompts states to resort to more borrowing to fight wars. Again, the result is robust whether I use the top 1% share of income (the left) or the Gini coefficients (the right) as the measure of inequality. The finding is consistent with the implication of my hypothesis 3 that the higher the level of domestic inequality, the more likely it is that a state would include a deficit-financing strategy to pay for war.

Figure 4-3 D Marginal Effect of War on Borrowing, conditional on Inequality

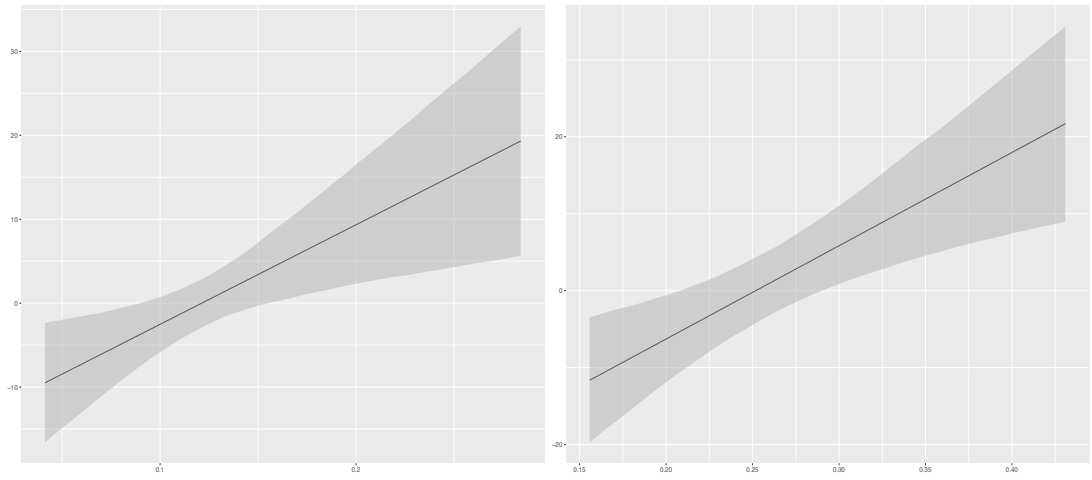


Figure 4-3 D takes another angle to capture the impact of economic inequality and the interaction effect in table 4-3. Now, the Y-axis of Figure 4-3 D denotes the effect of war on borrowing, while the X-axis denotes how inequality influences war's effect. As Table 4-3 shows, war has a negative effect on domestic borrowing. The reason may be that since financial actors are especially averse to conflict, governments will face a higher hurdle to get credit during war, ceteris paribus (Kirshner, 2007; Gartzke, 2007). Once we take into account economic inequality, however, the effect of war on borrowing becomes non-monotonic. When inequality is low, war limits a government's borrowing. Once inequality takes off, however, war's ability to reduce borrowing begins to evaporate. When inequality

rises over a certain threshold (for example, the top 1% share of income go beyond 15%, or the top 1% share of wealth go beyond 30%), the effect of war will be reversed: war becomes one of the main driving factors of a deficit-financing strategy.

To sum up, economic inequality increases state reliance on borrowing during war as shown by the interaction effect: (1) war triggers the influence of high inequality on increased borrowing; (2) high and rising inequality create the conditions that cause a state at war to depend more on credit. Taken together, those findings are consistent with one of my major hypotheses, that higher inequality makes states more likely to rely heavily on a deficit-financing strategy to pay for war.

My finding in Table 4-3 not only confirms hypothesis 3, it also reflects on other war finance literature. Table 4-3 shows that regime type (proxy by Polity IV) is not a significant factor in borrowing. This seems to contradict the democratic advantage theory (North and Weingast, 1989; Shultz and Weingast, 2003) that democracies tend to finance war by borrowing because they can receive better credit. My theory and empirical finding complements the democratic advantage theory by pointing out an important constitutive condition for regime type: economic inequality.

The empirical analysis so far offers the evidence for my main argument that domestic economic inequality shapes war finance by affecting the conditions for political leaders to achieve a successful fiscal bargain within society during wartime. When inequality is low, leaders can more successfully enact taxation and reduce nonmilitary spending to pay for war. The core reason is that a low level of inequality means that the dependence of the majority of citizens on social programs, and their demand for redistribution, is mild. By the same token, the wealthy elites' expected tax burdens are also moderate. Therefore, a political leader is more likely to secure a consensus of "equality of fiscal sacrifice" between

competing societal coalitions without causing too serious instability. Conversely, a higher level of inequality indicates a heightened threat of severe redistributive conflict within society. Unable to strike a bargain over fiscal sacrifices without igniting social crises, leaders will rationally delay the redistributive conflict by resorting to borrowing.

(4) Extremely High Inequality and War Finance: The choice of Money Creation and Foreign Borrowing

Up to this point, my study has shown solid evidence for my main argument that a lower level of inequality paves the way for political leaders to achieve "equality of sacrifice" in war finance, in which the wealthy are asked to pay more taxes while the majority of public are asked to accept welfare-spending cuts. Conversely, a higher level of inequality incentivizes leaders to delay social redistributive conflicts by heavily relying on a deficit-financing strategy. However, two war finance choices remain. When do states seek foreign borrowing and money creation?

The literature on democratic advantage theory (North and Weingast, 1989; Shultz and Weingast, 2003) argues that democracies tend to resort to foreign borrowing because they are more likely to receive cheap credit. Carter and Palmer show, however, that there is actually no difference between democracies and autocracies in pursuing either domestic or foreign borrowing. Both regimes resort to borrowing during wartime. Besides, Carter and Palmer also show that states shy away from money creation no matter what their regime types are (Carter and Palmer, 2016b: 708-713).

My empirical results in the previous section indicate a similar finding that regime type is not a significant factor. However, my explanation differs from Carter and Palmer (2016b) by arguing that inequality matters. As suggested in chapter III, when domestic inequality

reaches the highest level, a state is more likely to rely predominantly on foreign borrowing to finance war efforts. The core reason is the interaction and co-evolvement between domestic inequality and financialization. Therefore, I expect that I will not find any significant relationship between inequality and foreign borrowing until my observational cases become extremely unequal. Table 4-4 shows the result for my hypothesis 4 on foreign borrowing.

Hypothesis 4: When domestic economic inequality reaches the highest level, a state is most likely to finance war costs mainly through the deficit-financing strategy, which predominantly relies on foreign borrowing.

Table 4-4 Economic Inequality, Interstate War, and Foreign Borrowing

	D.V. Total Foreign Debt (millions of US$)	
	Model 1	Model 2
Interstate War	-6.819	-126.764*
	(31.863)	(49.052)
Top Income $_{t-2}$	1223.072***	598.733***
	(96.42536)	(98.268)
Interstate War × Top Income $_{t-2}$	69.823	841.526*
	(291.447)	(374.490)
GDP per capita	3.538	-3.417
	(4.709)	(4.631)
Polity	0.514	-0.017
	(0.690)	0.703
Country Fixed-Effect	Yes	Yes
N	701	231
R^2	0.20833	0.20819
R^2_a	0.16666	0.11163
F-statistic	34.9985	10.78
(Probability > F)	(< 2.22e-16)	(3.2395e-09)
Significance Codes: p < 0.1: '.'; p < 0.05: '*'; p < 0.01: '**'; p < 0.001: '***' (two-tailed test)		

Model 1 of Table 4-4 is the result of a full sample. Except for the measure of inequality (the top 1% share of income), no other variable has a significant effect on change in foreign borrowing. When I only examine countries with a high level of inequality, however,

significant relationships of inequality, war, and foreign borrowing surface. Model 2 analyzes a sub-sample of countries with the top 1% share of income over 0.1 (the threshold at the 75th percentile). In this sample, the interaction term of war and inequality has a positive coefficient, and it is statistically significant. This suggests that there is an interaction effect of war and inequality on foreign borrowing when inequality is extremely high. The model also shows that inequality itself has a significantly positive effect on foreign borrowing. Taken together, the effect of extremely high inequality on increasing foreign borrowing would be amplified when a state is at war. This confirms hypothesis 4 that when domestic inequality reaches the highest level, a state is most likely to finance war costs mainly through foreign borrowing.

Hypothesis 5: There is a U-shaped relationship between domestic economic inequality and the choice of money creation. A state is more likely to include monetary creation in its war finance portfolio if inequality in the state is either very low or very high.

Table 4-5 Economic Inequality, Interstate War, and Money Creation

	D.V. Money Creation (log M2)	
	Model 1	Model 2
Interstate War	0.172	-4.282*
	(0.668)	(2.102)
Top Income $_{t-1}$	0.145	1.708
	(1.630)	(1.811)
Interstate War × Top Income $_{t-1}$	-1.784	27.238*
	(5.621)	(13.756)
Inflation $_{t-1}$	0.440***	0.379***
	(0.049)	(0.065)
GDP per capita	0.005	-0.077
	(0.072)	(0.083)
Polity	-0.002	-0.013
	(0.013)	(0.017)
Country Fixed-Effect	Yes	Yes
N	768	223
R^2	0.11337	0.16892
R^2_a	0.071323	0.086639
F-statistic	15.2795	6.84305
(Probability > F)	(< 2.22e-16)	(1.2628e-06)
Significance Codes: p < 0.1: '.'; p < 0.05: '*'; p < 0.01: '**'; p < 0.001: '***' (two-tailed test)		

The choice of money creation reveals an even more complex picture. Recall my argument that there is a non-monotonic relationship between inequality and money creation due to its dual potential for either regressive or progressive redistribution. Put more precisely, a state is more likely to include money creation in its war finance portfolio when inequality is either very high or very low.

Model 1 of Table 4-5 is the result on the relationship of inequality, war, and money creation, using the full sample. Except for the variable of previous inflation, I fail to find any significant relationship between any of the other variables and money creation. When I focus only on countries that go beyond an intermediate level of inequality, however, a significant interaction effect of inequality, war, and money creation appears. Model 2 analyzes a sub-sample of countries with Gini coefficients beyond 34 (beyond the median). In this sample, the interaction term of war and inequality has a positive coefficient, and it is statistically significant. This suggests that there is an interaction effect of war and inequality on money creation when inequality goes beyond the intermediate level. I also run another model with a sub-sample of countries with Gini coefficients below 34 (below the median). The coefficient of the interaction term of war and inequality becomes negative (though it is not significant), suggesting a potential negative interaction effect of war and inequality on money creation. To intuitively portray the non-monotonic relationship of economic inequality, war and money creation, figure 4-5 graphically shows the relationship between inequality and money creation when a states is fighting war.

Figure 4-5 Inequality and Money Creation during Wartime

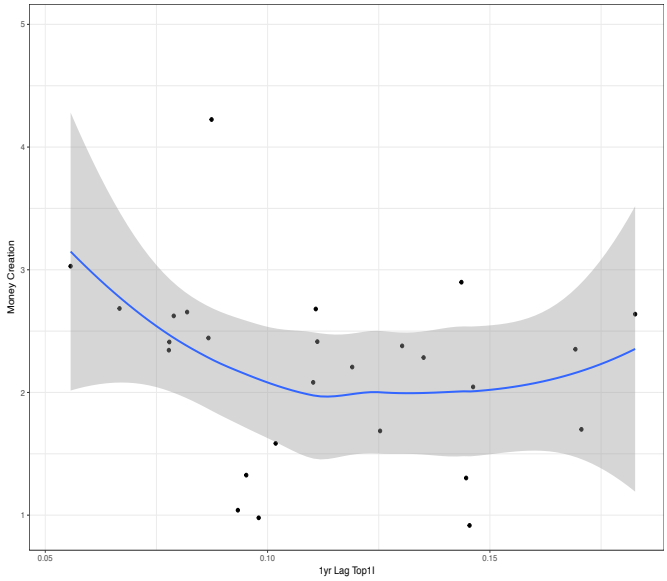


Figure 4-5 indicates that when inequality is low, a state is more likely to resort to money creation to pay for war. As inequality starts to rise from a low level to an intermediate level, the chance of money creation declines. After domestic economic inequality passes an intermediate level and ascends into the highest level, the chance of money creation surges again. This confirms my hypothesis 5 that there is a U-shaped relationship between domestic economic inequality and the choice of money creation to pay for war.

(5) Robustness Check and Sensitivity Analysis

Lastly, I include several analyses to see whether my results may be driven by other confounders. First, I want to control for the possible confounding effects of the stakes of interstate wars. Accurately identifying the stakes of an interstate war *ex ante* is usually extremely difficult. Nonetheless, scholars generally agree that disputes about territory are more likely to escalate and more likely to involve fatalities and higher levels of fatalities than disputes about other issues (e.g., Vasquez 1995; Braithwaite and Lemke 2011). Hence, I estimated a set of models that distinguish between interstate wars fought over territorial

issues or alternatively on other issues according to the MID project (Palmer et al. 2015). The results indicate that my substantive findings continue to hold: a low level of inequality is associated with high taxation and low nonmilitary spending during wartime regardless of what stakes states are fighting for. Conversely, a high level of inequality is associated with increasing borrowing and nonmilitary spending in war.

Second, I want to substantially control for the impact of regime type. In the previous sections I already included the regime variable, Polity IV, as a control in my models. And this control variable does not affect the significance of inequality variable. I then divided my full sample into two samples: democracies and non-democracies. I ran the same models using these two subsamples separately and found similar results: a low level of inequality correlates with a high tax to GDP ratio during wartime. In contrast, a high level of inequality correlates with a high deficit to GDP ratio and nonmilitary spending in war. In the interest of space, those results are in the appendix.

Lastly, I substituted *Gini* and *Top Shares (Wealth and Income)* with *Level (Low-High-Extremely High)* as the measure of inequality variable.[52] I carried out the same tests and my estimates show that my core findings remain valid. I also included a control variable of *central bank independence* (CBI) and ran the same models. Again, my main results were confirmed.

[52] As suggested in chapter 3, I generate a measure of the *level* of inequality by using the datasets of Gini coefficients and the top wealth and income shares. The threshold between *High* and *Low* will be the median value of my sample. I follow the inequality literature to identify the threshold for *Extremely High*. Specifically, the threshold of extremely high refers to Gini (or Top Wealth and Income shares) values at the 75th percentile of my sample.

2. Narrative Analysis of Interstate War Finance in the Two World Wars

During World War I the United States, United Kingdom, and France were the three major belligerents that to some extent financed war costs with progressive taxation. Inequality in these three countries, defined as the top 1% wealth share of total national wealth, was significantly lower than in Imperial Germany (Deutsches Reich) or Russia (Россійская Имперія), where taxation was basically ignored as a financing option (Zielinski, 2016: 110-111).

(1) Unequal Empire: Imperial Russia and Germany in WWI

In Imperial Russia, prior to World War I, distribution of land, the most important asset and source of wealth, and income, were extremely unequal. The nobility, while constituting only 1.5% of the population, held 50% of all privately held arable land in 1861. In Latvia, 1,500 nobles owned about 6.75 million acres of land, while 1.3 million peasants owned 5.4 million acres. An estimated land Gini coefficient for Russia in 1904 was 0.88 (Chapman, McDonald and Moser, 2015:140), which is similar to the land Gini coefficient in today's Middle East and Latin America (Vollrath and Erickson, 2007).[53] The extremely unequal structure of wealth created a huge hurdle for the Tsar to enact progressive taxation without provoking ferocious opposition from the rich. As a result, consistent with the prediction of my theory, Russian war expenditures were paid primarily by a combination of foreign and internal loans (74% of war revenue), and money creation (the ruble was debased by about

[53] According to the FAO (Food and Agriculture Organization of the UN) the land Gini coefficient of Venezuela in 1997 was 88 (income Gini: 50.6), the land Gini of Nicaragua in 2001 was 72 (income Gini: 53.1). In comparison, the land Gini of Greece in 1999/2000 was 58 (income Gini: 36.1); the land Gini of Sweden in 1999/2000 was 32 (income Gini: 25). (FAO, 2009)

30% by the end of 1917, and the volume of ruble bank notes increased tenfold during WWI). [54] The Tsar tried to impose new taxes during 1915-16 without much success due to the economic crisis and rampant resistance. Therefore, the Tsar kept seeking frequent and relatively small loans until he was overthrown and Imperial Russia collapsed in 1917. Under the new government led by the Bolsheviks, Russia finally enacted a capital levy on wealth (Zielinski, 2014: 37). After 1917, domestic economic inequality was dramatically brought down by the revolution, regime change and the socialist movement (Scheidel, 2017: 214-223). A rapid and sharp decrease in inequality had paved the way for progressive war taxation.

Like Imperial Russia, the Deutsches Reich also had a high degree of land inequality prior to World War I. Using agricultural census data from 1882 on the number and size of agricultural units, or individual landholdings, scholars estimate that the land Gini across the whole of Germany was 0.72, and 0.77 for Prussia (Thomson, 2014: 86, 89). These figures for Imperial Germany were similar to those of highly unequal countries today (Vollrath and Erickson, 2007). Furthermore, Imperial Germany even experienced a huge jump in income inequality during WWI, with its top 1% share of income rising to 22% between 1914 and 1918. Because of high land inequality and increasing income inequality, Kaiser Wilhelm II, also the King of Prussia, was especially vulnerable to pressure from rich elites. In fact, the Kaiser's empire was essentially built on the support of landed elites. Therefore, Germany chose to rely heavily on borrowing and money creation to pay for the war. Most German treasury bonds were monetized by the Reichsbank (Germany's central bank at the time). By 1918 the Reichsbank already held about 58.8% of the Reich's floating debt (Balderston, 1989: 238). The Reichsbank also issued new notes, *Darlehnskassenscheine*, which were not

[54] The overall note circulation reached the ruble equivalent of $8.9 billion, an amount many times higher than the $817 million estimated at the outbreak of World War I

legal tender but were receivable at face value at all public offices (Zielinski, 2016: 9). These war finance policies all contributed to skyrocketing increases in the money supply. From 1916 to 1918, the average annual growth rate of the German money base was 55% (76% in 1918), and the average growth rate in the money supply was 43% (52% in 1918) (Balderston, 1989: 238).[55] To be fair, the fiscal pressure of war also forced the Kaiser to try to tax the rich. The landed elite, however, halted the Kaiser's bid. As Bogart (1920) put it: "The taxes voted were, however, not merely belated; they were also slow in being put into effect. By the middle of August 1917, the Empire had not yet received a single penny of the war taxes. The war-profits tax was still unpaid after three years of war." (Bogart 1920: 226–227, quote from Zielinski, 2014: 39). High inequality thus led the Deutsches Reich to create new money during World War I. The remnant money creation ultimately led to hyperinflation in 1923 and thereafter.

(2) Lower and Declining Inequality: The US, UK, and France in WWI

In contrast with the Russian and German empires, the United States, the United Kingdom, and France were better able to incorporate progressive taxation as a crucial part of war finance strategy because of a level of wealth inequality that was lower than in Imperial Russia and Germany. To be fair, inequality in the US, UK, and France prior to World War I could hardly be considered low by today's standards, which is why deficit-financing still played a significant role in each county's war finance.[56] By comparison, however, inequality in these three countries was either less severe than Germany or Russia or declining. Land in the United States, UK and France was more equally distributed. In addition, by 1918 the top

[55] By contrast, the average annual growth rate of the UK money base was 20%, and the average growth rate of the money supply was 19% (Balderston, 1989: 238).

1% share of income in the US, UK, and France were 18.95%, 19.24%, and 20.09%, respectively. Their figures were close to those in the Scandinavian countries Sweden, Denmark, and Finland (*World Income and Wealth Database*).[57] Relatively mild inequality, in conjunction with war, paved the way for progressive taxation that accounted for 32.5% of US war finance, 17-21% of UK's, and almost 15% of France's (Zielinski, 2016: 110-111, 2014: 40-41; Rockoff, 2012: 125; Balderston, 1989: 224, 227; Seligman, 1919: 749-752, 756-757). [58]

Tracing the Causal Process of US War Finance in WWI

When we take a deeper look into the US in WWI, the process of US war-finance strategy-making illustrates how a declining trend of inequality influences rich and poor alike as well as the interaction between them. To begin with, the concentration of wealth in US reached a high point in 1910 (though still markedly lower than in Europe). Therefore, the wealthy were still able to advocate their preferred war finance strategy, which explains why Treasury Secretary William McAdoo rejected the view that war should be financed entirely by taxes because it would frighten the wealthy and reduce their support for war. And as the US entered World War I in 1917, its first war finance choice was domestic borrowing. The First and Second Liberty Loans were promoted, with their interest payments exempted from the standard surtax (Rockoff, 2012:114, 119-122). The policy was welcomed by the wealthy.

[56] Borrowing accounted for 60-65% of US war expenditures, 72-5% of the UK's, and around 79% of France's (Zielinski, 2016: 110-111, 2014: 40-41; Rockoff, 2012: 125; Balderston, 1989: 227; Seligman, 1919: 750-752, 756-757)

[57] Around the same time, the top 1% of income shares in Sweden, Denmark, and Finland were 16.35%, 21.28%, and 15.27, respectively.

[58] There are different estimates about the role of taxation in each country's war finance (US: 26.5-33.2%, UK: 17.1-21.2%, France: 12-15%). The general consensus is that in World War I taxation played a more significant role in US war finance than in the UK's. And taxation played a still much smaller role in French war finance. Also, from 1914 to 1920, the top marginal rate of income tax in the US rose from 7% to 77%. The top rate in the UK rose from 8.33% to 60%. The top rate in France rose from 2% to 50% (Scheve and Stasavage, 2016:78).

Controversies and fairness concerns, however, were raised. For example, major American economists, including Oliver Sprague, Edwin Seligman, and Irving Fisher, gathered at the annual meeting of the American Economic Association to make a statement that favored taxation as the main war finance strategy: "…If conscription of men is just and right, conscription of income is the more so; conscription of both is just and right when the nation's life and honor are at stake." (Quote from Scheve and Stasavage, 2016: 157) Oliver Sprague even alluded that "borrowing was unjust": "the injustice of treating those who furnish the funds for war more generously than those who risk life itself will not be questioned" (Quote from Rockoff, 2012:112).

Democratic President Woodrow Wilson eventually succeeded in mustering enough support for steeply progressive war taxation thanks to a declining trend of inequality, which began in 1910. Owing to war preparation and the 1913 Supreme Court ruling that income tax was constitutional, the top 1% share of wealth in the US declined from 45% to 40% of US wealth by 1917. It did not fundamentally equalize American society, but it did foster an environment that were more conducive to a compromise for equal sacrifice between the rich and poor. As a result, at the end of 1917, the US enacted the War Revenue Act, which introduced a sharply progressive income tax (the top marginal rate reached 77%), a graduated excess profit tax on corporations and individuals, an inheritance tax with a top rate at 25%, and higher taxes on alcohol, tobacco, and other luxuries (Scheve and Stasavage, 2016: 159; Rockoff, 2012:115).

Further Comparisons of US, UK, and France in WWI

If we further compare US war finance with its European allies, the impact of inequality becomes even clearer. According to Piketty, the US was actually more equal than European

countries at the beginning of the 20th century (Piketty, 2014: 321-324, 347-350). The top 1% share of US income was lower than the same figures in the UK and France. In addition, the distribution of wealth (assets, property, land, etc.) shows an even sharper difference. By 1913, the top 1% share of wealth in the US was 45%, while it was 66% in UK and 54% in France. This is why the United States was capable of using taxes to pay for 32.5% of war expenditures. By contrast, higher inequality in the UK and France constrained their taxation capacity and forced them to rely more on borrowing. Moreover, the UK and France both had incentives to rely on foreign borrowing because of a heightened redistributive conflict domestically. Britain thus paid 14% of war expenditures through foreign borrowing, while the figure for France was 18%. Besides, there is evidence to suggest that France also financed a portion of war costs by money creation. Conversely, the US did not seek any external financing.[59] Also, there is little evidence that the US ever utilized money creation. Thanks to a lower level of inequality relative to European countries,[60] the US was equipped with helpful conditions for progressive war taxation (Zielinski, 2016: 110-111, 2014: 40-41; Rockoff, 2012: 125; Balderston, 1989: 227; Seligman, 1919: 750-752, 756-757, 765-768).

(3) Inequality in Decline: The US, UK, and Allies in WWII

A further decline in inequality contributed to even greater reliance on progressive taxation in World War II. Prior to that war, the legacy of WWI and the Great Depression led to significant drops in inequality among almost every belligerent (Piketty, 2014: 323-325;

[59] Of course, state capacity was one of major reasons that US never resorted to foreign borrowing during World War I. The US was the main country that offered war loans to major European allies. However, this was not the only reason since the US theoretically could still seek private capital through international sovereign bond markets. An interesting case is the UK, another country that also provided a large number of loans to allies, but UK still constantly utilized the City of London and international bond markets to accumulate international capital (Balderston, 1989: 227, 237-240).

[60] As Piketty pointed out (2014: 347-350), the starting point of inequality in the United States was low. Since US was a new country whose population consisted largely of immigrants who came to the New World

Scheidel, 2017: 130-141). Their wartime taxes rose correspondingly (Zielinski, 2014: 51-56; Scheve and Stasavage, 2016; Scheidel, 2017: ch.5). Between 1918 and 1940, the top 1% share of wealth in the US declined from 45% to 37%, and the top 1% share of income in the US dropped from 19% to 17% over the same period. The United States could thus mobilize enough support for a steeply progressive war taxation to finance war efforts during WWII. The percentage of US war costs paid by taxation in WWII was 45 to 53%, a number much higher than the same figure during WWI (Zielinski, 2014: 55, 2016: 111; Rockoff, 2012: 171). Tax burdens were predominantly borne by the top wealth holders, with the top tax rate for income and estates peaking at 77% in 1941 (Scheidel, 2017: 149). The rich were by no means the only ones who made sacrifices in WWII. Due to the heightened pressure of inflation, wage and price controls and rationing were imposed. The "General Maximum Price Regulation" and Roosevelt's famous "hold-the-line" executive order drastically froze consumer prices and wages without causing severe strikes or resentment from either workers, employers or the rentier class (Rockoff, 2012: 174-180). By virtue of lower and declining inequality, Roosevelt was better able to achieve "equality of sacrifice" among American society.

The US was certainly not alone in enacting steeply progressive war taxation. Across the Atlantic, Churchill and his war ministry led the UK also to pay for much of the war by the conscription of wealth. Influenced by Keynes' war finance plan (1940), which sharply rejected deficit-financing, the top marginal tax rate for income in UK rose to 65% starting in 1941 and continued until the end of WWII (Scheve and Stasavage, 2016). The Excess Profits Tax continued at 100% during the war—it had a guaranteed postwar refund of 20% (Daunton, 2008: 195). The UK's choice of war finance followed its trend of declining

with little or no wealth, wealth inequality in the US around 1800 was not much higher than in Sweden in 1970-80, the representative case of "equal land."

inequality. Owing to World War I and domestic labor movements in the 1920s, from 1918 to 1940 the top 1% share of wealth in the UK plummeted from 62.55% to 49.85%, and the top 1% income share fell from 19.24% to 16.98%. The decline in inequality was even more dramatic than in the US. As a result, Britain was capable of financing 53-60% of war expenditures through taxation (Cooley and Ohanian, 1997; Kennedy, 1999: ch.18), a figure larger than in the US. Furthermore, UK war finance strategy in WWII was also characterized by "equality of sacrifice" between competing societal actors. Keynes' war finance plan was the best example. On one hand, Keynes (1940) recommended steeply progressive war taxation and a capital levy,[61] in conjunction with family allowances, to impose fiscal burdens on the rich. On the other hand, Keynes also proposed a scheme of compulsory saving and deferred payments, which required workers to accept delayed wage-payments and reduced current consumption. Besides, Keynes also suggested rationing measures that forced both the rentier class and the poor to retrench. Keynes' plan was largely adopted without provoking serious redistributive confrontations. Thanks to a significant drop in inequality, the British reached a compromise for equal sacrifices between the wealthy and the poor. Declining inequality persisted after the war and paved the way, starting in 1950, for an extraordinarily high top income tax rate of 80% (Scheve and Stasavage, 2016, 2012).

In addition to the US and UK, Canadian war finance too revealed a similar effect from a lower and declining level of prewar inequality. Inequality in Canada was lower than in the US and European countries. From 1920-1938, the average top 1% share of income in Canada was about 16%, and it further declined to 13% from 1939 to 1941. Canada financed

[61] Keynes (1940) suggested that a capital levy should be introduced after war to pay for deferred payments to workers.

55% of its war expenditures through progressive taxation, with the top income tax rate peaking at 95% in 1943 (Scheidel, 2017: 150; Kennedy, 1999: ch.18).

The same pattern could be found beyond the Anglo-Saxon countries. For example, because of the legacy of WWI and the communist revolution, inequality in the USSR from 1920 to 1939 was significantly lower than that in Imperial Russia (Scheidel, 2017: 213-220). Hence, the Soviet Union successfully enacted income taxes and an excess profits tax to pay for war. France also experienced a persistent decline in inequality during the interwar years. The top 1% share of wealth in France declined from 50.45% to 39.69%, and the top 1% share of income in France dropped from 20.07% to 16.51%. Therefore, even though most of its territory was under attack or occupied, France strove to introduce highly progressive war taxation as the top tax rate hit 70% in 1942 (Piketty, 2014: ch.14).

(4) A Hike in Inequality and Its Decline: Germany and Japan in WWII

On the Axis side, German and Japanese war finance strategies were also affected by changing trends in inequality. Inequality in Germany had been low during the interwar years because of the post-1923 hyperinflation. The rise of the Nazis, however, changed the trend. Once the Nazis came to power, the top 1% share of income in Germany spiked from 11% to 16% from 1933 to 1938. Moreover, the share of the "super rich," the top 0.01%, grew by more than 100% from less than 1.25% to more than 2.5% thus almost recovering its levels at the end of the nineteenth century (Dell, 2018: 374). As a result, the Nazi leadership initially rejected Walther Funk's plan[62] of financing war through a sharp increase in taxation. Instead, Nazi Germany relied on a combination of borrowing, compulsory saving, forced loans, and a comprehensive program of rationing. Money creation was also introduced to

[62] Walther Funk was the economic minister of the Third Reich.

relieve the pressure for tax increases (Tooze, 2006: 293-302, 353-356). Perhaps even more important, Nazi Germany heavily engaged in plundering in its occupied territories, collecting 8 billion Reichsmarks (Zielinski, 2014: 54). As the war went on, a combination of output decline, inflation, and physical destruction basically reversed the trend of inequality. Under fiscal necessity and declining inequality, Nazi Germany had no choice but to raise corporate tax rates from 40% to 55%, in 1941-42. Tax increases of 1941-42, combined with plunder, financed 54% of German war expenditures in 1942 and 44% in 1943 (Tooze, 2006: 643-644; Kennedy, 1999: ch.18). It is worth pointing out that Hitler vetoed further tax increases in 1943-1944. It was not until February 1945 that Hitler finally conceded to tax hikes, when the collapse of the Third Reich was imminent (Tooze, 2006: 647).

Imperial Japan also experienced a hike in inequality in the interwar years. From 1920 to 1938, the top 1% share of income in Japan grew from 16.78% to 20%. The income share of Japanese "super rich," the top 0.01%, reached more than 3.5% in 1938, a figure even higher than that of Nazi Germany (Moriguchi and Saez, 2008). Like Germany, Japan initially shied away from tax increases by resorting to borrowing for war mobilization. With Japan's invasion of China in 1931 (the Manchuria Incident), Japanese military expenditures continued rising year by year. Prime Minister Takahashi Korekiyo insisted on the deficit-financing strategy

Therefore, Japanese public debt gradually piled up due to war preparation. Domestic economic inequality caused severe financial and social instability that resulted in two attempted coups d'état. Corruption, populism and militarism were widespread. Social tensions were so high that no consensus on tax reform could be reached. Consider the initial failure of 1936 "Baba tax reform," for example. The Minister of Finance Baba Eiichi proposed a sweeping tax reform with a steeply progressive taxation to finance incoming

gigantic expenditures. His plan was essentially blocked and replaced with a temporary tax increase (Extraordinary Tax Increase Act) that was only limited to the 1936-37 fiscal year. Furthermore, the tax act also relieved the burden of the rich by raising the exemption point of land and business profits). It also expunged other measures that targeted financial capital (Revelant, 2015: 436-442). As a result, the top tax rate temporarily jumped from 33% to 65% in 1936. Then it declined to 55% starting in 1937 (Moriguchi and Saez, 2008: 728). The cut in top income tax rates was remarkable since the second Sino-Japanese War (1937-1945) had just started. The weight of indirect tax increases became heavier in 1939, which further eased the rich's stress.

As the war scaled up and triggered inflation, Imperial Japan started to impose wage and price controls. Social grievances burgeoned among the majority of citizens, especially the poorer rural population. To appease the poor, Japan established a Welfare Ministry for social policy planning in 1938, and initiated several welfare policies thereafter, such as land reforms, partially state-funded health insurance schemes and public housing (Scheidel, 2017: 121).

To sum up, a surge of inequality in the 1930s inhibited Imperial Japan from resorting to taxation to pay for the war. In the meantime, rising inequality also forced Japan to increase social spending. Together, the inevitable result was excessive reliance on borrowing. It was not until 1940 when the trend of inequality fundamentally reversed that Japan started to fully espouse progressive war taxation. Owing to inflation and war mobilization, the top income shares declined back to 16.5% in 1940-41, thus paving the way for an extensive reform of war finance and taxation.[63]

[63] A more detailed case study of Japanese war financing is in chapter 6

Table 4-6 A Inequality and the Dominant War Finance Strategy

		Trend of Inequality	
		Declining	Rising
Level of Inequality	Low	Taxation, Reducing Non-Military Spending, Direct Controls (Ration, Wage and Price Controls)	Shift from Taxation toward Borrowing
	High	Shift from Borrowing toward Taxation	Deficit-Financing Strategy, Money Creation

Table 4-6 B Inequality and the Dominant War Finance Strategy: Example Cases

		Trend of Inequality	
		Declining	Rising
Level of Inequality	Low	US WW II, UK WWII, Canada WWII, France WWII, USSR WWII	
	High	US WWI, UK WWI, France WWI, German Late WWII, Japan Late WWII,	Russia WWI, Germany WWI, German Early WWII, Japan Early WWII,

Concluding Remarks

This chapter utilizes both narrative and quantitative evidence to demonstrate the impact of inequality on war finance in the 20th century. When states are fighting, a low level of domestic inequality tends to pave the way for taxation and reduction in nonmilitary funding, which I label as a war finance strategy of equal sacrifice. Conversely, a high level of inequality is likely to prompt a deficit-financing strategy to pay for war, which is essentially a maneuver of buying time and delaying redistributive crises. In addition, when inequality rises to extremely high, foreign borrowing becomes the dominant strategy to finance war costs. Finally, a non-monotonic relationship exists between levels of inequality and governments' choice of money creation during wartime.

Now, a critical question emerges. Economic inequality is a structural condition. But how specifically does it influence the motives and behaviors of political and societal actors and the interactions among them? Some examples are provided in the next two chapters.

"In a defense emergency, all those on the home front should serve…there should be a sense of equality of service in the defense program… all of us must make sacrifices"

"Businessmen must pay much higher taxes… Workers must accept restraints and controls upon wages… Farmers cannot expect to avoid their fair share of the cost of national defense… families must expect very sharp curtailments of consumption…Sacrifices must be shared fairly by all groups."

——— *Harry S. Truman, 1951* ———

"But we will not permit those who fire upon us in Vietnam to win a victory over the desires and the intentions of all the American people. This Nation is mighty enough, its society is healthy enough, its people are strong enough, to pursue our goals in the rest of the world while still building a Great Society here at home… I recommend that we prosecute with vigor and determination our war on poverty... I believe that we can continue the Great Society while we fight in Vietnam"

——— *Lyndon B. Johnson, 1966* ———

"**Martin, my boys are dying in Vietnam, and you won't print the money I need!**"[64]

——— *Lyndon B. Johnson to William Martin, Chair of the Federal Reserve, 1965* ——

Chapter V. Pay-As-You-Go vs. Borrow to Fight: US War Finance in the Korean and Vietnam Wars

US finance patterns have experienced major changes during the 20th century. Indicative of these changes are the differences in how the United States financed the Korean and Vietnam Wars, two wars that share political, economic and strategic similarities. In both

[64] This account came from Richard W. Fisher, the President of Federal Reserve Bank of Dallas, 2005–2015.

instances, the US was motivated by a grand strategy of Cold War containment. In terms of fiscal cost, both wars were categorized as "limited wars." At its peak in 1952, the Korean War cost 4.2% of annual GDP, while the same figure was 3.7% of annual GDP for the Vietnam War (Zielinski, 2016: 29). Another estimate shows that in total, military spending accounted for 17% of GDP during the Korean War and 11% of GDP during the Vietnam War (Rockoff, 2012: 255, 295). They were nowhere near the magnitude of fiscal effort required during the Civil War or the two World Wars. On the side of domestic politics, both wars were led by Democratic presidents. When each war started the Democratic party held the majority of Congress—the 81st Congress for the Korean War and 89th Congress for the Vietnam War—(Bank et al., 109; Zielinski, 2016: 29-30). Furthermore, public support for the presidents' decisions was high when both wars began. In November 1950, a Gallup poll survey indicated that 66% of Americans supported Truman's decision to defend Korea (Zielinski, 2016: 35). As for the Vietnam War, by the end of 1965, 60% of the country saw the Vietnam War as America's most urgent problem, and two out of three Americans supported taking a stand in Vietnam. Johnson's approval rating remained impressively high at 64%, while the opposition to his first serious Vietnam engagement in 1965 was low, about less than a quarter of the population (Dallek, 1998: 340; B. D. Mesquita and Smith, 2016 (ibook): ch5, 332).

On the economic side, prior to both wars, Congress introduced major tax reductions (the Revenue Acts of 1945 and 1948 and the Revenue Acts of 1962 and 1964, respectively). In addition, both wars took place under the Bretton Woods system, suggesting that capital controls were still roughly in effect (Bank et al., 109; Zielinski, 2016: 29-30).

Lastly, if we take a close look at Truman's and Johnson's paths to power prior to the presidency, a striking similarity appears. During WWII, Truman chaired the special Senate

Committee to Investigate the National Defense Program, also known as the "Truman Committee,"[65] in which Truman cultivated his knowledge and perspectives on war finance. Likewise, during the Korean War Johnson chaired the Senate Armed Services Preparedness Subcommittee, whose main goal was to "reactivate the War Investigation Committee, or the 'Truman Committee'" (Cook, 1951: 1).

Even though the Korean and Vietnam Wars shared many similarities, US war finance strategies in the two wars were strikingly different. Immediately after Communist forces attacked the Republic of Korea in June 1950, Truman called for a $10 billion rearmament program, and he was determined to adopt a pay-as-you-go approach to finance the Korean War entirely by taxation (Truman, 1950, 1951). Conversely, Johnson preferred a different war finance strategy to pay for the Vietnam War. After the 1964 Gulf of Tonkin incident, Johnson followed JFK's foreign policy doctrine to engage in defending South Vietnam, and decided to escalate in mid-1965. Unlike Truman, Johnson shied away from war taxation. Instead, Johnson initially relied on a deficit-financing strategy—borrowing to sustain the war effort in Vietnam. Johnson even tried to force the Federal Reserve to create money to finance the effort (Califano, 2000: 106-121). Due to the worsening fiscal situation, Johnson eventually was forced to call, in January 1967, for 6% income tax surcharges (which, due to budget deterioration, he later increased to 10% in mid-1967), almost two years after the

[65] The establishment of the Truman Committee and its achievement are considered one of the most important reasons for Truman's rise to power. It initially started with an attempt of Truman in 1940, then a Missouri senator, to investigate how national defense resources were used and to prevent waste and profiteering. The investigation committee was established due to Truman's effort. During the three years when Truman was chair, the committee held 329 hearings (194 were open to the public and press) and generated tons of reports (Caro, 2002:231). Although no exact figure is possible, the Truman Committee was widely believed to curb profiteering (McCullough, 1992: 288). Because of the prestige and national celebrity Truman earned in the committee, FDR chose him as vice presidential running mate in 1944. And after FDR passed away in 1945, Truman succeeded as president and won his own election in 1948. Perhaps inspired by Truman's story, Lyndon Johnson seized the opportunity to establish and chair the Senate Armed Services Preparedness Subcommittee during the Korean War. Johnson's move was depicted as an attempt to expand his political capital through investigating war finance and defense programs (Caro, 2002:308). As journalist Leslie Carpenter put it: "his (Lyndon Johnson's) war-investigating subcommittee may do him what it did for ex-Senator Truman (Dallek, 1991: 385).

United States escalated the Vietnam War. Mounting resistance, however, prevented Johnson from successfully enacting tax surcharges. It was not until June 28, 1968, three months after Johnson announced he would not seek reelection and steps were taken to limit the war, did he finally push through the bill of tax surcharges (Johnson, 1968a, 1968b). And taxation retained a small role in the Johnson administration's war finance. How do we explain Truman's and Johnson's divergent choices when both wars had so much in common? The comparison of US war finance in the Korean and Vietnam Wars is an apt exercise of most-similar-systemic research design to sort out the critical factors behind war finance strategy.

One potential explanation for the different strategies is inflation risk. Rosella Cappella Zielinski argues that the Truman administration was extremely concerned about inflationary pressures. Hence Truman chose taxation from the start of the Korean War. Conversely, the Johnson administration was confronting the fear of recession, so taxation was never the first choice for war finance (Zielinski, 2016). Such an interpretation is not entirely consistent with historical evidence. For the Truman administration, the urgent economic issue at the beginning of 1950 was actually recession, not inflation. As the January 1950 *President's Economic Report* indicated:

> The basic economic problem facing the country now is **not** to combat inflation. Instead it is to increase production, employment, and incomes to complete the recovery from the 1949 downturn…(*President's Economic Report*, 1950: 8)

As a result, before the Korean crisis broke out Truman was proposing a tax reduction bill—the original version of H.R. 8920.

Conversely, when the Johnson administration was confronting the Vietnam War, the much more prominent threat at that time was inflation, not recession. Prior to the Vietnam escalation in 1965, the United States had already enacted tax reduction bills in 1962 and 1964. William McChesney Martin, Jr., the chair of the Federal Reserve Bank at that time, had begun, in mid-1965, signaling that he favored higher interest rates to avoid inflation. He eventually raised the discount rate (Califano, 2000: 106-108). Even the most committed Keynesian economist Gardner Ackley, the chairman of the Council of Economic Advisers, changed his mind in April 1966 to warn that "overall prices would rise by 2.5 % in 1966, and inflation was expected to increase further in 1967. 'Failure to act would turn "creeping inflation into a canter'" (Meltzer, 2009: 499). In short, the historical evidence suggests that inflation alone cannot fully explain the different choices of war finance strategies between Truman and Johnson administrations.

Another popular argument is to focus on central bank independence (CBI) and argue that a more independent central banker would have constrained the leadership/executive branch from choosing inflationary policies or money creation. Therefore, the leadership/executive branch would be more likely to choose either taxation or social spending cuts to pay for war. Conversely, a low level of CBI enables the leadership/executive branch to pursue alternatives other than war taxation or reducing nonmilitary expenditures. US war finance in the Korean and Vietnam Wars challenges the CBI argument. Historical evidence shows the Federal Reserve did not gain its full independence during the Korean War period. For the first year of the Korean War, the Treasury's "pegged rate policy,"[66] established in 1942 to finance WWII, constrained Fed monetary policy. Until 1951, the Fed continued buying low

[66] On April 30, 1942, the Federal Reserves announced its commitment to purchase all ninety-day Treasury bills offered "on a discount basis at the rate no higher than 0.375% per annum." The Fed thus established a pattern of rates that it maintained throughout the war and beyond. It held one-year rates at 0.875 %, and long-term bonds (the longest end being 25 years or more) at 2.5% (Meltzer, 2003: 594).

interest rate treasury securities and consulted the Treasury before changing its interest rate policy. Although the Fed finally gained its *de jure* independence through the "Fed-Treasury Accord"[67] on March 4, 1951, the Fed was still subject to the *de facto* power of the Truman administration. The clear evidence is that Thomas McCabe, the chairman of the Fed, was immediately forced to resign on March 9th and replaced by William McChesney Martin, who was assistant secretary of the Treasury at the time. Since the Fed was not fully independent from the Treasury during the Korean War, Truman's choice of war taxation becomes puzzling. Within 22 days after the start of the Korean crisis, on June 25, 1950, Truman asked for taxation to pay for the war (Truman, July 19, 1950). Why did Truman, when the Fed was not yet fully independent, immediately and so eagerly pursue taxation when he had a more convenient alternative, money creation?

Conversely, when Johnson was preparing to escalate war efforts in Vietnam in 1965, he never hesitated to try to force the Fed to choose money creation, although the Fed had already established its reputation for independence. After Martin, already the longest serving Fed Chair by that time, attempted to raise the discount rate, Johnson told the Treasury Secretary Henry H. Fowler by phone:

> I would hope that he wouldn't call his board together and have a Biddle-Jackson fight—I'm prepared to be Jackson if he wants to be Biddle (Johnson, 1965)[68]

[67] The Fed-Treasury Accord is considered the starting point for the Federal Reserve's push for independence and control over monetary policy. It states: "The Treasury and the Federal Reserve System have reached full accord with respect to debt-management and monetary policies to be pursued in furthering their common purpose to assure the successful financing of the government's requirements and, at the same time, to minimize monetization of the public debt."

[68] Johnson was referring to the 1833 "Bank War," when President Andrew Jackson whipped up a populist frenzy against Nicholas Biddle and effectively shut down his Bank of the United States, a predecessor of the Federal Reserve.

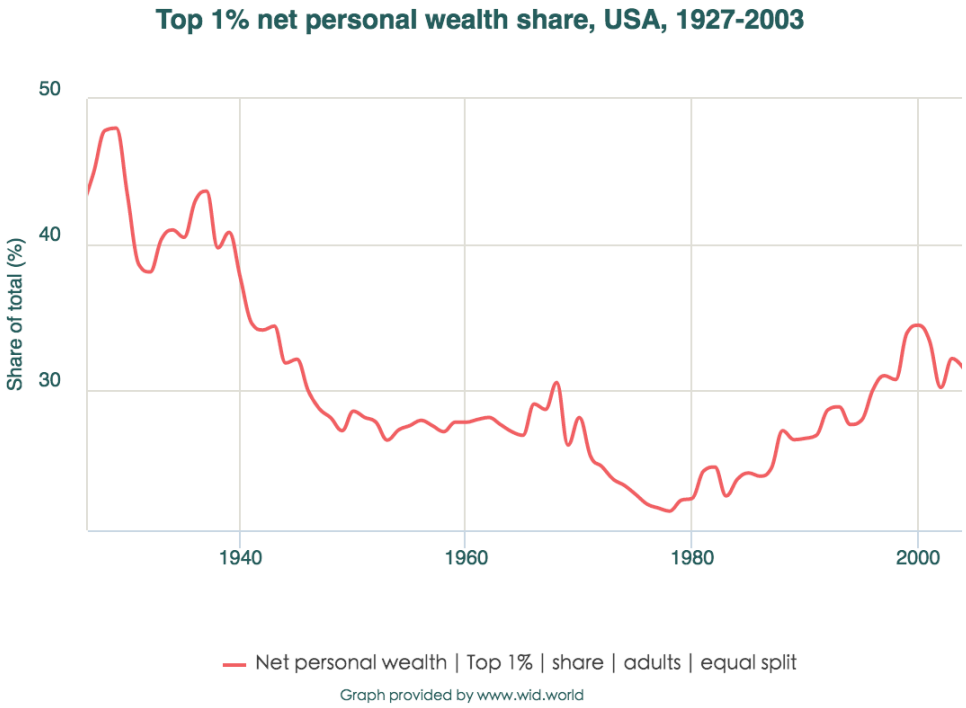
Eventually, Martin steered the Fed to raise the rate, thanks to its independence. Despite defeat in the battle with the Fed, Johnson did not choose taxation. Instead, Johnson continued relying on a deficit-financing strategy to pay for most of the war effort in Vietnam. Johnson kept postponing the request for tax surcharges until 1967, which he could not get passed until he announced plans to limit the Vietnam War and not seek reelection in 1968. How do we account for both Truman's determination and Johnson's reluctance to tax the rich in fighting a war?

Causal Factor: Not Just a Level of Inequality, but a Changing Trend of Inequality

Historical evidence suggests that *changing trends* of domestic inequality played a crucial role in determining the divergent patterns in strategies of US war financing in the Korean and Vietnam Wars.

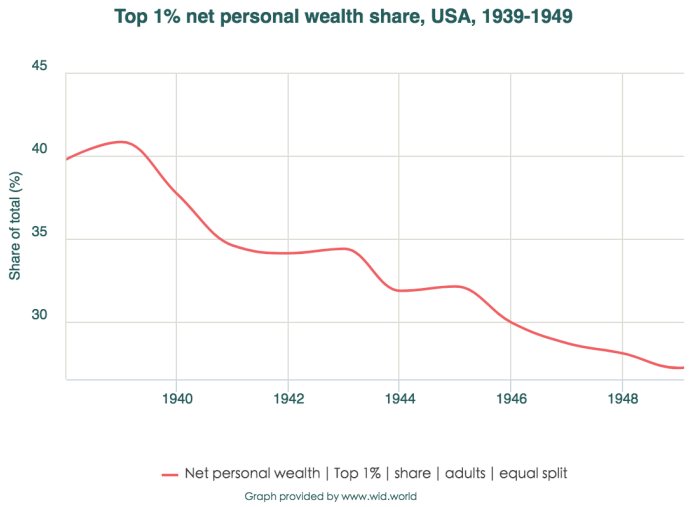
First of all, we should admit that the levels of inequality were quite similar at the times prior to the Korean and Vietnam Wars. Figure 5-1 shows that inequality, measured by the top 1% wealth shares, persistently declined between 1929 and 1949. Since 1953, inequality roughly stabilized until 1967. The top 1% wealth shares in 1949, the year prior to the Korean War, was 27.19% (The average from 1948 to 1949 was 27.63%). In comparison, the top 1% wealth shares in 1964, the year prior to the Vietnam Escalation, was 27.13% (The average from 1963 to 1964 was 27.37%)(World Income Database).

Figure 5-1 The U.S. Inequality Trend from 1927-2003



Although the levels of inequality during the Korean War and the Vietnam War were relatively similar, the *changing trend of inequality* prior to each war was strikingly different. Since the 1929-39 Great Depression, the US had experienced a persistently declining trend of wealth inequality until the onset of Korean War. The top 1% wealth shares first dropped from 48% to 38.1% between 1929-1932. Later, inequality declined further to 27.2% between 1937-1949 mainly due to WWII. This declining trend persisted for a decade as shown in figure 5-2. In average, the annual changing rate of inequality between 1939 and 1949 was -1.42%.

Figure 5-2 Inequality Trend before the Korean War



The *pattern of inequality trend* became different since the mid-1950s, as shown in figure 5-3. The US top 1% wealth shares from 1953 (the truce of Korean War) to 1964 basically stabilized in the small band between 26.5%-30% (it remained almost constant at 26.5-28% from 1953 to 1961, and then slightly jumped to 30% between 1962-64). So, the decade trend of inequality (1953-1964) prior to the Vietnam War was basically unchanged. In fact, the average annual changing rate of inequality between 1953 and 1964 was 0.05%.

Figure 5-3 Inequality Trend before the Vietnam War

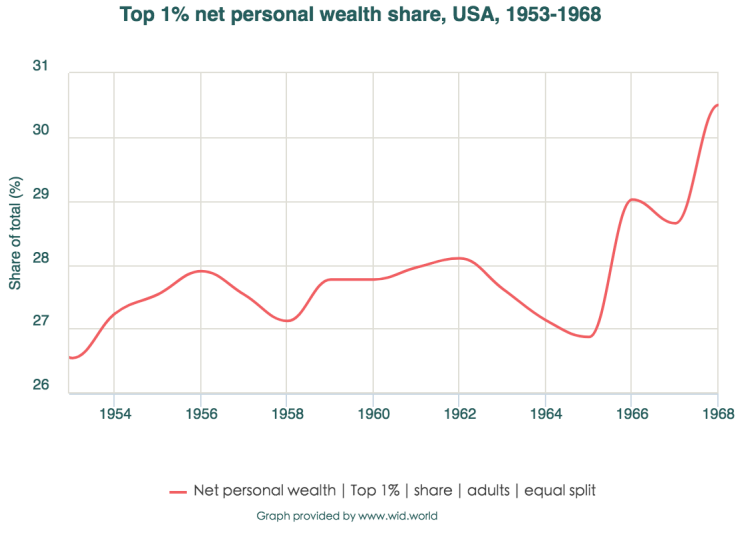
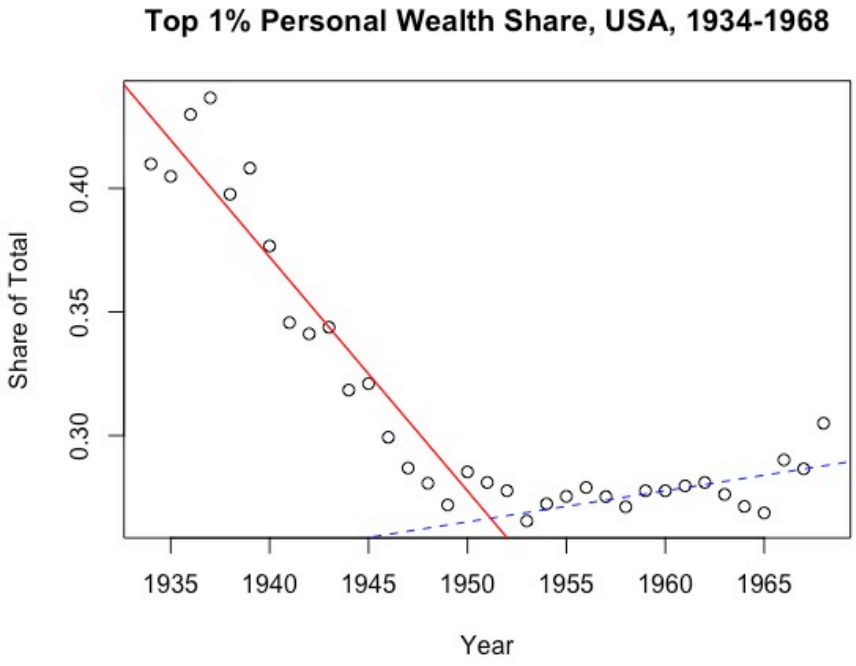


Figure 5-4 Visualization of Changing Trends of Inequality, 1934-1968



Source: World Inequality Database

Figure 5-4 portrays the different trends of inequality prior to the Korean and Vietnam Wars. The red line represents a persistently declining trend in inequality from 1934 to 1953. However, as the blue dashed line shows, after the end of Korean War, the trend of inequality in the United States had reversed and started to rise.

So how does a changing trend of inequality affect redistributive politics and war finance strategic choice? Prior to the Korean War, the U.S. experienced a persistently declining decade trend of inequality. This trend was likely to affect social actors' expectation of the future trends of inequality and social balance of power. Observing the declining trend, the wealthy elite expected a further decline of future inequality, so they were more likely to accept taxation and share-sacrifice discourses. In addition, they were more likely to back down when bargaining with the public or the leadership. In contrast, the general public

expected that the resource would be shared more and more equally because of the declining trend. The public also thought that the balance of power between the wealthy and the public would be more and more equal. In short, the general public though they could become more powerful and possess more resource as the declining trend of inequality persisted. The expectation on social resource and power distribution made collective action problems less onerous to the public. Therefore, the general public were more likely to organize powerful social movements. Here, the development of relatively stronger labor movement before the Korean War seemed to confirm this argument. Following the famous "Great Strike Wave of 1946," from 1947 to 1949 the yearly average number of strikes involving 1000 or more workers was 259. The numbers of workers involved in strikes from 1947 to 1949 averaged 1,867,000 per year. More important, unions were more capable of launching prolonged strikes, which caused more harm to employers, from the end of WWII until the late 1950s. Idle days as a percentage of estimated working time was more than 30% before the Korean War (US Bureau of Labor Statistics).

At the same time, the wealthy elite were more likely to concede. In the later part of my case study, I show that workers' power was more likely to prevailed during the Truman era. For example, workers prevailed in the Truman administration's steel seizure case (Youngstown Sheet & Tube Co. v. Sawyer, 343 U.S. 579 (1952)). In contrast, wealthy elites were constantly defeated and forced to accept compromises either in the steel seizure case or in the case of the Treasury-Fed Fight.

As a result, Truman was better able to resort to a war finance strategy based on the principle of "equality of fiscal sacrifices." On the one hand, the Truman administration paid for the entire war effort in Korea by taxing the rich—raising individual income tax and corporate tax and enacting an excessive profit tax. The top marginal income tax rate rose to

90% and the statutory rate for corporate tax increased to 52% (Piketty, 2014). On the other hand, Truman also adopted rationing and price and wages controls that created huge burdens on the public (Rockoff, 2012: 253-254). Furthermore, Truman also stopped pursuing many programs that were part of his version of the New Deal—the liberalist agenda of the "Fair Deal" (Zielinski, 2016: 37). Although Truman's price controls and rationing on steel caused large producers to resist, they were unable to launch continuing and effective challenges when the expected trend of inequality was persistently declining. Truman eventually managed to reach a deal between employers and workers in steel and other industries.

In contrast, prior to the escalation of Vietnam War, the declining trend of US inequality was halted. To stimulate the economy, John F. Kennedy and Johnson enacted tax reductions in 1962 and 1964, which decreased the top marginal income tax rate from 90% to 70%, and corporate tax rate to 48%. Consequently, the top 1% wealth shares in US slightly increased to 30% in 1962. Basically, the trend of inequality became stabilized for a decade prior to the Vietnam Escalation. This situation created an expectation for the general public: it would be more difficult for them to gain more resource or to become more powerful. In order to prepare for bad times, the general public became more likely to preventively demand welfare programs and to ask for more government protections. For the wealthy elite, however, the stabilized trend of inequality suggested that the wealthy at least would not lose more resource in the future. Hence, they were more inclined to use some of their "idle" resource to invest political campaigns to influence political process in their own favor

This had a constraining effect on labor movements. Prior to the escalation of the Vietnam War, the yearly average number of strikes involving 1000 or more workers was 213 during 1962-1964 (compared to 259 before the Korean War). The numbers of workers involved in strikes in the same period was 829,000 per year (compared to 1,867,000 before the Korean

War). Furthermore, idle days as percentage of estimated working time were only 9% before the Vietnam escalation in 1965 (as compared to more than 30% before the Korean War).

More important, after a decade of the civil right movement, the JFK and Johnson administrations realized that racial inequality had become one of the driving forces of economic inequality. The famous "Moynihan Report," written by Assistant Secretary of Labor Patrick Moynihan, showed that the nonwhite population suffered chronic unemployment, low wages, poverty, poor housing, and a lack of education (Moynihan, 1965). The combination of widening racial and economic gaps prompted Johnson to pursue his "Great Society."[69] On July 28th, 1965, when the Johnson administration announced the escalation of US engagement in the Vietnam War, it continued the expansion of Great Society programs. On July 30th, Johnson signed the Social Security Act Amendment, which created the Medicare and Medicaid programs (Johnson, 07/30/1965). On September 23rd, Johnson signed the Elementary and Secondary Education Act of 1965 (Johnson, 09/23/1965). In the following years, more welfare programs were enacted. Because of the rising trend of inequality, Johnson was unable to choose the same route Truman did—freezing his Fair Deal—during the Korean War.

Therefore, the combination of a stagnated trend of economic inequality and worsening racial inequality thus created a structural constraint—"guns and butter"—on Johnson's war finance choice during the escalation of the Vietnam War. Over the course of the war, Johnson kept avoiding or delaying a request for any tax increase to pay for the war efforts. Instead, Johnson sought to persuade the chairman of the Federal Reserve to continue money creation and low interest rates. Yet after failing to deter the Fed from raising interest rates,

[69] To name a few, the Great Society includes the Civil Rights Act of 1964, the Economic Opportunity Act of 1964, the Voting Right Act of 1965, the Social Security Act of 1965 (which authorized Medicare and Medicaid), and the Elementary and Secondary Education Act of 1965. More Great Society legislation would follow in 1966 and 1967 (Bank et al., 2008: 128).

he still insisted on continuing the Great Society and fighting in Vietnam through a deficit-financing strategy (Califano, 2000: 106-112). In January 1966, six months after the Vietnam escalation, in Johnson's annual State of the Union address and tax proposal he nonetheless insisted: "I chose to raise that money without any increases in personal and corporate income tax liabilities" (Johnson, 01/19/1966). Johnson understood that if he asked the wealthy to accept fiscal sacrifices, Great Society programs would also face demands for reduction. Social spending cuts, however, became more difficult and unpopular with the public due to the increasing trend in inequality. This constraint was complicated by conservative southern Democrats' hostility toward so many of the Great Society programs (Bank et al., 2008: 128). As a result, Johnson had to avoid tax increases or other fiscal sacrifices to maintain his political coalition.

In 1967, almost two years passed after Johnson decided to escalate the Vietnam War, the budget deficit deteriorated further and inflation increased. Finally, the Johnson administration was forced to call for tax hikes. Unlike the Truman administration's emphasis on shared sacrifices, the Johnson administration tried to downplay the notion of sacrifice. In January, Johnson asked for 6% tax surcharges in his State of the Union address and explained how minimal the burden would be (Johnson, 01/10/1967):

> A person whose tax payment, the tax he owes, is $1,000, will pay, under this proposal, an extra $60 over the 12-month period, or $5 a month. The overwhelming majority of Americans who pay taxes today are below that figure and they will pay substantially less than $5 a month a person.

In the same message Johnson pointed out that even with the tax surcharges, Americans would still be paying less than when he took office in late 1963. Even when the budget deterioration caused Johnson to change his proposal to 10% surcharges in mid-1967, Johnson still downplayed the degree of sacrifice (Johnson, 08/03/1967):

> For three out of every four American families, the burden of this increase will be between a few cents and $9 a month. That is a small burden, a small inconvenience, compared to what is borne by our men in arms who put their lives on the line in Vietnam.

The core logic behind Johnson's strategy was evident: he wanted to minimize the pressure to cut Great Society programs by lessening the implication of fiscal sacrifice. Furthermore, unlike Truman's adoption of progressive taxation, Johnson chose temporary flat tax surcharges (the same rate of increase for every tax payer) because of fear that Great Society programs would be severely endangered if he only increased taxes on the rich. Moreover, Johnson even tried to avoid labeling his proposal "war taxation." By doing so, he preserved the opportunity to allocate part of any new revenue for maintaining the Great Society. Johnson's proposal, however, confronted mounting resistance and fiscal conflicts. Congress finally approved the tax surcharge in mid-1968 after Johnson announced his intention to limit the Vietnam War and not to seek reelection (Rockoff, 2012: 288-289). Wilbur Mills (Democrat), the chair of the Ways and Means Committee, indicated: "if the surcharge proposal had been labeled a 'war tax,' then it would meet few obstacles in Congress" (Bank et al., 2008: 134-137). If the trend of domestic inequality was not gradually reversed at that

time, the Johnson administration would not have been worried about resistance to fiscal sacrifice.

1. Truman's War Finance and the Korean War: Declining Inequality and "Equality of Fiscal Sacrifice"

(1) The Korean War and Its Costs

On June 25, 1950, the Korean War began. At that moment, many considered North Korea's invasion of South Korea a potential trigger of World War III. To prevent Communist expansion, President Truman dispatched the US 7th Fleet to the Taiwan Straits on June 27. By July 7, the US was designated commander of all UN forces. President Truman authorized General Douglas MacArthur to send US ground forces to Korea. On June 20, President Truman called for $10 billion rearmament program. On December 15, President Truman declared a national emergency. The US mobilized its military establishment, increasing its ranks from 1.5 million men in June 1950 to slightly more than 2.1 million, a rise of 41%. Cumulatively, during the war, 572,000 troops served worldwide and 1,789,000 served in-theater. Total US casualties amounted to 139,860. Military spending during the Korean War amounted to 17% of real GDP (Zielinski, 2016: 30-31; Rockoff, 2012: 255; Bank et al., 2008: 111).

(2) The Truman Administration War Finance Strategy

Tax Wealth: Sacrifice from the Rich

From the beginning of the Korean War, Truman insisted on the principle of equality of fiscal sacrifice by primarily relying on progressive war taxation. In his message to Congress on July 19, 1950, Truman articulated his case (Truman, 07/19/1950):

> We must make every effort to finance the greatest possible amount of needed expenditures by taxation…We must provide for a balanced system of taxation which makes a **fair distribution of the tax burden** among the different groups of individuals and business concerns in the Nation. A balanced tax program should also have as a major aim the **elimination of profiteering**.

Initially, Truman's choice was welcomed by the whole country and bipartisan support in Congress. In some 45 days, the Truman administration and Congress worked swiftly and decisively together to transform the "supposed-to-be tax-cut bill," H.R.8920, into a new tax-hike act—the Revenue Act of 1950. The new bill raised $5 billion by increasing personal and corporate income taxes, excise taxes, and taxes on luxuries (Zielinski, 2016: 36-37; Rockoff, 2012: 246-247).

To increase funding for the war effort, on November 14, 1950, Truman asked Congress to re-enact the Excess Profit Tax, which had been repealed at the end of WWII. The Excess Profit Tax was designed specifically to target corporate profits because their profits, according to Truman, "rose sharply as a result of the decision to enlarge defense programs." Hence, Truman advocated taxing these profits "as part of a sound program of defense taxation" (Truman, 11/14/1950). His request prompted debates in Congress. With US forces suffering spectacular losses through the end of November, however, Treasury Secretary John Snyder emphasized the need for excess profit taxes during hearings of the Senate Finance Committee: "the events of the past few days in Korea testify to the compelling need for enactment of additional profits taxes" (Bank et al., 2008: 119). On December 15th, Truman declared a national emergency and asked for further tax increases by arguing: "each

of us should measure his own efforts, his own sacrifices, by the standard of our heroic men in Korea" (Truman, 12/15/1950) The Truman administration's idea was echoed by Democratic Senator Harry Flood Byrd, Sr. of Virginia, who argued that "we must tax every dollar to the greatest extent that our private enterprise system can stand." The call for fiscal sacrifices also came from the Republican Party. Senator Taft suggested that: "everybody should cut his standard of living by perhaps 10%." Renewed emphasis on the theme of sacrifice eventually led to the enactment of the Excess Profit Tax, which returned the United States to the tax system in place during WWII (Bank et al., 2008: 118-119).

With military setbacks occurring through late 1950, the United States was required to further expand defense expenditures for the following years. Hence, on February 2, 1951, Truman delivered his "pay-as-you-go" special message to Congress to ask for an additional 10 billion in taxes by increasing personal and corporate taxes and selective excise taxes (Truman, 02/02/1951). This time, Truman's proposal met huge resistance in Congress. The major reason was the conflict between President Truman and General MacArthur on how to approach a peace agreement in Korea. By mid-March 1951, the Truman administration was preparing to negotiate a peace agreement with Communist China and North Korea, while MacArthur disagreed and signaled his intention to expand the war to China if necessary (Ferrel, 1994: 332). Truman then relieved MacArthur from his command and caused a severe political crisis that dragged Truman's approval rating down to a new low of 26%. Besides, unsatisfactory military operations with massive casualties and new budget report all weakened support for further taxation. In June, Snyder reported that the federal government would have a budget surplus of nearly 3.5 billion for fiscal year 1951 (Bank et al., 2008: 123). These events made Truman's original request for taxation less compelling.

Although resistance to new war taxation was mounting, the declining trend of economic inequality still enabled Truman to acquire the wealthy elite's fiscal sacrifices. With substantial compromises, Truman finally gained Congressional passage of the Revenue Act of 1951. The bill raised an additional 5.5 billion by increasing the top marginal income tax rate to 91.7%, and the statutory rate for corporate tax increased to 52%. As a result, the Korean War was financed 100% by taxation (Zielinski, 2016: 45; Rockoff, 2012: 249).

Cut Welfare: Sacrifice from the Public

Although taxation was the main US war finance strategy during the Korean War, the importance of wage and price controls and spending cuts adopted by the Truman administration in regulating national economy should not be overlooked. In fact, the Truman administration's war finance plan exemplified "equality of fiscal sacrifices." When Truman attempted to pay for war by heavily taxing the wealthy, he also implemented restrictive measures that put massive burdens on the public. In his request for tax increases on July 19, 1950, Truman asked Congress to authorize controls of consumer credit and housing credit (Truman, 07/19/1950). One week later, in the *Presidential Economic Report*, Truman requested a reduction in federal domestic expenditures to release additional resource for the defense program. The president specifically targeted public works projects, loan programs and agricultural price subsidies. Truman emphasized: "We should act selectively, curtailing those programs which compete with defense needs, and orienting other operations to the support of the defense program" (Truman, 07/26/1950). As the Korean War escalated further, in the declaration message of national emergency, he advocated both "pay-as-you go" war taxation and a reduction in nonmilitary spending:

> "I have also instructed the Director of the Budget to reduce the nonmilitary expenditures in the new Federal budget to the minimum required to give effective support to the defense effort. The measures I have just mentioned—credit control, higher taxes, and reduced nonmilitary expenditures—are essential" (Truman, 12/15/1950)

In addition, Truman signed an executive order to establish the Economic Stabilization Agency, the Office of Price Stabilization, and the Wage Stabilization Board. On January 26, 1951, the Administration imposed mandatory wage and price freezes (Truman, 01/27/1951; Rockoff, 2012: 252-254). Rationing and controls on prices and wages effectively required the whole country to make sacrifices.

Truman's acceptance of wage control and reduction of nonmilitary spending is significant because before the Korean War, he was eagerly promoting his own version of the "New Deal"—the Fair Deal. The Fair Deal included most prominently a higher minimum wage, a farm program, housing, expansion of social security, national medical insurance, Federal aid to education, and civil rights. However, Truman's direct controls and cuts—or freezes in social welfare programs—effectively ended his pursuit of the Fair Deal.

(3) The Declining Trend of Inequality: The Structural Condition for US War Finance Strategy in Korea

Historical documents show that from the first day of the Korean crisis the Truman administration had already decided to pay for the war by a combination of progressive war taxes and reductions in nonmilitary spending. How was the Truman administration able to achieve the war finance strategy of equality of sacrifice swiftly and decisively? The main

condition for doing so was the declining trend of domestic economic inequality over two decades. Before the breakout of the Korean War, the top 1% of income and wealth shares had already plummeted due to the Great Depression and WWII, indicating an expectation of a persistent decline in the wealthy elite's political influence. As a result, the Truman administration could finance the war effort by heavily taxing the rich without generating much political resistance. The major tax acts were illustrative of this point. In the Revenue Acts of 1950 and 1951, the Administration did not choose a flat tax surcharge to pay for war. Instead, it adopted steeply progressive taxation that raised substantially the top marginal income tax rates for individuals (91.7%) and corporations (52%). More important, Truman enacted the Excess Profit Tax Act, which mainly targeted corporate capital gains.

To gain sufficient concessions from the wealthy and downplay criticism of "soaking the rich," the Truman administration also needed to ask the public to pay substantial costs. Price and wage controls imposed painful adjustments on the public. In addition, Truman was forced to suspend the pursuit of Fair Deal programs that would benefit the poor. Thanks to declining inequality, cuts in nonmilitary expenditures did not cause uncontrollable social upheavals. In fact, declining inequality created the conditions for the public to protect itself through organized collective actions, like union strikes, during wartime. Conversely, a weakened elite was unable to mobilize against taxation or promote their desirable war finance strategy. Two cases illustrate the point: (1) the Treasury-Fed fight on the "pegged interest rate" policy; and (2) the Steel seizure case (*Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579 (1952)). In both cases, the economic elites fought hard to further their interests, but with relatively unsatisfactory, if not totally failing, results.

The Treasury-Fed Fight on the "Pegged Interest Rate" Policy

The Pegged Interest Rate Policy Since 1942

In 1942, to finance US war efforts, the Federal Reserve announced its commitment to purchase all ninety-day Treasury bills offered "on a discount basis at the rate no higher than 0.375% per annum," one-year rates at 0.875 %, and long-term bonds (the longest being 25 years or more) at 2.5% (Meltzer, 2003: 594). The Fed also agreed to consult with the Treasury before any change in interest rate policy. The Treasury-Fed framework was thus known as the "pegged interest rate/pegged rate" policy. After the end of WWII, the Fed and its Federal Open Market Committee (FOMC) gradually raised interest rates to curb inflation. This action challenged the Truman administration's low interest rate policy orientation. Marriner Eccles, the Fed chair at that time, openly complained about the low interest rate policy and asked for independence and autonomy in monetary policy making. Though well-respected by the financial community, Eccles's complaint led to Truman's decision to abruptly "fire" (not reappoint to the chair) Eccles in 1948, replacing him with Thomas McCabe (Kirshner, 2007: 137). Hence, under Treasury's influence, the Fed remained committed to maintaining long-term interest rate at 2.5% and kept short-term interest rates at a relatively low level.

The Outbreak of Korean War and the Dominance of the Treasury (July 1950—October 1950)

The Korean War brought back to financial communities the memory of inflation in WWII, and forced the Fed to ask for higher interest rates. During July and August 1950, McCabe and Allan Sproul (vice chair of the FOMC) kept informing Treasury Secretary Snyder about the Fed's intention to raise interest rates. The Truman administration's

preference, however, was to keep interest rates unchanged by indicating "financing of the defense mobilization program should be assured by a stable Federal Securities market" (Truman, 01/31/1951). Snyder's first response was simply to "ignore" the Fed's request. The FOMC decided to go it alone by utilizing open market operations to raise the interest rate on one-year Treasury securities from 1.25% to 1.375% and increasing the discount rate from 1.5 to 1.75% (FOMC, 8/18/1950). The Treasury then announced that it would offer a new refunding issue for September–October short-term securities at the same rate (1.25%). McCabe said that the announcement would be in direct conflict with the Fed's measures and create confusion in market. But neither retreated, thus causing market instability. The Fed eventually stepped in to buy new treasury securities to avoid a market collapse for the new Treasury issue. The Fed started, however, to sell other government securities in support of rising interest rates. Snyder then criticized the Fed for "causing the financing failure of the Federal Government" (Kirshner, 2007: 140-141).

In late September, the Fed took another action. The FOMC unanimously voted to let the one-year rate increase to 1.75 percent but to postpone the increase until after a further meeting between McCabe, Sproul, and Snyder. To appease the Treasury, the Fed signaled that the long-term rate would remain at 2.5 percent or slightly below. Snyder delayed any meaningful discussion until October 9. Then Snyder forcibly rejected a rate increase, citing the harmful effect on sales of series E savings bonds. Seeing that the Treasury would make no concessions, the FOMC gave the New York Fed the authority to raise the one-year treasury note rate to 1.5%. The Fed also announced a 2% increase in member bank reserve requirements (Meltzer, 2003: 695; Kirshner, 2007:141).

The fight between the Fed and Treasury started to draw Truman's attention. On October 26, Truman arranged a meeting between Snyder and McCabe. The Fed ultimately conceded.

Four days later, the FOMC wrote a letter to Treasury Secretary Snyder: "we can assure you that these actions will not affect the maintenance of the 2.5% rate for the outstanding longest Government bonds." The FOMC also agreed to maintain a maximum of 1.5% on one-year treasury notes (FOMC, 10/30/1950). In the same message, the FOMC still cautioned that further inflationary or market forces could make it necessary to reconsider raising interest rates. As Kirshner pointed out (2007: 138), the financial community and wealthy elite were averse to the inflationary consequences of the Korean War. Sproul and Eccles, both well-respected financial experts, and members of the Fed Board, all pressed for an immediate increase in interest rates. With economic inequality decreasing, the power of the wealthy and the financial elite was in decline, and it was relatively hard to further their own interests swiftly.

The Expansion of the Korean War and the Treasury-Fed fight (November 1950-February 1951)

The later evolution of the Korean War created another opportunity for the Fed to challenge the Treasury. On November 22 the Treasury preannounced its refunding in December and January. The initial market response was favorable, but sentiment drastically changed just after three days, when an enormous number of Chinese Communist troops entered the War (Meltzer, 2003: 696). On November 28, MacArthur announced that the allies now faced "an entirely new war." The War had expanded, and it was not expected to end soon. And the threat of another total war seemed imminent. On December 15, Truman declared a national emergency. As a result, both consumer spending on durable goods and government spending on defense programs surged (Kirshner, 2007: 143). From December 1950 through February 1951, the consumer price index rose 19% for three months (Meltzer,

2003: 698). Severe inflation seemed to be inevitable, which gave the financial elite and the Fed legitimate reason to press for higher interest rates.

The financial community made the first move. On December 1st a story appeared in the *New York Herald Tribune*, suggesting that there was open speculation about whether the Fed would continue to support long-term government bonds (Kirshner, 2007:144). The Truman administration immediately responded by requesting the Fed's assurance. Truman called McCabe and asked the Fed to make it perfectly clear that the Fed and FOMC would support the pegged rate policy. McCabe replied with assurance that "you [Truman] can rest assured that we [the Fed] are fully conscious of the magnitude of the financial problems that face us, and that we will do all in our power to insure the successful financing of the Government's needs" (Truman, 12/04/1950; McCabe, 12/09/1950). McCabe was not just giving Truman the runaround. After Communist China's entry into the Korean War in late November 1950, rising uncertainties made low-interest Treasury securities unattractive in the market. The Fed was forced to become the major buyer, purchasing $2.7 billion of the maturing issues in December, partly offset by sales of $1.3 billion. In other words, the Fed was effectively monetizing the government' debt, causing a large increase in the Federal Reserve System's balance sheet (Meltzer, 2003: 696). Mounting burdens on the Fed started piling up and ignited its resistance.

Inflationary pressure and a swelling portfolio pushed McCabe and Sproul to hold a meeting with Snyder at the start of 1951. Sproul urged higher short-term interest rates, and recommended higher rates on long-term debt to permit the Treasury to sell debt without the Fed's support. Still, Sproul tried to appease the Treasury by leaving intact the 2.5% limit on longest-term government bonds (Meltzer, 2003: 700). Yet such a compromise request was not welcomed by Snyder. The conflict between the Treasury and the Fed intensified and

came out in the open. On January 17, 1951, Truman again intervened, arranging a meeting with Snyder and McCabe. Truman emphasized that "I wanted to make sure that we were in agreement about our ideas of maintaining 2.5% rate on the long-term bonds" (FOMC, 01/31/1951: 13). McCabe gave the assurance, but apparently McCabe thought this was about the maintenance of 2.5% on the **outstanding** bonds (FOMC, 01/31/1951: 14). The next day, in a luncheon meeting of the New York Board of Trade Snyder announced that "after a joint conference with President Truman and Chairman McCabe of the Federal Reserve Board," "refunding and **new money issues** will be financed within the pattern of that rate (2.5%)" (Snyder, 01/18/1951). The Fed was incensed by Snyder's speech because the Treasury stretched the Fed's commitment without consultation and forced the Fed to finance treasury bonds without limit. Therefore, the Fed struck back.

In the following weeks, McCabe contacted Truman, complaining and asking for clarification. And Sproul gave a public speech to the New York Banking Association that challenged the Treasury position. The FOMC used market operations to cause a minor drop in the price of long-term bonds (100.96 to 100.66)—notably, still above par (Kirshner, 2007: 146). Seeing these moves, Truman asked for an immediate meeting with the FOMC on January 31, 1951. During the meeting, he stressed the seriousness of the wartime emergency and the importance of maintaining confidence in government securities. McCabe explained that the Federal Reserve shared the president's concern about maintaining the government's credit, but that it had responsibility for economic stability. The meeting seemed to smother the conflict in ambiguity, but no one changed position. The next day, however, the White House released a letter from the president that shocked the Fed. In the letter Truman thanked the Fed for "your [McCabe, and the Fed's] assurance that you would fully support the Treasury Defense financing program, both as to refunding and new issues, is of vital

importance to me" (Truman, 02/01/1951). The Treasury immediately made a public announcement that the Fed and FOMC pledged to the President their support of government securities, which meant that interest rate levels would be maintained during the Korean emergency (Treasury, 02/01/1951). Once again, the Fed felt betrayed and was forced to shoulder an extra burden. The president and Treasury recklessly and constantly imposed their will on the Fed without full consultation. The Fed felt it could no longer stay in such a subservient position and started to seek external assistance.

Eccles, the board chair, fired an opening shot. As a well-known member of the financial elite, Eccles released to the press his copy of board governor Evans's memo, summarizing the meeting with the president on January 31, showing that the White House and Treasury were misrepresenting the information (Meltzer, 2003: 706). Not surprisingly, this caused a political storm and the financial communities supported the Fed. The Fed also sought allies in the House and Senate, including Senators Paul Douglas and Robert Taft. In the meantime, the Treasury's allies such as Senators Burner Maybank, Willis Roberson, and Joseph O'Mahoney stood up to defuse the confrontation. Senator O'Mahoney wrote to McCabe to warn that "the Treasury-Fed conflict was playing into the hands of 'Soviet dictators' and there should be no conflict between the two agencies during the Korean crisis" (Kirshner, 2007: 147-148) On February 7, Senators Robertson and Maybank asked McCabe and Sproul to meet Snyder to reconcile their difference. The next day both sides met and repeated their grievances without reaching any consensus. Snyder claimed that McCabe had agreed to support the 2.5% limit, and Sproul criticized Snyder for not conducting a dialogue and for not listening to the Federal Reserve's position. Two days later, Snyder informed McCabe that he expected to be away for two weeks for eye surgery. Snyder then appointed assistant

secretaries Edward F. Bartelt and William McChesney Martin Jr. to negotiate with the Federal Reserve (Meltzer, 2003: 708).

"Won the Battle but Lost the War!"—The Treasury-Fed Accord and the Replacement of the Fed Chair

Snyder's leave proved to be critical in enabling the Treasury and Federal Reserve to reach an agreement. As Sproul charged, Snyder never even bothered to understand the Fed's opinion, let along make any concession. It was Snyder's continued disregard that irritated the Fed. To some extent, Snyder's domineering attitude reflected the relatively weak bargaining power of financial elites under the declining trend of economic inequality.

The Korean War and domestic political environment compensated for the weak influence of financial elites. On December 31, 1950, Communist China launched the Chinese New Year's Offensive, also known as the Third Battle of Seoul, which not only captured Seoul but also forced UN forces to retreat massively. On January 12, 1951, in the cabinet meeting the Joint Chefs proposed to Truman a plan for an evacuation from Korea. Truman indicated general approval of the idea of arranging for appropriate evacuation, although he expressed that "he was unwilling to abandon the South Koreans to be murdered" (Foreign Relation of the United States, 1951: 795.00/1–1251). The difference between Truman and MacArthur in strategic planning in the Korean War became more significant and politically problematic. From October 1950 to January 1951 public support for the war dropped from 65% to 31% (Zielinski, 2016: 43). These issues made the Truman administration eager to solve the Treasury-Fed conflict in order to maintain the equality of fiscal sacrifice.

With more adept negotiation skills and concessions, Treasury Assistant Secretaries Bartelt and Martin successfully reached agreement with the Federal Reserve. On February 26,

Truman held a meeting with the Fed and the Treasury (Bartelt and Martin). On March 4, Snyder, Fed Chair McCabe, and the FOMC jointly announced the Treasury-Fed Accord (The Treasury-Fed Accord, 03/04/1951):

> The Treasury and the Federal Reserve System have reached full accord with respect to debt-management and monetary policies to be pursued in furthering their common purpose to assure the successful financing of the government's requirements and, at the same time, to minimize monetization of the public debt.

According to some economic historians or political economists (e.g. Allan Meltzer) the Treasury-Fed Accord is considered the milestone and starting point for central bank independence in the United States.[70] As Cargill and O'Driscoll point out (2013), however, it might be incorrect to assume that the Fed was truly freed from political pressure and gained full independence after the Treasury-Fed Accord. It might also be misleading to assume that the Treasury-Fed Accord was a bankers' victory. Nor was the Accord a case of bankers flexing their muscle (Kirshner, 2007: 151). As a bureaucratic entity, the Fed did gain its de jure independence. Whether the Fed really gained de facto power, however, and whether financial elites successfully seized control of policy, remained to be seen. In fact, both the Fed and financial elite were still constrained by the social structure—their bargaining power was still relatively weak due to the declining trend of economic inequality.

One salient case of financial elite defeat is the stunning replacement of the Fed Chair. After the announcement of the Treasury-Fed Accord on March 4, 1951, Truman forced McCabe, on March 9, to resign as chair, although his term as a member ran until 1956.

Truman told McCabe that "his services were no longer satisfactory, and he quit" (Meltzer, 2003: 712). The core reason, as some economic historians suggest, was that Treasury Secretary Snyder told Truman that he no longer had confidence in Chairman McCabe (Moe, 2014: 54). Truman then appointed Martin, the Treasury assistant secretary, as the new chairman of the Federal Reserve. Perhaps not surprising, Martin was proposed by Snyder (Meltzer, 2003: 712, fn235). In the press, this was widely understood to be Treasury's revenge, and that the Fed had "won the battle but lost the war" – the Fed gained de jure independence from the Treasury, but then the Treasury recaptured de facto power by installing its own man at the helm (Moe, 2014: 55). A few months later, Eccles resigned from the Board of Governors of the Fed. In 1956, Allan Sproul also resigned from the FOMC. Because of the retreat of the financial elite, press reports at that time did not treat the Treasury-Fed Accord as a major change in policy or independence (Meltzer, 2003: 712, fn234).

The other evidence is about interest rates, which changed little. Over the entire fight between the Treasury and Fed during the Korean War, what financial elites desired most were higher interest rates on both short-term and long-term bonds. Did financial elites win? The result was disappointing to them. After the Accord, the interest rate on short-term bonds rose from 1.60% to 1.94%. As for new issues of the long-term bonds, Treasury agreed to issue at the rate of 2.75%, but asked the Fed to maintain the existing premium (2.5%) on long-term bonds until the Treasury sold off the new 2.75% issue (refunding). The FOMC agreed to a maximum $200 million purchase of 2.5% bonds during the refunding and until April 15. After the refunding, the yield rose to 2.62%. Then, both short-term and long-term interest rates stabilized until the Korean armistice in 1953. Just as Meltzer points out, a less

[70] Allan Meltzer (2003) suggests: "for the first time since 1934, the Federal Reserve could look forward to conducting monetary actions without approval of the Treasury. The accord ended ten years of inflexible rates,

than 0.25% rise in long-term bond rates, and about a 0.34% rise in short-term bond rates were "so little" (Meltzer, 2003: 711-714).

Ample evidence suggests that the wealthy elite in the banking and financial communities were far from powerful. Their preference seldom prevailed in the choice of war finance strategy. This also explains their unsuccessful attempt to avoid further tax increases. At its annual convention in 1951, the American Bankers Association voiced that any further tax increases would be destructive (Kirshner, 2007: 152). What awaited them was the steeply progressive Revenue Act of 1951, which increased the top marginal rate to 91.7% and the corporate tax to 52%. Even after the Republican Party took decisive control of both the White House and Congress in 1953, financial elites still failed to force any substantial reduction in progressive taxation. After his inauguration, the newly-elected Republican president Dwight D. Eisenhower asked to extend the Excess Profit Tax to December 31, 1953 (previously scheduled to expire on June 30) (Eisenhower, 05/19/1953). Furthermore, in 1954, to balance the revenue loss caused by the expiration of the Excess Profit Tax, Eisenhower again worked with Congress to extend the historically high statutory corporate tax rate at 52% (Eisenhower, 08/16/1954).

"Dump the Bosses Off your Backs!" The Union-Industry Fight and The Steel Seizure Case under the Truman Administration

The circle of wealthy elite does not include only financial communities. Employers of large companies and manufacturing industries are also major members. As is widely known, there is a constant cleavage between management and workers, who account for a predominant portion of the public. To maximize company profits, employers usually try to

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following seven years of inactive and inflexible policies" (712).

suppress wages and utilize (or threaten) lay-offs to force workers to accept lower wages. Because it is not easy to swiftly switch to other companies or industries for higher wages, workers lack an *exit* strategy in wage-bargaining. Therefore, workers need to rely on the voice strategy, such as strikes (Hirschman, 1970). Workers, however, suffer a more severe collective action problem because their interests are usually more diffuse, and each individual's capacity is limited. To organize powerful strikes, as Mancur Olson (1965) suggested, workers need to form unions to offer members selective incentives to mobilize for effective collective action. More important, domestic economic inequality is a major factor in determining the balance of power between management and unions. An unequal society tends to suggest that wealthy employers control more resources to crack the solidarity of workers and cripple union mobilization.

This was certainly not the case before the Korean War. As indicated previously, the declining trend of economic inequality during the Great Depression and two world wars had created a powerful leveling effect between the wealthy and the public. This led to increasing numbers of massive and effective strikes, such as the Great Strike Wave of 1946. From 1947-1949 the number of major strikes averaged 259 yearly (1962-1964: 213; 2000-2002: 29). In addition, more workers were involved in strikes prior to the Korean War (on average, 1947-1949: 1,867,000; 1962-1964: 829,000; 2000-2002: 180,000). More important, unions were more capable of prolonging strikes in bargaining with companies. Idle days as a percentage of estimated working time was more than 30% before the Korean War (1962-64: 9%; 2000-2002: less than 2%) (US Bureau of Labor statistics).

Lower and declining inequality before the Korean War empowered workers and the rest of the public to generate more effective collective action. This ability to mobilize became a fundamental factor in Truman's decision-making on war finance. When the Truman

administration called for equality of fiscal sacrifice, it was especially more concerned about public dissatisfaction and the risk of social instability. Consequently, when distributional conflict intensified during the Korean War, the Truman administration more frequently chose to appease workers and the public while suppressing the wealthy elite. The representative case is the wage and price bargaining of the steel industry during wartime, which led to the Truman administration's steel seizure case (*Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579 (1952))

After Truman issued mandatory wage and price freezes on January 26, 1951, the Office of Price Stabilization, Economic Stabilization Agency issued a General Ceiling Price Regulation (16 F.R. 808) freezing prices on most commodities and services at the highest levels charged between December 19, 1950, and January 25, 1951. At the same time, as required by the Defense Production Act of 1950, wages and other compensation were frozen at the rates paid on January 25, by order of the Wage Stabilization Board, Economic Stabilization Agency (Truman, 01/27/1951).

Most industries suffered a huge decline in profits due to price controls, and the steel industry was perhaps the one that encountered the worst blow. The reason was evident. Steel was the core strategic resource for defense programs. Therefore, during the Korean War the steel industry's revenues were severely squeezed by price freeze production quotas and procurement orders, which directed most steel production to military uses. This caused a serious distributional conflict between employers and workers in the steel industry: day and night steel workers sweated to maintain massive production, so they asked for wage increases. Profit margins were already thin, however, so steel companies hoped to suppress wages until the removal of the price freeze.

Stage I: The Union's Call for a Raise: Support from the Truman Administration, Dissatisfaction from the Industry

In November 1951, the United Steelworkers of America, which was part of the C.I.O. (Congress of Industrial Organizations, a federation of unions that organized workers in industrial unions) and headed by Phil Murray, sought a new labor contract with management because they believed that the steel industry was operating at high profit levels in spite of government price controls (Bellia, 2008: 2-4; McCullough, 1992: 897). The union called for an 18.5-cent increase in hourly wages, improved benefits (paid holidays and vacation benefits),[71] and a "union shop hiring arrangement (hiring based on union membership)"[72] in the steel mills. Management refused to negotiate and instead asked for a price increase first. When the union announced that it was prepared to strike on December 31, Truman referred the dispute to the Wage Stabilization Board. On December 22 the Wage Stabilization Board made a recommendation of an hourly wage increase of 26.4 cents in three installments over 18 months. The initial increase for 1952 would be 18.8 cents (*NY Times*, 03/23/1952; 07/25/1952). The Steelworkers accepted the recommendation while the steel companies denounced the proposal as unreasonable. The companies claimed that only a hefty price increase of $12 a ton could offset the higher labor cost (average price of steel was $110 per ton at that time) (McCullough, 1992: 897). The union then agreed to postpone strikes until April 8, 1952 to give the government and steel companies extra time to reach a consensus.

To the Truman administration, price stability in steel was crucial to manage inflation. If steel wages and prices went up drastically, other industries would follow the steel formula

[71] The most conservative estimate was an increase of 18 cents. If all the "fringe benefits" were included, the total increase could reach 30-35 cents (*NY Times*, 03/22/1952; McCullough, 1992: 897; Marcus, 1977/1994: 65).

[72] A union shop, also known as a post-entry closed shop, is a security clause that guarantee a hiring arrangement based on union membership. Under this, the employer agrees to either only hire labor union

and across-the board price controls would collapse (Ferrell, 1994: 371). Hence, Truman and the Office of Price Stabilization refused the steel companies' request, and only permitted a potential price increase between $2-3 per ton. With the deadline for a strike approaching, on April 3, Ellis Arnall, director of the Office of Price Stabilization, secretly offered an increase of $4.50 per ton (Marcus, 1977/1994: 71). This was far from what the steel companies had asked for. The negotiations ended in deadlock and a steel strike became inevitable.

In the process of bargaining, the Truman administration was much more concerned about workers' threat of a strike than the companies' dissatisfaction. Truman worried that the strike would substantially harm the flow of munitions to Korea and to the buildup of NATO forces in Europe. Truman specifically mentioned: "Any curtailment of steel production would endanger the lives of our fighting men [in Korea]" (McCullough, 1992: 898) The Administration was also sensitive to workers' interests. The Wage Stabilization Board's wage proposal was almost the same as the union's request. Truman also thought this proposal was "fair and reasonable" (McCullough, 1992: 897). In stark contrast, management's interest was severely resisted. The Administration's price proposal never took into substantial consideration the steel companies' bargaining requests. When the wealthy elite tried to change Truman's stance from inside the government, the result was equally disappointing. Charles Edward Wilson, the director of the Office of Defense Mobilization, was an advocate within the Administration of loosening price controls. Wilson, former president of General Electric (GE), was known for his adversarial relationship with unions. During steel industry bargaining, Wilson urged Truman refuse any substantial wage increases to the unions. Wilson argued that the wage proposal conceded too much to unions and would destabilize the whole economy. On the other hand, Wilson

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members or to require that any new employees who are not already union members become members within a certain amount of time.

advocated a further increase in steel prices to solve the bargaining deadlock (*NY Times*, 03/25/1952). Wilson thought he had already convinced the Administration to side with him. Truman, as well as the Office of Price Stabilization, however, eventually rejected Wilson's price proposal while still keeping intact the wage increase proposal. Feeling humiliated and frustrated, Wilson resigned and publicly criticized Truman in the *New York Times* (03/31/1952).

The Truman administration's policy choices in the first round of steel industry bargaining clearly reflected that the balance of power tilted toward workers, who accounted for a large portion of the public. Thanks to a sharp declining trend in inequality, unions were more capable of causing a credible threat of strike and persuading the government to accept their demands. Conversely, management and wealthy industrial elites were relatively powerless in furthering their interests. For example, the steel companies' demand for price increases were never met, and their allies in the Administration easily became casualties of the political conflict.

Stage II: The Steel Seizure, the Supreme Court Ruling, and the Steel Strike

The exile of Wilson implied that the steel companies would not back off, so unions announced that a nationwide strike which would begin at 12:01 a.m. on April 9, 1952. Extremely concerned about maintaining steel production for defense programs, Truman made his move. On Tuesday, April 8, only hours before the strike, Truman signed Executive Order No. 10340, which directed the secretary of Commerce to take possession of the steel mills and to keep them operating. This is widely known as "the Steel Seizure." In his radio and television address on that night, he explained his decision (Truman, 04/08/1952):

> Steel is our key industry. It is vital to the defense effort. It is vital to peace… If steel production stops, we will have to stop making the shells and bombs that are going directly to our soldiers at the front in Korea.
>
> The plain fact of the matter is that the steel companies are recklessly forcing a shutdown of the steel mills. They are trying to get special, preferred treatment, not available to any other industry. And they are apparently willing to stop steel production to get it.

Truman's choice to take over steel mills was apparently in the union's favor. As a result, the union immediately called off the strike and steel production continued. The steel seizure, in Truman's belief, rested on the president's inherent constitutional power as Commander in Chief in a time of national emergency. In fact, Truman had another choice to sustain steel production, the Taft-Hartley Act. After the "Great Strike Wave of 1946," Congress passed the Taft-Hartley Act in 1947 to restrict the power of unions and strikes. With Taft-Hartley, the government could go to the courts for an injunction requiring a union to postpone a strike for 80 days when a strike threatened to imperil national health or safety. Taft-Hartley gave management more bargaining advantage because it deprived unions of the right to strike. After factoring in the balance of power between management and unions, Truman shied away from invoking Taft-Hartley and made the politically rational decision to seize the nation's steel mills. Furthermore, Truman fiercely criticized the steel companies for non-cooperation. It should be noted, however, that the Truman administration was by no means an "agent" of workers. The Administration chose the action that dampened social instability, but it did not mean the government had been "captured" by the unions. During the period of seizure, the Truman administration did not raise wages. Rather, it asked for continuing

negotiations between management and unions (Ferrell, 1994: 371). The steel seizure decision indicated that lower and declining inequality allowed the government much leeway to navigate the social cleavage.

Truman underestimated, however, the constitutional restraint on his presidential power. Within an hour of the president's address, lawyers for two of the major steel companies, Youngstown Sheet & Tube and Republic Steel Corporation, went to Judge David A. Pine of the District of Columbia. Judge Pine determined that the seizure of steel companies was illegal. The Truman administration appealed. And the Supreme Court announced it would hear the case. On June 2, 1952, the Supreme Court declared the president's action unconstitutional by a majority of 6 to 3. The core reason (based on Justice Hugo Black) behind the ruling in *Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579 (1952) was the legal principle that taking possession of private property is a "lawmaking" power resting within Congress's "exclusive constitutional authority." Taking possession of private property to keep labor disputes from stopping production was "a job for the Nation's lawmakers, not for its military authorities" (McCullough, 1992: 899-901).

After the ruling, Truman ended the seizure, and the Steelworkers immediately launched their nationwide strike for 53 days, making it the longest and most costly steel strike in history. Losses in production and wages were unprecedented, about 21 million tons of steel and $400 million in wages, as 600,000 steel workers and 1,400,000 others in related industries were idled (McCullough, 1992: 901-902). On July 22, the steel strike forced the Army to shut down its largest shell-making plant (*NY Times*, 07/23/1952). And Truman had enough. On July 24 he summoned Phil Murray (the head of the Steelworkers' union) and Benjamin Fairless (president and chairman of United States Steel Corporation) to his office and demanded a settlement. Management and unions reached an agreement that provided a

wage increase of 16 cents an hour, "fringe benefits" that included an additional 5.4 cents, and a compromise form of union shop (hiring arrangement based on union membership). The steel companies were granted a price increase of $5.20 (*NY Times*, 07/25/1952). Steel production resumed.

Two implications can be inferred from the strike and settlement. First, a lower and declining level of inequality empowered unions to mobilize more powerful collective action and to gain a satisfactory deal. The final settlement was close to the union's initial request (18.5 cents plus fringe benefits). Conversely, the offer that steel companies eventually accepted was actually the same as the government had proposed back in April (an increase of $4.50, plus 70 cents for increased freight rates). Second, declining inequality also enable the Truman administration to navigate the cleavage and achieve equalities of sacrifice. The final settlement, under Truman's mediation, asked both management and unions to make sacrifices. Truman was even able to request both parties to show solidarity. In the words of the *New York Times* (07/25/1952):

> A novel feature of the understanding is an agreement that Mr. Fairless and Mr. Murray will make a joint speaking tour to promote improved labor-management relations in United States steel plants.

If domestic inequality had not been declining at that time, the conflict between management and unions would have been fiercer with little or even no room for solidarity or mutual sacrifices. The constitutional crisis of the Truman administration would also have lasted longer without any effective way of managing the steel dispute.

2. Johnson's War Finance and the Vietnam War: Inequality on the Rise and the Deficit-Financing Strategy

(1) The Vietnam War and its costs

The US role in Vietnam originated in the Eisenhower and John F. Kennedy years. During the JFK administration, the US increased the number of military advisors in South Vietnam to more than 16,000. The major push for US involvement would follow the assassinations of Ngo Dinh Diem and JFK in 1963. The number of military personnel in Vietnam increased to 23,000 by 1965, 184,000 by 1966, 450,000 by 1967, and 500,000 by early 1968. Over the full course of the war, of the more than 2.5 million personnel deployed to Vietnam by the US, 153,303 came home wounded, while in-theater deaths totaled 58,000. Military spending during the Vietnam War amounted to 11.6% of real GDP (Zielinski, 2016: 48; Rockoff, 2012: 295; Bank et al., 2008: 127).

(2) The Johnson Administration War Finance Strategy

In the Pursuit of Both "Guns and Butter"

Although Lyndon Johnson is commonly considered a "reluctant warrior" (B. D. Mesquita and Smith, 2016 (ibook): ch5), he did not hesitate to follow the grand strategy of containment established by Kennedy, Eisenhower, and Truman to escalate US involvement in Vietnam. Since the Gulf of Tonkin incident on August 2, 1964, the situation of South Vietnam continued to deteriorate. In February 1965, upon the request of Secretary of Defense Secretary McNamara, the Joint Chiefs of Staff developed an expanded program of air strikes against the Democratic Republic of Vietnam (North Vietnam) (Foreign Relations of the United States, 1965: Vol. (II), Document 109). Under the approval of Johnson during

several meetings of the National Security Council (NSC), the US started Operation Rolling Thunder. Then, during the NSC meeting of February 18, Johnson decided that US military responses would have to be expanded (Foreign Relations of the United States, 1965: Vol. (II), Memorandum of 549th NSC Meeting).[73] On March 6, Johnson telephoned one of his old friends in Senate, Richard Russell, telling him the Administration would be sending Marines in to protect the Hawk outfit at Danang (Ward, 2017: 115-116). A month later, Johnson delivered his speech, "Peace without Conquest," at Johns Hopkins University, emphasizing the necessity for the US to increase its military response and strategic bombing against the North Vietnam (Johnson, 04/07/1965).[74] At the same time, Johnson also approved the enlargement of military programs, including the engagement of psychological warfare (Foreign Relations of the United States, 1965: Vol. (II), National Security Action Memorandum No. 330). This course of action prompted Johnson to submit to Congress an early request for additional appropriations ($700 millions) for military purposes in Vietnam, on May 4 1965 (Johnson, 05/04/1965). The aforementioned efforts, however, failed to halt military setbacks in Vietnam. After several evaluations and National Security Council meetings in June and July, on July 27 the Johnson administration finally made the decision to start deploying additional US forces and to escalate the Vietnam War (Foreign Relations of the United States, 1965: Vol. (II), Summary Notes of the 553d NSC Meeting).

At the same time, Johnson was eagerly pursuing his Great Society welfare programs. In 1964 Johnson declared a "war on poverty" in his annual State of the Union address (Johnson, 01/08/1964). Then he signed the Civil Rights Act in July and the Economic

[73] "The President said that we must expect an increase in Viet Cong aggressive tactics and that we must recognize that our own responses are likely to increase as well."

[74] Johnson highlighted the domino effect by mentioning: "We are also there to strengthen world order. Around the globe, from Berlin to Thailand, are people whose well-being rests, in part, on the belief that they can count on us if they are attacked. To leave Viet-Nam to its fate would shake the confidence of all these

Opportunity Act in August. On the tax front, following the Revenue Act of 1964 that cut individual and corporate income taxes (passed in February), the Johnson administration pledged to reduce excise taxes in 1965, and was planning another round of substantial income tax reductions (Johnson, 10/27/1964). Johnson's landslide victory in the 1964 presidential election boosted his determination to expand his Great Society programs. In January 1965 the Johnson administration announced 88 new projects in the War on Poverty programs. Later, Johnson successfully worked with Congress to pass the Elementary and Secondary Education Act of 1965 in April, and the Social Security Act Amendment of 1965 in July (which authorized Medicare and Medicaid). In the meantime, the Johnson administration proposed the Excise Tax Reduction Bill, Congress enacted it, and Johnson signed it into law H.R. 8371. It would phase in the reductions over a 4-year period at an estimated cost of $4.7 billion. Treasury officials were also talking about possible income tax cuts for lower- and middle-income groups (Bank et al., 2008: 129)

Delay the Inevitable, Continue the Great Society

By the first stage of the Vietnam conflict (August 1964-July 1965), Johnson had already received multiple reports about the deteriorating situation, which foreshadowed the necessity of enlarging military involvement. Unlike Truman, Johnson kept shying away from requesting tax surcharges to pay for increased defense spending. The reason was straightforward: he did not want to sacrifice the Great Society. Johnson was worried that calling for war taxation would create the opportunity of cutting his welfare programs by both Republicans and conservative Democrats, most notably Wilbur Mills who chaired the House Ways and Means Committee. Johnson said: "I do know Congress… if I talk about the

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people in the value of an American commitment and in the value of America's word. The result would be increased unrest and instability, and even wider war"

cost of the war, the Great Society won't go through and the tax bill won't go through" (Bank et al., 2008: 131).

Johnson's "Guns-and-Butter" concern was also salient in his decision-making on security policy. He was not hesitant to support more military efforts but postponed any request for additional funding. For example, during a meeting with major security advisors and officials on April 1, 1965, Johnson approved most requests for adding to military efforts, including an 18,000-20,000 increase in US military support forces, two additional Marine battalions, one Marine air squadron, and other military supplies and armaments. There was one exception, however: when Carl Rowan, the director of the United States Information Agency (USIA), asked for additional money for the psychological warfare program, Johnson agreed to energetically support it but withheld approval of any request for supplemental funds that might have needed to go through Congress (Foreign Relations of the United States, 1965: Vol. (II), National Security Action Memorandum No. 328 (document 242); McGeorge Bundy's Memos to the President(document 203)).[75]

Another significant case appeared around July 20-21, 1965 when Defense Secretary McNamara was submitting the war plan proposal. At that time, the escalation of US involvement in Vietnam became certain and in the draft McNamara recommended a tax increase. Johnson rebuffed and removed it from McNamara's proposal. Anecdotal evidence suggests that McNamara took the position that without a tax increase the costs of the war would create a government budgetary deficit, which would then stimulate inflation. Johnson replied (Gibbons, 1989: 389):

[75] Carl Rowan's proposal asked for supplemental funds that would change the military budget of fiscal year 1966 (Foreign Relations of the United States, 1965: Vol. (II), McGeorge Bundy's Memos to the President (document 203). This would increase Congressional opportunities to challenge the entire budget.

> You know so goddamned much about it, you go up there and you get it and you come back down here and give me the names of the people who will vote for it. Obviously, you don't know anything about politics. I'll tell you what's going to happen. We'll put it forward; they are going to turn it down. But in the course of the debate they'll say: "You see, we've been telling you so. You can't have guns and butter, and we're going to have guns."

Johnson wanted to have both guns and butter even if this meant the US would rely in effect on a "credit card"—the deficit-financing strategy. This set the main tone of the last NSC (on July 27) meeting before the Vietnam escalation. During the meeting the Johnson administration had already decided to expand the US commitment to the Vietnam War. The critical question was how to proceed. Eventually it boiled down to two approaches. First, "asking for everything from Congress—money, authority to call up the reserves, acceptance of the deployment of more combat battalions. This dramatic course of action would involve declaring a state of emergency and a request for several billion dollars." This approach had been Truman's choice in the Korean War. Johnson, however, preferred the alternative:

> We have chosen to do what is necessary to meet the present situation...We will give the commanders the men they say they need and, out of existing materiel in the US, we will give them the materiel they say they need. We will get the necessary money in the new budget [*of fiscal year of 1966*] and will *use our transfer authority* until January. We will neither brag about what we are doing nor thunder at the Chinese Communists and the Russians" (Foreign Relations of the United States, 1965: Vol. (II), Summary Notes of the 553d NSC Meeting(document 93)).

One of the major goals of this approach was to proceed with the Vietnam escalation without external constraints or congressional oversight. Johnson preferred this approach and persuaded other members of the NSC to agree. After the NSC meeting, Johnson called the bipartisan Congressional leadership and successfully convinced leaders from both parties to support his decision (Califano, 2000: 41). McGeorge Bundy, National Security Advisor, in his memorandum of the NSC meeting, wrote (Foreign Relations of the United States, 1965: Vol. (II), Summary Notes of the 553d NSC Meeting (document 93), fn.9):

> My own feeling is that while President was placing his preference on international grounds, his unspoken object was to protect his legislative program—or at least this had appeared to be his object in his informal talk.

Joseph Califano, the special assistant to President Johnson (Johnson's top domestic advisor), also pointed out a similar thought in his personal memoir. During the days following the Vietnam escalation decision, Johnson did not put off any Great Society agenda. On the next day (July 28th) after the NSC meeting, during the president's news conference, Johnson announced the decision to escalate the war effort in Vietnam, but he also highlighted the blueprint for the Great Society. On July 30th, on his way to the LBJ Ranch, Johnson visited Truman at the Truman library and signed the Medicare-Medicaid bill. Then Johnson and Califano spent the whole weekend (July 30-31) at the LBJ ranch discussing legislative programs and working on a memorandum about Vietnam (Califano, 2000: 41, 48-52). Califano recalled:

> I realize that in our conversations in the pool and throughout the weekend, Johnson had not mentioned, or even alluded to, any limit to the push for Great Society programs in spite of his decision to step up the war in Vietnam. Only once over the weekend, when we worked on the memo to McNamara, did Johnson touch upon anything related to Vietnam with me" (Califano, 2000: 52).

Califano thus concluded:

> That night I began to realize what Johnson had truly decided: he had not simply decided to fight the war in Vietnam; he had made another big decision—to continue full-steam-ahead fighting for the Great Society. Unlike Roosevelt and Truman, Johnson was not going to let his war destroy his progressive vision (ibid).

Fighting Two Wars by Credit Card: The Deficit-Financing Strategy

With a decision to increase taxes indefinitely postponed, Johnson needed to seek other ways to finance both the Vietnam War and the War on Poverty. Johnson first resorted to money creation by urging the Fed to maintain a low interest rate policy, but he failed because of strong resistance from Fed Chair Martin. After Johnson's announcement of the Vietnam escalation in mid-1965, Martin received several warnings about inflation and balance of payment problems. Members of the FOMC and the Federal Advisory Council kept pointing out increasing evidence of inflationary pressures and strong demand for bank loans. Hence, Martin continued informing the president that the Fed was leaning toward higher interest rates (Meltzer, 2009: 448-453). Johnson made several attempts to sway Martin and the Fed, including misrepresenting budget information, inciting defection (within

the Fed Board of Governors), or direct coercion. Johnson's efforts, however, proved to be in vain. On December 3, at Martin's urging, the Fed voted 4 to 3 to raise the discount rate by 0.5% to 4.5%. Following the vote, the Board voted to increase regulation Q ceiling rates to 5.5% (regulation Q is a Federal Reserve regulation which sets out capital requirements for US banks) (Califano, 2000: 107-108; Meltzer, 2009: 454).

Losing the battle for money creation did not force Johnson to focus on fiscal sacrifice. In his 1966 State of Union address, he urged Americans to "continue the Great Society while fighting in Vietnam." Essentially, he stated (Johnson, 01/12/1966):

> We will not permit those who fire upon us in Vietnam to win a victory over the desires and the intentions of all the American people. This Nation is mighty enough, its society is healthy enough, its people are strong enough, to pursue our goals in the rest of the world while still building a *Great Society here at home*.
>
> I recommend that we prosecute with vigor and determination our war on poverty.

In this message Johnson ruled out cutting nonmilitary spending to pay for the Vietnam War. How about war taxation? In the following week, the Johnson administration proposed a war finance plan to the House Committee on Ways and Means. In the proposal Johnson recognized that there would be a deficit in excess of $6.5 billion in fiscal year 1967. He emphasized that "I chose to raise that money *without any increases* in personal and corporate income tax liabilities" (Johnson, 01/19/1966). Instead, the president proposed a one-off policy that derived revenue from accelerating corporate income tax payments and instituting a system of graduated withholding for individuals (Bank et al., 2008: 131). This method became the core framework of the Tax Adjustment Act of 1966. A salient feature

was that war finance was not its sole purpose even though the Act was mainly triggered by the escalation of the Vietnam War. The Tax Act also: "provides for the payment of social security benefits to some 370,000 persons, age 72 and over, who are not now insured under the social security program" (Johnson, 03/15/1966). Based on estimates, the bill eventually extended social security benefits to an additional 1.8 million persons at a cost of $760 million per year (Bank et al., 2008: 131). Once the Tax Adjustment Act was passed, in March, for the rest of 1966 there was little interest in raising taxes even though the costs of the Vietnam War kept escalating.

The Administration's war finance plan drastically diverged from the Truman administration's choice. After the outbreak of the Korean crisis in June 1950, the Truman administration immediately changed its tax-reduction bill into a request for a tax hike. Within just 18 months (mid-1950 to end-1951), the Truman administration passed three bills increasing taxes specifically for war purposes, and utilized a series of spending cuts and freezes of welfare programs. In contrast, Johnson delayed any request for substantial fiscal sacrifices. The Administration continued its expansion of welfare programs and two tax-reduction bills (the Revenue Act of 1964 and the Excise Tax Reduction Act of 1965) even after the Gulf of Tonkin incident in Vietnam in August 1964. Even if we exclude the war-planning stage and just focus on the stage of Vietnam escalation (July 1965-December 1966), the Johnson administration was nowhere near a model of shared sacrifices. One and a half years after the US enlarged its military involvement in Vietnam, Johnson still shied away from raising taxes or reducing nonmilitary spending. Rather, he continued expanding War on Poverty projects during this time. When the fiscal pressure of war started surfacing in 1966, Johnson's choice was still to insist that there was no need for tax increases, and to try to squeeze some revenue for the Great Society.

Calling For the "Five-Dollar Sacrifice"—the Battle over a Surtax, 1967-68

Entering 1967, the Administration's guns-and-butter strategy was reaching its limit. The budget deficits of 1966, 1967 and 1968 were $3.1 billion (0.4% of GNP), $12.6 billion (1.6% of GNP) and $27.7 billion (3.3% of GNP). Growing budget deficits, compounded with low unemployment (average 3.7% from 1966-68) and strong consumer spending caused considerable inflationary pressures (Meltzer, 2009: 674; US Bureau of Labor Statics). By the 4th quarter of 1966, the inflation rate reached 3.4%, and continued increasing during 1967-69 (3.6%, 4.6%, 5.8%, respectively) (US Bureau of Labor Statics). At the same time, the situation in Vietnam deteriorated further. On January 24, 1967, Charles L. Schultze, the budget director, wrote to Johnson asking for an additional $12.3 billion in supplemental appropriations for fiscal year 1967 to support war efforts in Southeast Asia (Zielinski, 2016: 54). As a result, Johnson was forced to request tax increases.

On January 10, 1967, Johnson delivered the annual State of the Union address, asking for a temporary (two-year term) surcharge of 6% on both corporate and individual income taxes. Johnson, however, emphasized the minimal sacrifice involved in the tax plan by making a "five-dollar" metaphor (Johnson, 01/10/1967):

> "A person, whose tax payment… is $1000, …will pay an extra *$5* a month. The overwhelming majority of Americans will pay substantially *less than $5* a month a person"

Johnson also pointed out that even with the tax surcharges, Americans would still be paying less than they would have when he took office in late 1963:

> This proposed surcharge will raise revenues by some $4.5 billion in the first year…Now if Americans today still paid the income and excise tax rates in effect when I came into the Presidency, in the year 1964, their annual taxes would have been over $20 billion more than at present tax rates. So this proposal is that while we have this problem and this emergency in Vietnam, while we are trying to meet the needs of our people at home, your Government asks for slightly more than *one-fourth* of that tax cut each year.

Perhaps even more significant was that in the same message, Johnson called for further expansion of welfare programs, including an increase in social security benefits, expansion of Medicare and strengthening the Head Start program (early childhood education, health, nutrition, and parent involvement services to low-income children and their families).

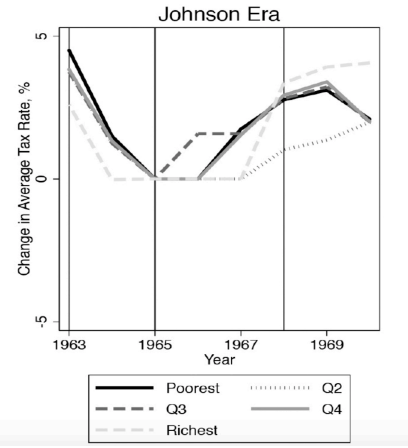
Once again, the way Johnson sought tax increases was in remarkable contrast to Truman's choice. First, while Truman highlighted and prioritized the necessity of fiscal sacrifices in his tax message during the Korean War, Johnson did his best to stress how small a sacrifice was required by the tax surcharge during the Vietnam War.

Second, Truman's war taxation fell heavily on the wealthy, while Johnson's tax surcharges were less progressive. Recall that after the outbreak of the Korean War, Truman specifically stressed that "Businessmen must pay much higher taxes." The Revenue Acts of 1950 and 1951, and Excess Profits Tax increased the top marginal income rate for individuals to 91.7%, and the statutory rate for corporate tax increased to 52%. Johnson's surtax was different. A surcharge is "a tax on a tax"[76] and would neither be progressive nor

[76] If an individual's taxes are $100, a 6% surcharge increases them by $6.

regressive by itself. How progressive it would be was ultimately dependent on the original tax system. Prior to the Vietnam escalation of 1965, the JFK and Johnson administrations enacted major tax reduction acts and reduced the top marginal rate from 91.7% to 70%. Johnson's tax surcharge only slightly lifted the top rate to 75-77% (Piketty, 2014). This was nowhere near as progressive as it had been during the Korean War. Moreover, Johnson's surcharge was just a temporary, two-year policy.[77] Figure 5-5 shows the change in average tax rate by income group in the Johnson era. It shows that after Johnson's tax surcharges all income groups paid more taxes. More important, except for the second highest income group (the highest 20-40%), the increases in effective tax rates were roughly the same for all income groups, including the richest and very poor. In short, Johnson's surtax was less redistributive/progressive than Truman's war taxation

Figure 5-5 Change in Average Tax Rate (by income group)



Resource: cited by B. D. Mesquita and Smith, 2016 (ibook): ch5,

Last but not least, Truman and Johnson held polar opposite attitudes toward nonmilitary spending during wartime. Truman was ready to freeze his Fair Deal and cut welfare programs immediately after the breakout of Korean War, while Johnson not only tried hard

[77] Therefore, after 1968 (75.25%) and 1969 (77%), the top rate fell back to 70% (Piketty, 2014).

to protect the Great Society but he also attempted to expand welfare programs over the course of the Vietnam escalation. It was this attempt to have both guns and butter that created the thorny hurdle over which Johnson had to leap to enact the surtax.

Suspecting that Congress would force him to reduce welfare programs, Johnson didn't submit his official request for the surcharge until August (Bank et al., 2008: 134). By that time, however, the continuing budget deterioration caused Johnson to change his proposal in mid-1967 to 10% surcharges. Once again, Johnson did all he could to downplay the sacrifice: "For three out of every four American families, the burden of this increase will be between a few cents and *$9* a month" (Johnson, 08/03/1967).

The core logic behind Johnson's strategy was evident: he wanted to minimize the pressure for cutting the Great Society programs by lessening the implication of fiscal sacrifices. However, Republicans and conservative Democrats, most notably Wilbur Mills, Chairman of the House Ways and Means Committee, and Russell Long, Chairman of Senate Finance Committee, blocked Johnson's attempt. Wilbur Mills held up Johnson's proposal in committee, insisting on domestic spending reductions before considering tax increases. On October 3, 1967, the committee voted 20 to 5 to set aside the surtax proposal until the president and Congress reached an agreement on expenditure reductions. The Johnson administration and Congress remained in the deadlock until early 1968 (Bank et al., 2008:135).

On January 30, 1968, North Vietnamese forces, including the People's Army of Vietnam and forces of the Viet Cong launched the "Tet Offensive," one of the largest military campaigns against the US and South Vietnamese forces. The Tet Offensive forced General William Westmoreland to request another 20,500 troops on top of the half million already in Vietnam. On February 27, Johnson held a meeting with security advisors and officials to

discuss Westmoreland's request. According to Joseph Califano, the meeting was pessimistic. McNamara called the request "madness,….and nobody knows whether it will make any difference. It still may not be enough to win the war." McGeorge Bundy said South Vietnam was very weak and the position of the US might be truly untenable. So Bundy suggested that plans be made for withdrawal. The soon-to-be Defense Secretary Clark Clifford recommended that "we must re-evaluate our entire posture in South Vietnam" On March 10, news of request for more troops was leaked to the *New York Times*, and the anti-war sentiment became widespread on the home front (Califano, 2000: 263-265) The Joint Chiefs of Staff eventually recommended to send additional support troops totaling approximately 13,500 men over the next 5 months. This troop build-up was, however, perhaps the final struggle of Johnson administration inVietnam.

On March 31, a beleaguered President Johnson announced that the United States would stop bombing North Vietnam and seek peace negotiations, starting the steps to end the Vietnam War. In addition, in the same message Johnson urged the Congress to pass the tax surcharge, and showed willingness to approve reductions of welfare expenditures. Finally, Johnson stated: "I shall not seek, and I will not accept, the nomination of my party for another term as your President" (Johnson, 03/31/1968).

Johnson's announcement that he would limit the Vietnam War, drop his bid for reelection, and accept spending cuts created the momentum for Congress to reconsider his proposal for tax increases. Finally, Johnson agreed to a $6 billion spending cut in the fiscal year 1969 as the price for the passage of a 10% tax surcharge. After signing the tax bill into law, Johnson delayed making any spending reductions and wanted Congress to choose what to cut. Because economic inequality was rising, the public's demand for welfare expenditures

became greater. Eventually, cuts in programs amounted to less than $4 billion, and most welfare programs remained intact.

To sum up, the principle of Johnson administration war finance was to minimize fiscal sacrifices. To do so, the Administration needed to rely on a deficit-financing strategy to protect welfare programs and to delay the request for additional taxes. When the budget deterioration finally made taxation inevitable, Johnson chose a temporary, less progressive form of tax—a tax surcharge (the same rate of increase for every tax payer) because he feared that the Great Society programs would be severely endangered if he only taxed the rich. Moreover, Johnson avoided the label "war taxation" for his tax proposal. By doing so, he preserved the opportunity to allocate part of new revenue to maintain the Great Society. Johnson's tactics, however, confronted mounting resistance and fiscal conflicts. Conservative Democrats were arguing that the tax increase would not be accepted unless it could be "wrapped in the American flag as a wartime measure and be used solely for military expenditures." This was why Wilbur Mills bluntly pointed out that the surcharge should had been explicitly labeled a "war tax." This view was echoed by the Republican Representative John Byrnes, who criticized Johnson for not linking the surcharge directly to the war in Vietnam. Byrnes complained that Johnson's "five-dollar sacrifice" metaphor was too complicated and "impossible to sell to the gas station operator" (Bank et al., 2008:136-137).

As I indicated previously (and will elaborate further below), the critical problem was not failed policy propaganda or confusing economic reasoning. It was the stagnant trend of inequality, and the associated expectation of future trend of inequality, that created a higher demand for welfare programs from the public, and stronger resistance to taxation from the wealthy elite. Congress finally approved the tax surcharge in mid-1968 after Johnson

announced his intention to limit the Vietnam War and not seek reelection (Rockoff, 2012: 288-289). If the trend of domestic inequality could change to decline, the Johnson administration would not need to worry about resistance to fiscal sacrifice.

(3) A Stagnant Trend of Inequality and the Expectation: The Structural Condition for a US War Finance Strategy in Vietnam

Prior to the escalation of Vietnam War, the trend of US inequality became stagnant (see figure 5-3). To stimulate the economy, JFK and Johnson enacted tax reductions in 1962 and 1964, which decreased the top marginal income tax rate from 90% to 70%, and the corporate tax rate to 48%. Consequently, the wealthiest 1% in US had increased, though slightly, their share of all wealth to 30% during 1962-1964. The stagnant trend of inequality created an expectation for the general public: it would be more difficult for them to gain more resource or to become more powerful. Now, they would need to ask for more welfare programs to prepare for bad times.

In addition, after a decade of nation-wide activism by the civil rights movement, the JFK and Johnson administrations realized that racial inequality had become one of the driving forces of economic inequality. In January 1965, Daniel Patrick Moynihan, the assistant secretary of Labor, started his research on low-income black family life in the United States. In March Moynihan completed the famous "Moynihan Report," titled "The Negro Family: The Case for National Action." Moynihan found that the black population suffered chronic unemployment problems, low wages, poverty, poor housing, and lack of education. He emphasized "The circumstances of the Negro American community in recent years has probably been getting worse, not better" (Moynihan, 1965; Patterson, 2015). Moynihan identified a variety of valuables that caused the widening economic gap between the black

and white population, such as migration, the urbanization of the black population, and white racism. All of this combined to further disorganize black families, making much higher black divorce rates and out-of-wedlock pregnancies. The result was that "almost one-fourth of negro families are headed by females" (Moynihan, 1965; Patterson, 2015: 8). The structural disadvantage of black population prevented them from enjoying the whole nation's economic development and prosperity. As a consequence, the structural disadvantage further exacerbated inequality. Moynihan thus concluded:

> equal opportunity for Negroes does not produce equal results—because the Negroes today are a grievously injured people who in fair and equal competition will by and large lose out.

The Moynihan Report had a huge impact on Johnson's view of the Great Society programs, leading him to deliver the "To Fulfill These Rights" commencement address at Howard University in June 1965. In the speech Johnson declared (Johnson, 06/04/1965):

> But freedom is not enough… it is not enough just to open the gates of opportunity. All our citizens must have the ability to walk through those gates.
> We seek not just freedom but opportunity. We seek not just legal equity but human ability, not just equality as a right and a theory but equality as a fact and equality as a *result*.

The combination of a stagnant trend of economic inequality and a widening racial and gap prompted Johnson to continue expanding welfare programs. However, a stagnant trend of

economic inequality, together with the associated expectation of concerns about the potential rising inequality in the future, weakened the capacity of the public to mobilize effective collective action. As a result, organized and powerful social movements became fewer. As indicated previously, prior to the escalation of Vietnam War, the number of labor strikes and participants had already declined. A more important feature was that labor movement persistence (measured by the idle days as percentage of estimated working time) significantly dropped (from 30% to 9%). It is obvious that if a strike, or any other popular movement, ends quickly, it will cause less threat to the target. It also signals a weak capacity to maintain organized and powerful mobilization. This was precisely the case during the Vietnam escalation. Although inequality increased the public's dissatisfaction and demand for redistribution, the ways they chose to advocate for redistribution became less effective and poorly executed. And those movements were frequently accompanied by crime and internal clashes.

In August 1965 a resentful black community initiated a five-day riot in Watts, the black ghetto of Los Angeles. During those five days Watts was full of violence, crime, and destruction, which cost 35 lives and $35 million in property damage. The Watts riot diminished the public's sympathy for black poverty. Johnson was also surprised by the Watts riot and felt compelled to mute his public commitment to black rights and opportunities, or at least gave the commitment less visibility. Johnson was worried that just as government was moving to help them, "the Negroes will once again take unwise actions out of frustration, impatience, and anger" (Dallek, 1998: 222-224).

Another even more salient case was the Poor People's Campaign of 1968 that camped out in the nation's capital during the spring of 1968 as the struggle over the tax surcharge bill reached a critical stage. Martin Luther King announced the campaign to create pressure and

force Congress (the main target was Wilbur Mills) not to cut welfare programs. Even though Johnson shared the same preference for the Great Society, he thought the campaign dangerous because it might provoke new disturbances. Then King was assassinated, and King's deputy, the Reverend Ralph David Abernathy, took over. The campaign turned out to be poorly organized and financed. In mid-May 1968 the campaign constructed a Resurrection City in West Potomac Park. In a particularly rainy season, Resurrection City became a swamp full of garbage. Poor sanitation threatened the health of inhabitants. Gangs of black youth from northern and midwestern cities terrorized black southerners. Black and Mexican American leaders clashed. Most important, the campaign was ineffective in preventing Johnson from conceding to the Congress and giving up his massive housing program (Califano, 2000: 286-288).

How did the stagnant trend of inequality change the Johnson administration's ability to achieve the equal fiscal sacrifices of war finance? Three important cases illustrate the challenge.

"How Can I Run the Country If I Have to Read on a News-Service Ticker That Bill Martin [the Fed Chair] Is Going to Run His Own Economy"—Johnson's Failure to Control the Fed

"You've got me in a position where you can run a rapier into me and you've done it!"

"You went ahead and did something that you knew I disapproved of that can affect my entire term here!"

——— *Johnson to Martin, December 1965*[78] ———

When Johnson decided to escalate the US engagement in the Vietnam War in July 1965, he confronted a similar challenge as Truman did in the Korean War: the Fed's concern about inflation. During the Truman era, the trend of inequality was persistently declining, making the power of the financial elite relatively weak. As a result, Truman could force the Fed to maintain a low interest rate policy, and he replaced the Fed chair at his will even after the establishment of the Treasury-Fed Accord. However, the trend of economic inequality during the Johnson era stagnated and even showed signs of slightly jumping, giving the Johnson administration greater difficulties in controlling the Fed.

After Johnson announced an escalation in Vietnam in mid-1965, Fed Chair Martin signaled his intention to increase interest rates. Johnson utilized several strategies to manipulate Martin and the Fed. The first was to misrepresent budget information. In October Johnson called for the "Quadriad" meeting of four key economic officials: Fed Chair Martin, Gardner Ackley (Chairman of the Council of Economic Advisors), Treasury Secretary Henry Fowler, and Budget Director Charles Schultze. Johnson wanted to elicit Martin's commitment to maintain low interest rates. Fowler and Ackley also suggested

[78] These are quotes from the oral history of William McChesney Martin (Martin, 1987).

postponement of any interest rate change. Fowler warned the risks of tightening and argued that the danger of overheating was "tenuous"; Ackley proposed a delay until the new budget plan in 1966 (Meltzer, 2009: 450).

Martin then requested information about "how much additional the government was going to spend in 1966, particularly by McNamara on the war." Johnson was initially ambivalent about the question and then tried to downplay the cost of the war by suggesting "less than a $5 billion increase for the rest of 1966." The way to get such a low estimate was to assume the Vietnam War would end on June 30, 1967. This avoided budgeting for long-term equipment (Califano, 2000, 111).

Martin knew the Johnson administration deliberately underestimated the cost (the actual increase in defense spending was up $10 billion to a total of $67 billion in fiscal year 1967). In Martin's oral history, he claimed that he liked Johnson but, he said, "he [Johnson] was one of the greatest liars I've ever known, and 'liar' is the only word I can use for it because he would have no hesitation in lying about the most trivial things" (Meltzer, 2009: 452, fn. 314). Financial elites, however, had grown strong enough to get more accurate information. In early July, Martin had already learned from Senator Richard Russell, who was chairman of the Senate Armed Services Committee and had information sources in the Defense Department, that the budget deficit would be much larger than Johnson had admitted to the Treasury, the Council, or the Quadriad. Martin might also have his own sort of pipeline to Defense Undersecretary David Packard. After gaining the information Martin already informed some of the Federal Reserve governors. J. Dewey Daane, a Federal Reserve governor (1963-1974), recalled that Martin called him and said, "you know, I've been talking to David Packard and you're right . . . These things are going to go way beyond what

the administration has admitted'" (Meltzer, 2009: 449, fn. 311). As a result, Martin was preparing to raise interest rates.

Second, Johnson tried to incite defection within the Fed Board of Governors. In late November Johnson asked Ackley to try to turn the undecided members against a rate hike. James L. Robertson (Fed Governor: 1952-1966; Vice Chair: 1966-1973), George W. Mitchell (Fed Governor: 1961-1973; Vice Chair: 1973-1976), and Sherman J. Maisel (1965-1972) were Johnson administration allies. Ackley's main target was Dewey Daane. As the nation's financial elite became relatively stronger and more cohesive, however, Johnson failed to win them over. Besides, Martin's information on the budget may have played a role in convincing Daane to support higher rates. On December 3, at Martin's urging, the Fed voted 4 to 3 to raise the discount rate by 0.5% to 4.5% and increase regulation Q ceiling rates to 5.5% (Califano, 2000: 107-108; Meltzer, 2009: 453-456).

Johnson was infuriated. According to Martin's oral history, he recalled that Johnson called him to the White House immediately and told him in the presence of several people: "You took advantage of me. I just want you to know that I think that's a despicable thing to do" (Martin, 1987). A more sensational account from Richard Fisher, the former president of Federal Reserve Bank of Dallas, described Johnson asking the secret service to leave the room, slamming him against the wall, and yelling, "Martin, my boys are dying in Vietnam, and you won't print the money I need!" (Fisher, 2006).

In revenge, Johnson's last strategy was to coerce the Fed chair and install "low-interest-rate" persons at the Fed, just as Truman did. As mentioned previously, Johnson was thinking about initiating a "Biddle-Jackson fight," telling the Treasury Secretary Fowler that "If Martin resigns, it won't wreck the country," and Johnson made Fowler promise to think of suitable candidates to replace Martin (Bremner, 2004: 209). Johnson also rallied key

Democratic legislators to attack Martin and put pressure on the Fed. Johnson asked allies in Congress: "how can I run the country and government if I have to read on a news-service ticker that Bill Martin is going to run his own economy?" (Califano, 2000, 108). Congressman Wright Patman (Texas) called for Congress to end Martin's power. Senator Paul Douglas (Illinois) called the Fed's action "as brutal as it was impolite," and Senator William Proxmire (Wisconsin) said it was a blunder and demanded hearings (Meltzer, 2009: 458). Johnson's efforts, however, encountered a fundamental challenge: the trend of inequality became stabilized. Financial elites felt less threatened because they expected that they would not lose further resource due to a stabilized trend of inequality. Therefore, financial elites started to invest their resource in strengthening their cohesion and influences. It increased the difficulties for the Johnson administration in identifying true allies in the financial communities. For example, when Johnson asked Fowler if there was any candidate that can replace Martin, Fowler replied that he had considered Paul Volcker, but he was unsure. Johnson was unsatisfied: "we want a sure vote, not a reasonable fellow who will try to steer us down the right path. We'll just want a fellow that just goes along" (Meltzer, 2009: 453, fn. 316). As later history showed, Paul Volcker was actually a "high-interest-rate" man who would not go along with Johnson. Since financial elites became more cohesive and independent, the president found himself unable to repeat Truman-style revenge (firing the chair). Therefore, when Martin bluntly told Fowler: "if there is any desire for me to go, all that is needed…is a quiet nudge and I'll resign," Johnson could not choose but did his best to appease Martin, telling him: "I have great respect for you and business and bankers have a high regard for you. You have educated three presidents before me . . . and I want you to continue to be frank with me" (Bremner, 2004: 213-214).

Johnson's last attempt tried to manipulate the Fed by replacing retiring Fed Governor C. Canby Balderston. This case showed that domestic inequality could have multiple effects on the decision-making of financial policies. As indicated earlier, a combination of widening racial and wealth gaps was the main driving force behind economic inequality during 1960s. The rising trend of inequality incentivized Johnson to promote Andrew Brimmer, the first African American governor in the Fed. Initially, Martin doubted this decision because Brimmer was too young and he was another economist (after three previous economists). Martin wanted to make the Board of Governors more diversified and representative, so he preferred Atherton Bean, director of the Minneapolis Federal Reserve Bank and former chief executive of a middle-sized food processing company (Meltzer, 2009: 490-491). Eventually, inequality created stronger legitimacy and momentum for Johnson to appoint Brimmer.

Even more interesting, however, was that a stagnant trend of inequality actually contributed to solidarity and cohesion in financial communities, cultivating a preference for a similar interest rate policy among financial elites. The best case in point is Brimmer himself. Before being appointed, Brimmer had already shown, during an interview with Johnson, his support for the Fed's decision to increase the December 1965 discount rate (Meltzer, 2009: 491, fn.9). During July and August of 1966 when the risk of inflation was mounting, Brimmer wrote to Ackley that "higher rates are inevitable." In the July 26 FOMC meeting, Brimmer took a strong stand for "as much firmness as possible . . . and an increase in the discount rate when the time is propitious" (Bremner, 2004: 219). The case of Brimmer indicates that no matter what background elements the financial elites had, once they got into the power circle, they were easily socialized and incorporated into a cohesive group. Brimmer displayed that group cohesion by breaking tradition and requesting Martin administer his oath of office, rather than the president or chief justice of the Supreme Court.

In addition, Martin wrote to the president commending Brimmer for his "constructive contributions to the Board" (Bremner, 2004: 213).

Thanks to increasing cohesion, solidarity and concentration of resources, financial elites gained stronger power to protect their own autonomy and influence in making monetary policy. For example, Johnson once told Martin that he would like to appoint a Chevrolet salesman from Louisiana to the Fed Board of Governors (multiple accounts suggested that this was Senator Russell Long's favorite candidate), Martin replied: "Mr. President, if you appoint this individual, you have my resignation now." Johnson said "well, I was afraid that would be your reaction," and gave up (Martin, 1987: 16). In April 1977, another chance of appointing a new Fed Governor appeared when Charles Shepardson was going to retire. This time, Johnson directly promised that whoever was going to be appointed would be acceptable to Martin first. Eventually, the White House informed Martin that the proposed candidate was William Sherrill, a member of the board of the Federal Deposit Insurance Corporation (FDIC). Sherrill had been a banker and investment manager in Houston prior to joining the FDIC board, and fit Martin's profile of an experienced businessman who was knowledgeable in national financial issues (Bremner, 2004: 233-34). In short, the Fed Chair had gained a greater influence in the president's decision on financial and monetary bureaucracy recruitment.

Revisiting William McChesney Martin under the Truman and Johnson Administrations

William McChesney Martin was a unique figure in US financial history. He was the longest-serving Fed chairman, working with four Presidents. He represented the Treasury in negotiating with the Fed and engineered the Treasury-Fed Accord. He became the Fed Chair

starting in the heyday of the Korean War, and directed monetary policy until 1970 when the Vietnam War began entering its finale. The evolution of Martin's policy choices across two wars nicely illustrates how changing inequality affected war finance strategies.

Martin's close relationship with the financial community began with his father, William McChesney Martin Sr., the founding chairman of the Federal Reserve Bank of St. Louis (1929-1941). After graduating from Yale (major in English), Martin joined the St. Louis brokerage firm of A. G. Edwards & Sons, of which Martin's uncle, Albert N. Edwards, was the managing director. In 1931, Martin became the firm's representative at the New York Stock Exchange (NYSE), where he went through the Great Depression and pursued PhD graduate studies in finance at Columbia University (Bremner, 2004: 1-24). Eventually, Martin became the president of the NYSE at 31, a position that earned him the nickname of the "boy wonder of Wall Street" (*NY Times*, 07/29/1998).

Martin's public service was not limited, however, to finance. Drafted as a private in the army in 1941, Martin left the NYSE. In April 1943 he accompanied General James Burns to Moscow to evaluate US aid to Russia. Later Martin became a principal defender of Russian lend-lease, before Congress. The trip and subsequent congressional hearings acquainted Martin with the politics of foreign aid and international relations. Soon after WWII ended, with the recommendation of John Snyder, Martin became, in December 1945, the chairman of the Export-Import Bank. The job led Martin to engage with, sometimes confront, the National Advisory Council on International Monetary and Financial Problems (the NAC), established by the Bretton Woods Agreements Act, and General George C. Marshall, the engineer of the Marshall Plan. The NAC and Marshall considered the Ex-Im Bank as a tool of the US grand strategy and forced the Bank to either expand or extend reconstruction loans to France, China, Latin American countries (most notably Brazil), European countries, and

Israel (Bremner, 2004: 52-67; Becker and McClenahan, 2003: 64-72). From this experience Martin learned to negotiate with multiple actors with different preferences and power resources. Martin's performance also drew Truman's attention. In 1949, John Snyder invited Martin to join the Treasury to become assistant secretary for International Affairs.

The hybrid of Martin's career path contributed to his flexibility and inclusiveness in monetary policy preference. On one hand, Martin recognized the crucial importance of financial stability, the priority of financial communities. On the other hand, Martin also cared about other policy objectives that benefit more the public, such as employment or other strategic goals, and he was willing to use monetary policy to pursue them. His policy response hardly stuck to any dogmas. Rather, his strategic choices usually reflected his pragmatism in accepting the reality of changed circumstances. The changing trend of inequality and subsequent expectations of power shifts were those of the most decisive factors affecting Martin.

Prior to the Korean War, US inequality was experiencing a persistent and substantial decline. Therefore, financial elites and the wealthy expected that they were continuing losing decision-making power. As a result, they lacked the will and resource to build elite cohesion and to mobilize effective collective actions. These constraints translated into Martin's concessive strategy in the Treasury-Fed fight during the Korean War. When Martin was engineering the Treasury-Fed Accord and ending the pegged-interest-rate policy, he had to make the Accord extremely vague to appease Truman and the Treasury. Even this seemed not enough to elicit Treasury Secretary Snyder's agreement. And Martin needed to make a suspicious assurance that "the Fed was committed to stabilizing the market, and when the Treasury and the Fed acted together, they could ensure an 'orderly' market during the transition to unpegged rates," which could make long-term rates "close to under the peg."

(Bremner, 2004: 78). Martin also persuaded the FOMC to agree that "the FOMC will approve no change in the discount rate during the rest of the calendar year without prior consultation with Treasury." In addition, the FOMC agreed (again, owing to Martin's persuasion) to a maximum of $200 million of purchases of the 2.5% bonds to stabilize the Treasury Securities when the Treasury issued new bonds (Meltzer, 2003: 711). With Martin's effort, Snyder finally gave his "unsmiling support to a smiling Bill Martin" (Bremner, 2004: 78).

After the Accord, Truman replaced Thomas McCabe with Martin as the Fed Chair. Martin and the Fed made three moves to support the Truman administration war finance. First, within two weeks of the Accord, the Fed and the Treasury had each purchased $500 million of long-term Treasuries in support of the USD$ 99 price limit (Bremner, 2004: 86). In this process, the Treasury issued new 2.75% nonmarketable long-term bonds in exchange for its outstanding 2.5% bonds of 1967–72, while the FOMC continued purchasing the 2.5% bonds in the market. Owning to the Fed's massive purchase, the refunding was more successful than anticipated. The yield on long-term bonds just slightly rose to just 2.62% (Meltzer, 2003: 709, 711-713), and the Treasury could actually finance its deficits without paying more than Snyder's self-imposed ceiling of 2.5 % for long-term bonds during the Truman-era. However, such open market operations had to allow short- and medium-term rates to fluctuate. And even such a small concession was not accepted by Truman. In late 1952 when Martin met Truman in New York, Martin recalled that occasion: "I said 'Good afternoon Mr. President.' The president looked me right in the eye and said only one word in reply, 'Traitor!'" (Bremner, 2004: 91) This anecdote shows how difficult financial elites were able to appease the leadership and the general public.

Second, in order to further make sure that the bond market was stabilized, in the 17 May FOMC meeting, Martin also requested a $250 million authorization to the open-market desk to "probe the extent of the underlying demand for government securities"(Bremner, 2004: 86-87). Many influential financial elites were disappointed at Martin's hard push to constrain the increase of interest rate and support for the Treasury, including Allan Sproul. By the time when Martin became the Fed Chair, Sproul was already America's most well-known banker in domestic and international financial circles. His position, president of New York Reserve Bank, traditionally enjoyed the unique and leading status in the Reserve System. Sproul was wary about Martin's appointment as chairman position, and he constantly challenged Martin's policy orientation during FOMC meetings. The interactions among Martin and other financial elites signal the fact that, because of declining inequality, conflicts within elite circles were more common and harder to resolve.

The last move by Martin was to hold the discount count rate during the heyday of Korean War. In the FOMC meeting on October 4th 1951, Watrous Irons, president of the Dallas Reserve Bank, spoke out for a frustrated FOMC, complaining that "the Fed should not prevent rates from rising…because I doubt that present rates are sufficient to attract savings into Government securities." Irons also mentioned that because short-term interest rates already increased, the Fed should increase the discount rate (1.75%). However, Martin insisted on the Fed's commitment under the Accord that it would not increase the discount rate during 1951(Bremner, 2004: 87-88).

Martin's effort to support the Treasury's stable interest rate policy during the Korean War was in sharp contrast with what he did in the Vietnam Escalation. In a sense, Martin became a perfect "counterfactual to himself" between these two wars. After the Johnson administration announced the plan to expand military involvement in Vietnam, Martin

directly and bluntly warned Johnson, Treasury Secretary Fowler, and Ackley that he was going to raise interest rates. Martin was willing and capable of choosing such a strategy because, as explained previously, the decade trend of inequality became stagnant with signals of slight jumping. The financial elite became better prepared and more willing to invest in elite cohesion and power relationships. Therefore, it became easier for Martin to mobilize support and to raise the discount rate immediately after the Vietnam Escalation.

The solidarity among financial elites and their power resource contributed to Martin's tenure and influence. Recalled that during the first half of Korean War, former Fed Chair McCabe easily became "the casualty" of Treasury-Fed fight when he tried to raise interest rates. Conversely, Fed Chair Martin remained solid in his position after confronting Johnson. When Martin's 4th term was approaching the end during January 1967, his reappointment was favored by almost every Fed Governor, raging from his ally and inflation hawk Daane, liberals like Robertson, Brimmer, Maisel, to George Mitchell, who usually held opposing views with Martin. The CEA member James Duesenberry indicated that "95 % of the Business Council members want Martin reappointed" (Bremner, 2009: 230).

Even Johnson recognized how important Martin's reappointment was in stabilizing the nation's economy and financial communities. In April 1967, Johnson met with Martin and pleaded with Martin to continue as the Fed Chair. Johnson told Martin (quote from Bremner, 2009: 230):

> "Bill, you and I have had our differences, but I respect you and like you. I am convinced that you're the best man available for the job… I am going to have a very difficult time in the next two years and I am pleading with you to continue. The

Vietnam War is going to get hotter. I have a bear by the tail and I don't know how to let go."

Johnson even let Martin become the first one to know his decision not to run the reelection (*ibid*):

"Now I am going to tell you something that I want you to keep in complete confidence. I have decided not to run again in 1968 and, in spite of what the press writes, I expect to turn the Government over to someone else at the start of 1969. I am asking you to stay with me, if your conscience permits, until the inauguration of a new president in 1969."

Martin was emotionally reeled, but still asked for Johnson's assurance that whoever was appointed to replace retiring Fed Governors (Charles Shepardson) would be acceptable to Martin first. Martin got it and accepted the reappointment. Johnson's seeking for rapprochement with Martin, in contrast with Truman's choice to distance Martin (the "traitor" story), indicated the different patterns of inequality trend and their impacts on the perceptions and reality of balance of power within society.

"The Great Society Programs Survived"—Unable to Cut Non-Military Spending

The Administration's inability to reduce non-military spending became even more significant when Johnson finally agreed to cut spending but asked Congress to choose what to cut. During the president's news conference on May 3, Johnson pointed out (Johnson, 05/03/1968):

> The President can propose, but the Congress must dispose. I proposed a budget. If they don't like that budget, then stand up like men and answer the roll call and cut what they think ought to be cut. Then the President will exercise his responsibility of approving it or rejecting it and vetoing it.
>
> If they want to effect reductions, then as each appropriation bill comes up, they can offer their amendments like men out on the floor, and call the roll. But don't hold up a tax bill until you can blackmail someone into getting your own personal viewpoint over on reductions.

Congress did "stand up like men" to take the helm. Congress found it much easier to agree on the principle of reduced spending than to implement it, and "Johnson declined to make any further reductions above those passed on Capitol Hill" (Califano, 2000: 288). Eventually, cuts in programs amounted to less than $4 billion. In the aggregate, spending *increased* by $2.7 billion in the fiscal year of 1969 compared to $18.7 billion in 1968. Most of the reduced growth came in defense spending. Spending on human resources, including most of the Great Society programs, *rose* $7 billion in fiscal year 1969 compared to $8 billion in 1968 (Meltzer, 2009: 539). Califano called this Johnson's success: "Johnson did indeed have the last laugh…the Great Society programs survived" (Califano, 2000: 288).

"We Had No Power to Tell What They Had to Take"—The Failure to Control Industry

During the escalation of the Vietnam War, the Johnson administration used "price guideposts/guidelines" to direct prices and wages and to curb inflation, similar to what the Truman administration did in the Korean War. Unlike Truman's successful intervention,

however, Johnson failed. As indicated previously, the public's capacity to mobilize was starting to decline, making collective actions more unorganized, sporadic, and easily compromised. Companies were more likely to use one-time measures, such as wage increases for their own workers, to prevent national strikes. Accordingly, wealthy elites were also more able to ignore the Johnson administration's price guideline and to raise prices to earn more profit. For example, on December 31, 1965, Bethlehem Steel simply breached the price guidepost and increased prices without informing the Council of Economic Advisers, and the Johnson administration was unable to force the company to concede (Johnson 12/31/1965).

Califano (2000: 137) gives several other examples: color TVs, lamb, household appliances, paper cartons, newsprint, men's underwear, and others. For instance, Johnson was unable to convince, or successfully threaten, New York Mayor John Lindsay, who settled a transit strike by agreeing to wage increases far above the guideposts (Califano, 2000: 118), nor could Johnson get the machinists' union to settle for less than a 4.9 % increase, far above the 3.2 % guidepost (Califano, 2000: 146). All of these cases made Lyndon Johnson admit: "As we all know, we had no power to tell either party (companies or union) what they had to take (Dallek, 1998: 306-307)."

3. Conclusion

This chapter has utilized a most-similar-systemic research design to analyze how domestic economic inequality affects war finance strategy by comparing US war finance in the Korean and Vietnam Wars.

Scholars are intrigued by the divergent patterns of US war finance in the Korean and Vietnam Wars. The US adopted a pay-as-you-go approach to finance the Korean War

entirely by taxation. The Vietnam War effort, however, was paid primarily through borrowing. The divergence is puzzling given that both wars shared political, economic, and strategic similarities. They were part of US grand strategy of containment, and they were limited wars fought in the shadow of the Cold War. Their total costs were roughly at the same level. Both wars were led by Democratic presidents with the Democratic Party in both cases holding a majority in the Congress. Given so many similarities, what explains different war finance strategies? This chapter highlights the critical importance of *changing trends of domestic economic inequality* and their impact on actors' *expectations* of power balance within societies. By analyzing US war finance decision-making and social contexts in these two wars, I illustrate how changing trends of economic inequality affects the fiscal bargaining of war finance among political leaders and societal actors.

Wars entail huge costs and sacrifices, which generate mounting pressures for increasing taxation and cutting non-military spending. Faced with the exigency of war, leadership needs to secure a fiscal bargain that can sustain sacrifices by competing societal coalitions without generating serious upheavals. When the society experiences a persistently declining trend of inequality, the public will expect that their dependence on social programs would be decreasing, as is their demand for redistribution. On the other hand, the wealthy elites' also expected that tax burdens would be moderate. As a result, leadership is more likely to secure a consensus of "equality of fiscal sacrifices" without causing serious instability. Specifically, leaders can more successfully enact progressive taxation and reduce nonmilitary spending to pay for war. This was the case of US war finance in the Korean War. Thanks to the legacy of WWII, the declining trend of economic inequality in the US persisted until the Korean War. As a result, the Truman administration could implement huge war taxes and austerity measures to pay for the Korean war effort.

Conversely, when the trend of inequality becomes stagnant and no longer shows the sign of persistent decline, redistributive conflict between competing coalitions will more likely to be triggered. Unable to strike a bargain on fiscal sacrifices without severe social instability, government actors will rationally delay the redistributive conflict by resorting to borrowing. A deficit-financing strategy allows the leadership to defuse the poorer majority's unrest while appeasing the wealthy with potential investment opportunities and lower tax burdens. This was the case of US war finance during the Vietnam War. The Johnson administration faced mounting pressures and social instability generated by a combination of a stagnant trend of domestic inequality, an expectation of future rise of inequality and widening racial gaps. Consequently, Johnson needed to rely heavily on borrowing to save "the Great Society" while also fighting in Vietnam.

"During this emergency, I suggest that we deliver or airdrop five hundred million to ten hundred million 'Fa-Bis'(Chinese legal tender under Nationalist Government) to the frontline. As long as we keep this operation in secret and deny everything to the public, there would not be any political or economic repercussions."

——— *Demao Xi to China's Finance Minister H. H. Kung, 1937*———

"Xi'an City and Luoyang City are the most strategically important locations in the frontline. Now soldiers there are desperate for supplies and logistics to fight. We need to deliver more '*Fa-Bis*' in a much earlier fashion and as soon as possible"

"Besides the two hundred million *Fa-Bis*' already planned to deliver, I order that additional sixties million are to be delivered immediately in Chengdu City, Hengyang City and Ganzhou City"

——— *Generalissimo Chiang Kai-shek's orders in 1940, 1941 and 1942* ———

"Transportation, carriage and logistics are constrained by the war. Now, costs of all goods are rising and sales declining. Facing such difficulties we businesses can no longer bear any additional tax burden…Please reduce the business tax"

—— *The Chinese Chengdu City Business Association to the government, 1938* ——

"We have decided to carry out necessary revisions of the system of taxation in all departments, both national and local, with a view to readjusting and consolidating the system in consonance with the financial and economic conditions of the country now in the midst of the long-term construction of a new order in East Asia."

——— *Prime Minister Mitsumasa Yonai, Imperial Diet of Japan, 1940* ———

Chapter VI. Democracy Is Not Enough: Chinese and Japanese War Finance in the Second Sino-Japanese War (1937-1945)

1. The Significance of the second Sino-Japanese War (1937-1945)

The second Sino-Japanese War (1937-1945) was the watershed for both China and Japan in the modern history. Each country began full mobilization after the Marco Polo Bridge Incident (July 7th, 1937), and spent most of the resources on total war. The extremely costly war fundamentally transformed Chinese and Japanese political and economic systems. More important, both countries' destinies were completely changed by the outcome of war and the associated costs. After surrendering to China and the Allies in August 1945, Imperial Japan was dissolved by the US occupation government. The ruling power of Emperor Hirohito was eliminated; the main economic enterprises, *zaibatsu*, were collapsed; land reforms were carried out, and Japan became a democracy (Scheidel, 2017: Ch.4). For China, the victory did not guarantee stability and development. After the second Sino-Japanese War as well as WWII ended, China immediately fell into the civil war. The associated consequence of Sino-Japanese War, such as hyperinflation and social riots, contributed to the rise of Mao Tse-Tung and the dominion of Communist Party. Eventually, Generalissimo Chiang Kai-shek and his Nationalist government (*Kuomintang Government*) lost and retreated to Taiwan. China thus began its rule under the communist regime.

The financial cost of war caused a profound impact on each country's transformation. For Japan, the total military expenditures of the Sino-Japanese War amounted to ¥162 billion in estimate ($38 billion, 1$ = 4.27¥, 1939).[79] From 1938 to 1941, on average military spending accounted for almost a quarter of annual Japanese GDP (23.75 percent). When the war entered the stage of Pacific War (1942-1945), military spending as a percentage of GDP

[79] The data on the exchange rate of Japanese yen are from Bank of Japan.

jumped to 51 percent annually, and peaked at 76 percent in 1944.[80] Taking another angle, military expenditures had become the main government outlays since the war started. Roughly 37 percent of Japanese government spending was devoted to military programs annually from 1938-1941. Then the figure rose to 60 percent annually from 1942 to 1945, reaching the astonishing level of 87 percent in 1944. (Hara, 1998: 257). Obviously, these extraordinary figures are still underestimates. The real financial cost of war was likely to be much higher since many outlays on development and welfare were diverted to war mobilization (Scheidel, 2017: Ch.4).[81]

For China, the Sino-Japanese war cost even more. In comparison, Japanese GDP (with Japanese colonies) was more than two-thirds of China's in 1938 (Harrison, 1998: 3), while Chinese total military outlays were almost twice as much as Japanese. In estimate, the total Chinese military expenditures from 1937 to 1945 amounted to C$ 1279 billion ($64.4 billion).[82] In fact, before the war China already spent 40 to 45 percent of total government outlay on military purpose in response to Japanese aggression after the Manchurian Incident of 1931 and the communist threat. The outbreak of war further called for greatly increased military spending. On average military expenditures amounted to 65 to 70 percent of government spending annually from 1937 to 1945, peaking at the startling level of 84 percent in 1945. Just as in the case of Japan, these figures seriously underestimate the real financial cost of war China incurred. The main battlefields of Sino-Japanese War were in

[80] The data on Japan's war expenditure are approximate. Huff (2015: 15) uses other sources and more strict criteria to provide a much more conservative estimate. Even Huff's estimate shows that Japanese war expenditures (central government war expenditure plus munitions industries and war expenditure abroad) as a percentage of GDP was a fifth in 1940. Then, from 1941 to 1944 the average of Japanese war expenditures as % of GDP jumped to 53.05%, reaching the astonishing level of 80 % in 1944.

[81] Kasza(2002: 429) concludes that "war outweighed all other factors in causing Japan's welfare transformation from 1937 to 1945."(Quoted from Scheidel, 2017: Ch.4: ftn.9)

[82] 'FaBis'(Chinese legal tender under Nationalist Government) depreciated year by year during 1937-1942, and stabilized at the price of 1C$ = 0.05$ during 1943-1945. To calculate, I use Young's (1965: 16) data on Chinese government spending, and convert into dollars by using Lin's (1996: 104-106) data on Chinese yearly exchange change rate.

China, and outlays on communications, construction, economic development, and subsidies to provincial and local governments were mainly for war ends. It would not be incorrect to think that during 1937-1945 most if not all of Chinese government spending was for the purpose of the war (Young, 1965: 15, 54-56).

In short, the Sino-Japanese War from 1937 to 1945 forced both Japan and China to mobilize every resource to pay for fighting. Hence, the war offers a crucial opportunity to analyze how economic inequality affects state war finance strategy. In addition, it is a critical case to examine my war finance theory for several reasons. First, in the previous case-study I compared a state's war finance strategy in two different wars. Such a comparison may overlook the impacts of contexts and the chosen state's characteristics. That is, the finding may be driven by the state's or the wars' unique features rather than the causal variable — economic inequality —assumed in my theory. This chapter removes the bias by utilizing a comparison of two different states' war finance strategies in the same war. Second, the previous chapter deals with a case of a fully industrialized state, the United States, in *limited wars*. This chapter analyzes the case of *total war*. Moreover, prior to and during the war China was still in a stage of industrialization. As for Japan, although by the war it was already an industrialized power, it was still far from a fully developed state. Therefore, the comparison can increase the external validity of my theory.

Third, the previous chapter studied the case of a mature democracy, while this chapter examines other regime types. During the second Sino-Japanese War, Japan was undoubtedly an autocracy. The Chinese regime, on the other hand, was more complicated. Dr. Sun Yat-Sen, the founding father of the Republic of China, proclaimed China a democracy after the overthrow of the Qing dynasty, the last imperial dynasty of China. Dr. Sun Yat-Sen also led his Kuomintang party to draft a constitution and held elections. However, the Nationalist

government never fulfilled the transformation of China into a full democracy. Therefore, the comparison of Chinese and Japanese war finance can shed light on the decision-making of non-democracies. In addition, the nuance between Japanese regime (a well-established autocracy) and Chinese regime (transitional regime from autocracy to semi-democracy) can also provide an important opportunity to illuminate the limit of democratization's impact in terms of my theory.

2. Similarities and Differences between Chinese and Japanese War Finance

(1) Similarity: Combination of Multiple War Finance Instruments

In order to finance their war efforts, both China and Japan needed to utilize multiple methods and spend every penny it could extract. Over the course of the war, each country incurred massive debts. Japanese government debt had increased less than 10 percent (average 9.3 percent) annually from 1932 to 1936. After the outbreak of war the rate of debt increase per year jumped to 25.5 percent from 1937 to 1941. And then the rate went further to reach 50.5 percent yearly from 1942-44 (Huff, 2015: 61). On the Chinese side, government deficits swelled even more astoundingly. On average, from 1938 to 1945 the Chinese budget deficit grew at a rate of 196 percent annually, reaching the incredible level of 685 percent in 1945 (Young, 1965: 12, 20).[83]

[83] The impact of Sino-Japanese War on Chinese government debts is clear. After the outburst of war in 1937, government deficit skyrocketed from C$ 279 million to C$ 1605 million (a 440% increase). The rate of deficit growth per year went back to 38% in 1939, and it rose again to 67% in 1940. Since 1941, the yearly growth rate of Chinese government deficit was never lower than 100% until the end of war. The average deficit growth rate per year from 1941 to 1944 is 146%. And the rate reached 685% during the last war year of 1945. Prior to the war, the average deficit growth rate per year from 1929 to 1937 is 24%. Between 1929 and 1937, Chinese government deficit per year never went over C$ 300 million. In 1929, Chinese government deficit was only C$ 100 million. It increased 112% to reach C$ 217 million in 1931 owning to the "Central Plains War (major Chinese civil wars fought between the Nationalist government and other warlords)"and the "Mukden

In addition, each country also tried to enact new taxation. Japan passed a temporary "extraordinary profit tax" amounting to ¥ 40 million yen increase during 1936-1937 for war preparation. Then in 1937 the North China Incident Special Tax Act was passed, raising another ¥100 million for emergent military expenses. Further temporary tax hikes for nearly ¥ 200 million were enacted in March 1939 (Revelant, 2015: 440-442). Lastly, Japan carried out a more sweeping tax reform in 1940 that introduced corporate income tax, withholding tax on wage income and a comprehensive reform on individual income tax. The "1940 reform" transformed the Japanese taxation system into one that relied mainly on direct taxes, especially income taxes (Noguchi, 1998: 404-406; MOF, 2006: ch1: 3-4). On the Chinese side, the Nationalist government enacted a series of tax reforms prior to and during the war. The Chinese taxation system had been underdeveloped and government revenue came mostly from customs, salt taxes, and a complicated system of various taxes on goods and sales. In 1931, the Nationalist government centralized and consolidated sales taxes, and announced the repeal of "Likin"— an old tax levied by local governments on goods and vendors when they were in transit between provinces. When Japanese threat became imminent, the Nationalist government introduced individual and corporate income taxes in 1936. It then enacted excess profit taxes in 1939 and inheritance taxes in 1940. Moreover, China started reforms of customs since 1939, and increased taxes on tobacco, sugar, cotton yarn, cement and mining between 1939 and 1941. Lastly, after 1942 the Nationalist government made salt, sugar, tobacco, matches government monopolies (tea, cement and wine had been included but were later dropped) (Cui, 2004: 95-224; Young, 1965: 32-39).

Incident (Japanese invasion of China)." However, later the Nationalist government actually achieved fiscal surplus and reduced deficits in 1932 and 1933. It rose again (70%) in 1934 because Chiang led the Nationalist government to launch the fifth campaign against the Communist Party's Red Army. Then the annual rate of deficit growth declined to between 16% to 33% from 1935 to 1937 (Young, 1965: 12).

In addition to traditional war finance strategies, both countries imposed stringent controls on prices, wages and other economic activities. Japan enacted the National General Mobilization Act in May 1938 that gave the government carte blanche with regard to all types of controls (Hara, 1998: 236). Imperial Japan also passed the Temporary Import Export Grading (TIEG) Act on 11th October 1937 that created controls on production, rationing, consumption, use, and price until December 1941. The TIEG act was then replaced by the Materials Control Order. Furthermore, The Temporary Funds Coordination Act was introduced in September 1937 to prevent investment from flowing to companies unnecessary for war mobilization. Another law on regulating industries, the Control Associations and the Munitions Company Act, was implemented in October 1943 to increase and control munitions companies (Miwa, 2015: 175-182). Due to those serious economic controls and war ravage, the standard of living in Japan fell rapidly. For example, rice rations were maintained at 2 to 3 *shaku* (0.736 pints) from April 1941 until July 1945, but rice itself changed from being 70 percent husked to being only 50 percent or 20 percent husked. Clothing rations were introduced in 1942 and the consumption was down around one-seventh by the end of war. Allies' air raids demolished the cities and worsened the housing situation in Japan, causing the evacuation of young schoolchildren and city population to the countryside in August 1944 (Hara, 1998: 255-256).

China was no exception. During the first half of 1939 the Nationalist government set up price stabilization committees and imposed price controls on several essential commodities such as rice, cloth, salt, coal, vegetable oil, and fuel. On December 5 1939, the government issued regulations on hoarding (Young, 1965: 143). In order to control the price of rice — the main source of food for Chinese, the National Food Administration was established in May 1940. During May and June 1941 the Nationalist government further created the

Ministry of Food and decided to collect farm tax in the form of tax-in-kind (rice). In 1942 the Bureau of Commodities of the Ministry of Economic Affairs was set up. Then Generalissimo Chiang started to direct price controls himself. With the help from his internal staff, the Aide Office of the Military Affairs Commission of the Nationalist Government, Chiang proposed the "programs on enforcing price controls." The programs were soon endorsed by the Kuomintang Central Executive Committee and the third National People's Political Council in October 1942 (Lin, 2006: 291-308; Young, 1965: 143-145). The programs established comprehensive controls on price and signified the initiation of the Chinese garrison state's control in its economy.

(2) Difference: Money Creation and Foreign Borrowing

Although Chinese and Japanese war finance shared a lot of similarities, there was a striking difference: their contrasting attitudes toward money creation.

Since the beginning of the war, China had been eager to rely on money creation to fight. For example, after the war broke out in 1937, Demao Xi, director of the Banking Bureau of the Central Bank, R.O.C, urged Finance Minister H. H. Kung to "airdrop five hundred million to ten hundred million *Fabis*, Chinese legal tender under the Nationalist Government, to the frontline." Over the course of war, Generalissimo Chiang Kai-shek also constantly commanded the increase and delivery of additional *Fabis* for military need (Lin, 1996: 36, 41). When the war was approaching to the end, Finance Minister Kung argued in the journal of *Foreign Affairs* (Kung, 1945: 222-223):

> When Japan invaded China in 1937, China's monetary system was prepared for the emergency . . . it enabled the government to rely on the increase of bank credit as a

means of emergency war finance. Thus, despite the lack of modern equipment in the military field, the new monetary system provided China with modern means of financing war.

Because of its over-reliance on money creation as the main war finance strategy, China fell deeply into hyperinflation. As table 6-1 and 6-2 show, China poured monstrous amounts of new *fabis* into the country at an astonishing pace every year after the outbreak of the war. The annual growth rate of money creation averaged 151 percent, and it reached 192 percent and 472 percent in 1944 and 1945 respectively. Arthur Young, US financial adviser to the Chinese Government and to the Central Bank of China (R.O.C) during the war, pointed out that during 1945 Chinese *fabis* increased 638.5 percent. Young also indicated that after July 1938, one year after the outbreak of the war, on average 75 percent of the government cash deficit was financed by money creation annually. And in each year the government deficit was associated with 80 to 90 percent growth of newly created note issues, suggesting China paid for war mainly by simply printing money (Young, 1965: 20, 162). As a result, the average retail and consumer prices skyrocketed. In 1939 to 1940 the increases of prices exceeded 100 percent annually. Between 1941 and 1944, the increases escalated to about 240 percent a year. During 1945, the last year of fighting, prices rose 250 percent. The overall increases of prices were between 1,759-fold and 2,647-fold against their prewar bases. In addition, the *fabi* substantially depreciated against the dollar and the sterling even though the Nationalist government maintained a fixed exchange rate policy and imposed strict exchange controls. China also depleted its foreign reserves over the course of the war. Due to the hyperinflation, Young observed that (1965: 161):

Large purchases might require carrying a briefcase or even a suitcase full of notes. Banks would make up parcels of notes in denominations of 20, 50 or 100, writing on them the value and sealing them with a paper band with their "chop." These were commonly taken at the value stated without counting.

Table 6-1 China's *Fabis* (Note Issue), Foreign Exchange Rate (Official Rate), Foreign Reserve Ratio, and Consumer Price Index, 1937-1945 (Lin's estimate, 1996)

	Fabis in Circulation (Millions)	Net increase of *Fabis* (Millions)	% Increase of *Fabis*	FX: 100 *Fabis*: US Dollar $	Average Foreign Exchange Index	Foreign Reserve Ratio	Consumer Price Index (CPI)
1937 January	1,407.00			30.00	100.00	100.00	100.00
1937 December	1,639.10	232.10	16%	29.24	97.87	93.38	102.18
1938	2,943.98	1,304.88	80%	15.62	53.63	71.76	186.47
1939	5,469.01	2,525.03	86%	7.07	26.30	68.57	380.17
1940	9,669.90	4,200.89	77%	5.63	21.78	64.63	459.09
1941	16,703.94	7,034.04	73%	5.28	19.68	44.90	508.03
1942	39,259.56	22,555.62	135%	5.14	19.18	20.11	5,886.60
1943	76,084.56	36,825.00	94%	5.00	18.68	10.95	19,832.17
1944	220,890.00	144,805.44	190%	5.00	18.68	3.77	50,981.08
1945 July	1,264,146.32	1,043,256.32	472%	5.00	18.68	0.66	175,918.43

Source: Lin (1996: 40,106-106)

Table 6-2 China's Averages of Retail Market Prices, Foreign Exchange Rate (Market Rate), % Increase of *Fabis* to Deficit, and Deficit covered by Bank Credit 1937-1945 (Young's estimate, 1965)

	Averages of Retail Market Prices	Annual Percentage Price Increases	Free Market Exchange Rate, US$: *Fabis*	% Increase of Note Issue to Estimated Cash Deficit	% Cash Deficit covered by expansion of Bank Credit
1937	1.00		3.35		37(July 1937- June 1938)
1938	1.45	45.0	6.10	70	71(July-December, 1938)
1939	3.23	122.8	13.30	89	79
1940	7.24	124.1	18	97	70
1941	19.8	173.5	28	83	81
1942	66.2	234.4	49	101	75
1943	228	244.4	83	88	69
1944	755	231.1	441	86	69
1945 August	2,647	251.0	1060(2nd quarter)	81	83

Source: Young, 1965: 20, 152, 349, 370; Huff, 2015: 70

In contrast, Japan took a drastically different approach. Rather than finance the deficit by simply printing additional money, Japan managed to carry through several alternative measures to raise revenues. For example, Japan launched massive national savings and thrift

campaigns. On April 19, 1938, the Imperial Cabinet started to set a national savings target of ¥8 billion during that fiscal year, and increased the target every year until the end of war. To reach the annual target, the Imperial Cabinet established the National Savings Promotion Bureau in April and convened the National Savings Promotion Council in June. Under administrative guidance, various organizations were mobilized or directed to promote saving, including savings unions, neighborhood associations, commercial banks, savings banks, trust companies, mutual loan and credit companies, and post offices —the postal savings system. Those efforts were so successful that by 1944, Japanese households were saving an extraordinary 39.5 percent of disposable income (Garon, 2000: 42, 51-52). Furthermore, citizens were not allowed to withdraw personal savings without strict permission, and financial institutions were not allowed to make loans freely. Instead, under the Temporary Fund Control Act, the government controlled the authority over the allocation of funds in financial institutions. Therefore, the government was able to command financial institutions, which extracted a large amount of personal savings, to finance military expenditures (Okazaki, 1999: 147-148). This financing mechanism actually became the prototype of the "main banking system" that was central to Japan's postwar financial system (Okazaki, 1999: 158). As Garon points out, the "voluntary" personal savings, and the ways to collect them, became more and more compulsory and increasingly equivalent to taxation. (2000: 55, 60)

More important was the taxation reform that established the "1940 system." As mentioned earlier, the Imperial Cabinet had already enacted several temporary acts that increased taxes during 1936-1939. But none of them was comparable to the taxation reform of 1940. The new system established: (1) a comprehensive income tax on aggregate income at progressive rates ranging from 10 to 65 percent; (2) a corporate income tax at a flat rate of 18 percent;

(3) a scheduler income tax; and (4) a 6 percent withholding tax with respect to employment income. As a result of the tax reform, direct taxes became the main pillar of the Japanese tax system. The share of direct taxes, 67 percent of which was income taxes and corporation taxes, reached 64 percent of total tax revenues (MOF, 2006: ch1: 3-4). The reform also achieved a sharp reduction in the growth of the national debt in 1942 (Hara, 1998: 257). On average tax revenues amounted to 27.3 percent of annual Japanese government budget appropriations from 1941 to 1945 (Shavell, 1948: 126). In comparison, during the same time on average direct tax revenues only amounted to 3.82 percent of the annual Chinese government deficit. Adding up indirect taxes, total tax revenues only amounted to 11.18 percent of the Chinese budget deficit per year (Young, 1965: 33).

Due to the Imperial Cabinet's diligent effort to raise revenues, Japan did not experience hyperinflation as China did during the war. As table 6-3 shows, from 1937 to 1945 the Japanese annual growth rate of total money creation (currency plus bank deposits) averaged 37 percent, a number much lower than the Chinese figure. And recall that Japan was very successful in siphoning citizens' savings into the government-controlled banking system and preventing withdrawal. As a result, most of the government deficit was actually financed by those noninflationary deposits. In fact, from 1937 to 1944 the Japanese banking system always had more bank deposits than currency in circulation. Therefore, the price level in Japan was relatively stable during the war. On average the annual increases of prices were around 16 percent from 1937 to 1945. The overall increases of prices were about 130 percent between 1937 and 1944. In other words, according to the official index, overall prices were just doubled until 1944.

Table 6-3 Japan's Money Supply and Prices, 1934-1945

	Money in Circulation						Wholesale Prices (official)	Wholesale Prices (Actual)
	Currency (Million Yen)	% Increase	Bank Deposits (Million Yen)	% Increase	Currency plus Bank Deposits (Million Yen)	% Increase		
1934-36	2,230		4,579		6,809		1.0	1.0
1937	3,155	41%	5,855	28%	9,010	32%	1.3	1.2
1938	3,478	10%	7,293	25%	10,771	20%	1.3	1.3
1939	4,654	34%	10,484	44%	15,138	41%	1.5	1.5
1940	6,000	29%	13,157	25%	19,157	27%	1.6	1.7
1941	7,287	21%	15,972	21%	23,259	21%	1.8	1.8
1942	9,254	27%	20,254	27%	29,508	27%	1.9	2.4
1943	13,099	42%	23,137	14%	36,236	23%	2.0	2.7
1944	22,856	74%	31,801	37%	54,657	51%	2.3	3.3
1945	56,658	148%	46,180	45%	102,838	88%	3.5	

Source: Huff, 2015:64

To be sure, gigantic military costs did force Japan to increase money supply over the course of war. And Japan's achievements in paying for war through taxation and stabilizing prices during wartime should not be overestimated. In total, taxation may not have provided more than 25 to 30 percent of Japanese war finance (Hara, 1998: 257; Shavell, 1948; 126; Garon, 200: 53). In addition, in 1945, the final year of fighting, price stability of Japan started to break down. During 1945 currency in circulation became greater than banking deposits for the first time during the war. And wholesale prices trebled against the prewar level (1934-1936). Not to mention that inflation surged after Japan was defeated. However, comparing to Chinese performance —low tax revenues and hyperinflation during and after the second Sino-Japanese War of 1937 to 1945 —, Japanese war finance was indeed more effective.

Another salient difference between Chinese and Japanese war finance was their contrasting attitudes toward foreign borrowing. When the war erupted in mid-1937, China was never hesitant to resort to foreign borrowing to boost its military capability. In November 1937 China made a request, at the Brussels Conference, for a credit of US$500 million from the US, UK and France. However, this request was turned down (Young, 1965: 97, 120; Cui, 2004: 250). Then Generalissimo Chiang Kai-shek kept sending negotiators to

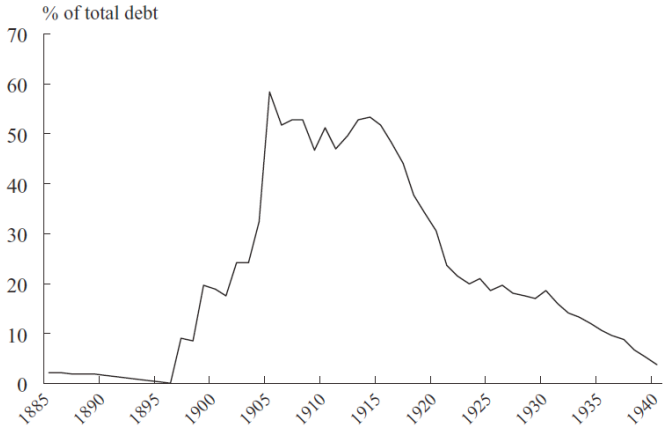
many foreign countries to seek loans. China thus secured Russian credits totaling US$250 million from 1938 to 1939. In addition, Chinese negotiators bargained very hard to receive US and UK loans before 1941. From February 1939 to February 1941, China received four loans totaling US$ 120 million from the US and US$ 35.5 million from the UK. Besides, in order to support the exchange rate of the *fapi*, the US and UK jointly provided a currency-stabilizing loan, US$ 50 million from the US and US$ 43 million from the UK, to the Central Bank of the Republic of China in April 1941. Furthermore, China also gained French credits totaling US$15million between 1938 and 1939 to build railways from a French banking group and the French Government Credit Insurance Department. China even tried to seek credits from Germany through the HAPRO Agreement of 1936 (Sino-German loan contract). Under the agreement Germany loaned China 100 million Reichsmarks to purchase German weapons and machinery. The loan was repaid by shipment to Germany of agricultural and mineral products (tungsten, antimony, tin, vegetable oils and shelled groundnuts). The Sino-German barter agreement continued to work until the outbreak of World War II in September 1939 (Young, 1965: 89-108; Cui, 2004: 238-247).

China was very diligent in pursuing foreign loans after the war started. In order to increase the chance of getting foreign credits, during 1937-1938 China even tried very hard to maintain payment on prewar foreign debt, including custom-secured obligations, salted-secured obligations and *the Boxer Indemnity of 1901*. China eventually ran out of funds and was forced to suspend its debt payments in January 1939. However, after securing new loans from the Western powers, China resumed its payment on both old and new war debts during the war (Young, 1965: 89, 93-96; Cui, 2004: 238-246). After Japan attacked Pearl Harbor on December 7/8, 1941, China and the Western powers became allies. As a result, the Nationalist government of China gained US lend-lease aid totaling US$1,546 million from

1941 to 1946. The UK also agreed to provide to China a credit of £50 million in 1942. Total credits and lend-lease aid utilized by China during the Pacific War was about US$1.2 billion (Young, 1965: 121; Cui, 2004: 244-245).

In stark contrast, Japan shied away from reliance on foreign borrowing in war preparation and fighting against China. As figure 6-1 shows, Japan had resorted to foreign loans during the Russo-Japanese War of 1904-1905. However, Japan's dependence on foreign credits was sharply reduced after World War I. It then declined further after 1931. Japanese outstanding foreign debt as a percentage of total public debt decreased from 19 percent to 4 percent during 1931-1940 (Shizume, 2011: 1134-1135). In fact, after 1930 the only international bonds the Japanese government issued were for the refinancing of Russo-Japanese War bonds (1905) in May 1930, and the refinancing in London of £4 million in existing South Manchurian Railway Company bonds in 1933. Aside from these two issues, Japan did not borrow abroad again until the 1950s (Meltzer, 2006: 150, 253). Instead, Japan was committed to developing state capacity for taxation and extraction. Why was Japan so cautious about recourse to foreign borrowing during the Sino-Japanese War while China was keen to pursue foreign credits to fight?

Figure 6-1 Japanese Public Debt held by Foreign Investors



Source: Shizume, 2011: 1135

A common explanation is great power politics. One may argue that because in 1930s Japan was already a great power that competed with the Western powers for interests in the Far East, Japan was financially blockaded by the international capital market. In contrast, China sided with the old powers and thus received aid from them. This explanation may have been true during the Pacific War (December 1941 to August 1945), but it was inconsistent with the historical evidence during 1937 to 1941. The fundamental problem with the great-power-politics explanation is that it overlooks the fact that great powers' policy orientations are constantly changing. From 1937 to early 1941, the prevailing political stance toward East Asian affairs in Washington and London was neutrality. China's request for a war loan was initially turned down after the outbreak of war. As a result, China had to appeal to foreign lenders by making its loan request appear as a commercial deal. This means China needed to prepare collateral, and had to accept high interest rates, more stringent loan conditionalities and maturity. For example, on February 8th 1939 China finally received its first loan amounting to US$25 million from the US. The credit was granted under an agreement between the US Export-Import Bank and the Universal Trading Corporation of New York that represented the Chinese government. The loan agreement required that the proceeds China received were to be used to buy American agricultural and manufactured goods. Interest was 4.5 percent and the maturity date was January 1st 1944. Repayment was to be by shipment of 220,000 tons of wood oil to the US. China agreed to use half the proceeds from the wood oil to repay the credit, and the other half to buy American products. The agreement strictly prohibited China from using the credit to buy arms, ammunition, or airplanes. Finally, the loan deal was unconditionally guaranteed by the Bank of China, a commercial bank of good standing partly owned by the Chinese government, as collateral (Young, 1965: 102-104). Later loans from the US, the UK and

France between 1939 and early 1941 have similar provisions. In order to maintain a good reputation to receive continuing foreign credits, China was diligent in repaying those debts during the war. This fact suggests that, at least before the outbreak of Pacific War in 1942, the Western powers did not lent China just because their strategic interests aligned. An even more crucial reason was that China did its best to pursue foreign borrowing even if China needed to pay more costs. Then, the question remains: why did Japan choose different war finance strategies, such as taxation, saving campaigns and social spending cuts?

Another alternative explanation is bureaucratic capacity. As Rossella Capella Zielinski points out, in order to collect taxes states need to have capacity to gather enough information for assessing tax bases. More important, states need to have sophisticated infrastructure and institutional structures to extract revenues. Thus, if a state wants to finance a war via direct taxation, it will need a developed and complex bureaucracy to carry out its war finance policies (Zielinski, 2016). In this sense, China was unable to pay for war by taxation due to its low level of bureaucratic capacity. Although bureaucratic capacity correctly depicts some important dimensions of Chinese war finance, it is more like a consequence rather than a cause. The fundamental weakness in this explanation is that it does not answer why Japan was so determined and capable of carrying out tax reforms and developing necessary bureaucratic capacity even during wartime while China failed to do so. This is very puzzling because Chinese bureaucracy has been commonly regarded as an excellent meritocracy with high capacity (Evans and Rauch, 1999; Castells, 1998). After Generalissimo Chiang and his Nationalist government unified all of China in 1930, they enacted a series of fiscal, financial and currency reforms. The currency reform was no easy task because China did not have a unified national fiat currency before the reform. Instead, China had relied on silver-backed coins, bank notes and *tael* (a unit of silver-backed currency). In 1933, the Nationalist

government abolished the use of *tael*. In November 1935, China enacted an epochal currency reform, abandoning the silver standard and officially making *fapi*, or the Yaun or Chinese dollar, the legal tender. Silver was nationalized. The use of silver-backed currencies was prohibited, and *fapi* could not be converted into silver. Domestically, confidence in the *fapi* was firmly established. Hence the *fapi* became widely accepted, used and prevailed in the whole China even including Japan-occupied areas. Externally, foreign exchange rates of the *fapi* were successfully stabilized, and free convertibility was achieved (Kung, 1944). This accomplishment was certainly remarkable. It also demonstrated highly competent Chinese bureaucracies and strong state power.

In contrast, taxation reforms under the Nationalist government were disappointing. The Nationalist government tried to introduce an income tax in 1936 to prepare the war, but it yielded very little revenue. The government then tried to raise business taxes and excessive profit taxes and confronted mounting social resistance. When the Chinese government started to increase business taxes, business associations in multiple provinces mobilized to protest during the war. The social resistance became even fiercer when excessive profit taxes were under consideration. The Nationalist government originally planned to enact such taxes in July 1938, but social resistance forced the government to delay until 1939 (Cui, 2004: 111-114, 134-137, 146-147). Finally, the Nationalist government failed to enact the reforms on land ownership taxation. China in 1937 was about four-fifths agricultural. Despite the predominance of agriculture, China in 1937 lacked an effective land tax. Scholars and bureaucrats continued had been urging land reform since 1904. After Generalissimo Chiang and the Nationalist government consolidated ruling power in 1930, bureaucrats and scholars circulated proposals on land reforms in order to compete with the

Communist party in rural areas. The Nationalist government continued postponing and eventually it failed to achieve substantial reforms (Young, 1965: 22-23).

The simple comparison between currency reforms and taxation reforms under the Nationalist government leads to some puzzling questions: Why was China unable to resist over-reliance on money creation and foreign borrowing, while Japan was so successful in raising taxes, extracting revenues, and stabilizing prices? What exactly prevented China from successful taxation reforms in the face of war? What constraints did the Nationalist government confront when it wanted to pay for war by taxation? The cases of financial and currency reforms show that the Chinese government never lacked competent bureaucrats, and it demonstrated strong state capacity in the reforming process. Then, why China failed to attain the same results in taxation and land reforms? What exactly made Chinese and Japanese war finance so different?

3. Causal Variable: Trend of Economic Inequality

(1) China: Extreme and Persistent Inequality

Our theory suggests that when income inequality is extremely high, the demand for redistributing wealth from the rich to the poor becomes high and threatening. The wealthy elite can be expected to do their best to collude with the political leader to engage in money creation and foreign borrowing. And this was exactly the case of China.

The data on inequality in China are usually imperfect especially those during the Sino-Japanese War, so we have to rely on other measures to estimate economic inequality in China. As indicated previously, China in 1937 was about four-fifths agricultural. Hence, land had become one of the most critical sources of wealth and income in China. Most of the wealthy elite belonged to the landed class during 1920-49. And land ownership was

extremely concentrated in China. According to the data compiled by the National Land Commission in 1934 on almost 1.75 million rural households residing in 16 provinces, the Gini coefficient for the landholdings is 0.72. The top 1 percent of rural households owned approximately 18 percent of the land; the top 2 percent of rural households owned approximately 25.5 percent of the land the top 5 percent owned nearly 39 percent; and the top 10 percent owned around 53 percent. By contrast, slightly more than a quarter of all rural households were landless, and an additional quarter owned less than 5 *mu* (1 *mu* equal 0.164 acre) (Chao and Chen, 1982). The extreme land inequality translated into extreme wealth inequality in China. Not surprisingly, the wealthy elite used their resource in bribery, and corruption became rampant.

Because Chinese wealthy elites became so powerful in the political process, they were able to induce the political leadership to pursue certain war finance strategies that served the wealthy elite's interest. For example, the wealthy elite continued launching anti-tax campaigns that obstructed the Nationalist government's attempts to finance the war through taxation. In addition, many of them profited from the Nationalist government's policy combination of money creation and fixed exchange rate regime. In short, wealthy elites with influential political connections enriched themselves by black market currency arbitrage between the dollar and Chinese *fabi*. Many of them built up foreign asset holdings abroad and left nationalist China before its eventual collapse (Huff, 2015: 71).

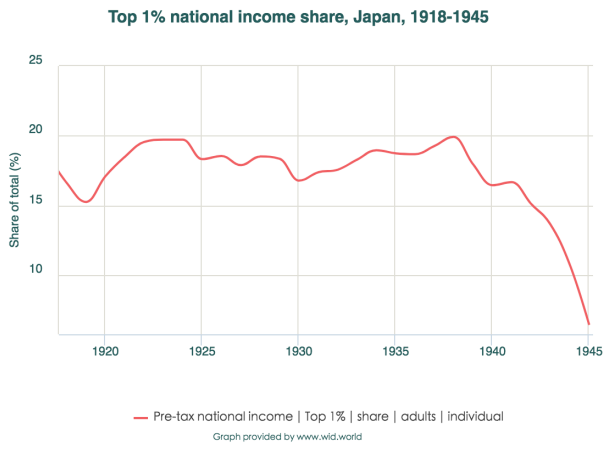
(2) Japan: A Declining Trend of Inequality during Wartime

First of all, we should admit that both China and Japan were economically unequal countries during 1930s. The wealthy in Japan, the top 1 percent, accounted for 16.78 percent of Japanese national income in 1930. And the top 5 percent accounted for around 31 percent.

However, the trend of inequality in Japan was different from that in China. As shown in figure 6-2, the Sino-Japanese War from 1937 to 1945 caused Japan to experience a persistent drop in inequality. This set the stage for Japan to pay for war through a sweeping structural reform of the tax system, savings campaigns, and spending cuts.

To illustrate more clearly, we break down the trend of inequality in Japan from 1918 to 1945, there were four episodes: first, immediately after World War I, it took about 6 years (1918-1924) for the top 1 percent income shares to slowly rise from 16 percent to almost 20 percent. In the second episode, it also took about 6 years (1924-1930) for the top income shares to gradually decline to 16.78 percent because of the Great Kantō earthquake and the Showa Financial Crisis of 1927. Third, it took another 8 years (1931-1938) for the top income shares to recover and rise back to 20 percent. In the final episode, the top income shares took a sharp and persistent dive between 1938 and 1945. It is worth noting that it only took less than 3 years (1938-1940) for the top income shares to drop back to 16.45 percent at the outbreak of the Sino-Japanese War (Moriguchi and Saez, 2008). This created a momentum for Imperial Japan to enact a sweeping tax reform. Then, the combination of newly established taxes and the ongoing war led the top income shares to further plummet to reach 6 percent.

Figure 6-2 The Trend of Inequality in Japan, 1918-1945



To sum up, because economic inequality in China was extremely high during 1930s and it remained roughly unchanged over the course of the Sino-Japanese War, Generalissimo Chiang Kai-shek and his Nationalist government were constrained by the wealthy elites' resistance to taxation. As a result, China had to rely on money creation and foreign borrowing to finance war efforts. In contrast, the war caused a more powerful leveling effect in Japan, creating a dramatically and persistently declining trend of inequality. Therefore, Japan was better able to restrain the desire to overly rely on money creation. For the same reason, Japan was also more capable of paying for war through taxation and spending cuts, a war finance strategy based on the principle of "equality of sacrifice."

Below, I will use several cases to illustrate how inequality affected Chinese and Japanese war financing during the Sino-Japanese War. I start with the process of China's war finance strategy. In the first part, I show how wealthy elites crippled the Nationalist government's attempt to raise taxes during the war. In the second part, I trace the process of "currency war" and the Chinese government's currency statecraft in Mainland of China. During the Sino-Japanese War, the Northern part of China was occupied by the "puppet regime" of Manchukuo/Manchuria backed by Imperial Japan. The Manchukuo regime joined the Japan-led "Greater East Asia Co-Prosperity Sphere." The Central Bank of Manchukuo continued issuing Manchurian currency, which was integrated into the yen bloc and redeemable at par in Japanese yen. In addition, Mao Tse-tung and his Chinese Communist Party (CCP) also issued the Communist notes in their controlled areas. Under this circumstance, Generalissimo Chiang Kai-shek and his Nationalist government engaged in ferocious currency rivalries with the Imperial Japan-backed Manchukuo regime and the Chinese Communist Party. I describe the Nationalist government's currency statecraft and the

strategy of money creation to finance war efforts. I also articulate the role of inequality in China's strategy-making.

Regarding Japan's war finance strategy, I focus on how the changing trend of inequality affected choices of the following war finance strategy: (1) Imperial Japan's choice of war tax reforms in 1940; and (2) the saving campaigns that essentially cut private spending and non-military government spending.

4. Inequality and China's War Finance Strategic Choice

(1) Wealthy Elites' Resistance to War Taxation in Mainland China

After the beginning of 1937, the situation between China and Japan had deteriorated further, making war seem inevitable. The Nationalist government thus had made several attempts to raise taxes either for war preparation or for financing the war later. Their attempts largely failed due to mounting resistance from the wealthy elite. Wealthy elites utilized business associations to mobilize protests against tax increases. They also cooked the books to evade taxation. Moreover, they bribed corrupted tax collectors to avoid tax hikes. In fact, many bureaucrats came from the circle of wealthy elites and they or their families usually had their own business. During the war there was multiplication of concurrent government jobs, so one man would hold several posts. Staffs often skimped official works and were absent from office each day to engage in outside remunerative activities. A large number of bureaucrats believed that accepting graft or "squeeze" (bribes) was as normal as gaining salaries from jobs (Young, 1965: 321).

Therefore, when the Nationalist government planned to enact an excess profit tax (capital tax) in July 1938, business associations lobbied to force the government to delay until 1939. After the enactment, the wealthy elite either tried to falsify business records or to collude

with bureaucrats to avoid such a tax (Cui, 2004: 111-114, 134-137, 146-147). Then, the Nationalist government tried to establish a wartime consumption tax in 1942. However, the Chinese government faced challenges from local governments: they wanted their own henchmen to collect such a tax. The multiplication of taxes on many kinds of goods, levied in many places, led to setting up numerous controls on roads, rivers, airports and railways (Young, 1965: 36). This tax created internal barriers to flows of goods and exacerbated shortages of necessities and inflation. And most revenues went to corrupt bureaucrats. It is estimated that more than two-thirds of revenues were captured by corrupt bureaucrats. The media criticized that: "Corruption and bribery was rampant. The higher position a bureaucrat reaches, the more powerful he could be, and the more bribes he would receive." (Cui, 2004: 146-147) Lastly, mounting pressures from the wealthy elite also crippled the attempt by Generalissimo Chiang and the Nationalist government to enact land reforms and new land taxes (Young, 1965: 22-23).

At the local level, tax revolts by wealthy elites were even more common. Representative examples were tax revolts in Szechwan Province, Canton Province, Tientsin City and Shanghai City.

After the Sino-Japanese War started, the Nationalist government faced ferocious attacks by Japanese troops and had to move the central government to the west to the Szechwan Province. Generalissimo Chiang and other top military leaders of the Nationalist government commanded the Szechwan Province government to mobilize additional troops and to raise more military funds. The Szechwan Province government then increased the local business tax rate to 3 percent in September 1937. Local wealthy elites were angry. They utilized four strategies to counter the government's actions. First, they asked business associations, for example the Chengdu City Business Association, to lobby for tax

reductions. Second, they coordinated collective closures of business. Third, they used the media to blame the government for business suspensions or closures. Finally, some of them mobilized violent riots that targeted local tax offices. In order to maintain stability, the Szechwan Province government retreated and announced a tax reduction in March 1938 (Ke, 2012)

The Canton Province case was similar. In 1937, the Canton Province government announced a new tax act that modernized and increased local business taxes. Not surprisingly, local wealthy elites mobilized to resist the tax reform by lobbying, threatening to close business, and protests. Led by the Canton Province business association, the wealthy elite created huge pressures and forced the provincial government to reduce taxes (Ke, 2015).

The cases of tax revolts in Shanghai City and Tientsin City were even more telling about the power and autonomy of wealthy elites because these two cities were occupied by the Japanese-military-backed Manchukuo regime. Normally, such a regime should have been more capable of enacting taxation for several reasons. First, as an occupying regime it did not have that much vested interest. Second, its bureaucratic capacity was considerably high. Lastly, during the war it was not hesitant to use brutal coercion if necessary. However, when the Manchukuo regime planned to increase income taxes and business taxes to finance military spending, the wealthy elite's agents, the Shanghai City Finance and Banking Association and the Tientsin City Business Association, were able to delay or even compromise the Manchukuo regime's attempt. The two associations utilized their information advantage, and sometimes they misrepresented the information, to cause the Manchukuo regime to delay tax increases or to change to a lower rates. They also helped companies cook the books to minimize tax burdens. Moreover, they coordinated to create

public opinion and made petitions for lowering tax rates (Wei, 2015; Chang, 2004; Lin, 2003).

(2) Currency War in Mainland China

Figure 6-3 Currency Areas in Mainland China during the Sino-Japanese War

Source: Huff, 2015: 65.

As figure 6-3 shows, there were three major currency areas in Mainland China during the Sino-Japanese War. Generalissimo Chiang and the Nationalist government controlled the middle part, southern part and west part of Mainland China. These places were *fapi* area. The Manchukuo regime, the Japanese-military-backed puppet regime, controlled the northern part, northeastern part, and the east coast part of China. In those parts, there were several kinds of notes issued by the Central Bank of Manchukuo regime, the Japanese military, and other local governments of the occupied regime. Those notes were all backed by Japanese *yen* and had a fixed exchange rate with the *yen* at the price of 1 puppet currency = 1¥. In other words, those places belonged to the *yen* bloc. Finally, Mao Tse-tung and his Chinese Communist Party (CCP) also issued the communist notes in their controlled areas, including border regions and northwestern part of Mainland China. In addition to violently

military rivalry, the Nationalist government, the puppet regime, and the CCP also competed ferociously to promote their respective currencies in Mainland China.

In *Currency Statecraft: Monetary Rivalry and Geopolitical Ambition* (2019), Benjamin Cohen defines currency statecraft as a government's management of its currency instrument. He uses the life cycle of currency internationalization to articulate a country's policy options in favor of or in opposition to currency internationalization. Although Cohen aims at explaining currency rivalries at the international level, his framework is useful in understanding the currency rivalries in the battling mainland of China among the Chinese central government's *fapi*, Japan-backed notes, and the communist note.

During the Sino-Japanese war, the Chinese central government's *fapi* was the most dominant, but it also started to fall into the stage of decline. The *fapi* used to be the most widely used currency in all of Mainland China thanks to its legal status (the only legal tender) and patriotic appeal. *Fapis* were even commonly used in the Japanese-occupied areas during the first three years of the war. However, as the war was prolonged and China's economic capability declined, the *fapi* lost its appeal. In contrast, the Japan-backed puppet regime's notes and the communist notes were in a youth stage. They wanted to establish their own monopolized currency areas. In addition, they hoped to weaken the dominance of the *fapi* and to promote wider use of their respective currencies.

When competing with the *fapi*, the Japanese-backed puppet regime took a more proactive approach to promote its currency. It used legal, administrative, and sometimes coercive powers to minimize the circulation of *fapi* in its controlled areas. It also used sophisticated tactics to destabilize confidence in the *fapi*. First, the puppet regime utilized multiple channels (trade or finance) to accumulate *fapis*. Then, it went to the foreign exchange markets (mainly the Shanghai foreign exchange market) to exchange *fapis* for US dollars or

UK pounds. Because the Chinese central government maintained a fixed exchange rate regime, the Japanese-backed puppet regime speeded up the process of depletion of China's foreign reserves. In addition, the puppet regime used propaganda to highlight inflation in the Nationalist government's controlled areas (Lin, 1996: 167-324).

Although Mao and the Communist Party wanted to develop their currency power, they understood that they were the weakest. Therefore, they focused only on the monopolistic power of the communist note in their own controlled areas. And they tried to *prevent* the use of the communist note outside their territory (Lin, 1996: 167-324-404).

For Generalissimo Chiang and the Nationalist government, the major challenge was to cope with the decline of *fapi* dominance. The Nationalist government strived to *resist* the fall of *fapi* hegemony. In fact, one of the main reasons for the Nationalist government to maintain a fixed exchange regime at the expense of losing foreign reserves was to maintain market confidence in the *fapi*. However, the Nationalist government also eagerly exploited the *fapi's* status (still relatively dominant and widely used). Specifically, the Chinese government continued creating new *fapis* at an exponential pace in the hope that it could extract strategic resources from abroad and all of Mainland China, including the occupied areas (Lin, 1996: 107-165). Such an *exploitation* strategy actually contradicted the *resistance* strategy because the former was damaging confidence in *fapi*.

Why did Generalissimo Chiang and the Nationalist government choose a strategy that harmed their effort to resist the decline of *fapi*? Inequality was one of the primary reasons. Extremely high inequality led to concentration of power in the wealthy elite, making it easier for them to promote their desired currency statecraft. So, wealthy elites persuaded the Nationalist government not to impose capital controls when it was eager to defend the price of the *fapi* after the war broke out. As a result, the Chinese government had to continue

spending foreign reserves. And a lot of Chinese bankers and financial investors tried to exploit their government's action by arbitrage or by sending their assets abroad through selling *fapis* to earn foreign currency assets. The Nationalist government attempted to counter such problems by setting a daily withdrawal limit on each individual. However, a lot of wealthy elites utilized their inner connections with banks to evade the regulation (Lin. 1996:53).

Because the wealthy elites controlled multiple channels of trade during the war, they became important brokers and agents for trade between the Nationalist government-controlled areas and the occupied areas. And they profited handsomely from the Chinese government's choice of money creation by using more *fapis* to extract resources and then earn additional profits by hoarding and speculation.

5. Declining Inequality and Japan's War Finance Strategies

(1) The Pursuit of Structural Reform of Taxation

As indicated previously, Japan's war finance strategy was different from China's. When the Chinese government had to rely heavily on money creation due to the failure of raising tax revenues, Japan was not only able to increase taxes during wartime but also successfully enacted sweeping reforms of its tax system in 1940. Japan's achievement hinged on a changing trend of inequality in the late 1930s: inequality sharply dropped in 1938 and continued declining henceforth.

In fact, Japan's march for tax reforms in 1930s did not always go smoothly. Between 1931 and 1934, the Japanese Tax Bureau prepared a series of plans to revise the Japanese tax system. A common feature of those plans was to make income taxation the central role in government revenues. In addition, some bureaucrats also attempted to introduce property

taxes and a tax on luxury goods. Because the Manchuria Incident of 1931 (Japan's invasion of North and Northeast China) caused a huge revenue demand, reformist bureaucrats wanted to exploit this opportunity to transform Japanese tax institution into a progressive system. However, as shown in figure 6-2, there had been a slowly increasing trend of inequality since 1930. As a result, the wealthy elites and conservative bureaucrats had become more powerful to resist the tax reform. They tried to block those proposals so none of them would reach the Imperial Japan Cabinet. They also promoted the argument that it would be better to "eat the cow after it has grown fatter," implying that taxation would kill companies and economic growth (Revelant, 2015: 427-429). Therefore, Prime Minister Takahashi Korekiyo insisted on paying for war (the Sino-Japan military conflicts in 1931) through a deficit-financing strategy:

> We will finance the whole fiscal gap in 1933 with debt. This is because the primary factors of the increase in expenditures are temporary, too large to finance with an increase in taxes and other revenues, and because an increase in taxes and other revenues would break the budding economic recovery. This is not yet the right time for tax increases (Quote from Shizume, 2011: 1136).

Rising inequality during the early and middle 1930s caused severe social tensions that resulted in two coups d'état: the May 15 Incident in 1932 (Goichigo Jiken) in which the incumbent Prime Minister Inukai Tsuyoshi was assassinated; and the February 26 Incident in 1936 (Niniroku Jiken) in which the incumbent Prime Minister Okada Keisuke was wounded, and two former prime ministers, including Takahashi Korekiyo, were killed. Then, successor Prime Minister Kōki Hirotathe appointed Baba Eiichi, a reformist

bureaucrat, as finance minister. Baba used to serve as president of the Hypothec Bank of Japan, which was primarily engaged in rural development. Baba came to learn directly about dire conditions of farmers hit by depression and wanted to enact progressive financial reforms. Baba also supported the expansion of the military budget to sustain expenditures in the event of war. Therefore, a radical plan of reform, the "Baba Plan," was proposed (Revelant, 2015: 436).

The Baba Plan intended to strengthen income tax as the pillar of national taxation, raising rates on corporations by about 80 percent and embedding interest on capital into individual income. It also wanted to eliminate unfair provisions in the current tax system. For example, it planned to complete abolition of the controversial household tax, which had long been the symbol of inequitable extraction in rural districts (Revelant, 2015: 437).

Although the Baba plan was welcome by the coalition between the reformist bureaucrats and military factions, it was faced with strong oppositions from the conservatives and the wealthy elite. The journal of *Ekonomisuto* criticized that "Baba's effort to achieve a 'totalitarian centralisation' of fiscal resources in view of a possible war was 'only full of sacrifice and scarcely effective in practice.'" The conservative party, Rikken Seiyūkai, strongly opposed the Baba's plan because it would hurt small landowners. Moreover, some executives try to delay the proposal by arguing that premature implementation might be counterproductive at both economic and fiscal levels. They suggested the Cabinet that it should take more time to study the plan (Revelant, 2015: 438-439).

Social tensions and resistance from the wealthy elite became fiercer with the rising trend of inequality. In January 1937, the Hirotathe cabinet collapsed and Baba Eiichi was replaced. The new premier, General Hayashi Senjurō, took office on 2 February 1937. On the next day, the government withdrew the tax reform plan. New finance minister Yūki

Toyotarō, a former president of Yasuda Bank and board of directors of Bank of Japan, was considered as an ally in business circles. Moderate or conservative bureaucrats were promoted to important positions, while the Baba faction was demoted. The new cabinet wanted to rely on the deficit-financing strategy to prepare for the incoming Sino-Japanese conflict. If tax increases were deemed inevitable, the Hayashi cabinet insisted that the amount should be limited and only for the fiscal year of 1937.

Perhaps even such a compromise package could not fully satisfy the wealthy elite. In addition, the crisis between China and Japan had escalated further, causing a huge division within the parliament. On 31 March 1937, Hayashi dissolved the parliament and held a general election in which he ultimately lost. Prince Konoe Fumimaro finally stepped in as new Prime Minister. Konoe was not only highly respected by the military but also welcome by the wealthy elite because he could hold the balance of an "iron triangle" of military leaders, big business and political parties. Konoe also appointed Kaya as finance minister upon Yūki's recommendation. Such a decision met a favorable response from business circles (Revelant, 2015: 439-440). However, this was perhaps the last success the wealthy elite could win.

Since the outbreak of the Sino-Japanese War in the middle of 1937, Japan had enacted several important acts to engage in national mobilization, including the Temporary Import Export Grading (TIEG) Act of 1937, the National General Mobilization Act in May 1938, and the Control Associations and the Munitions Company Act. These measures created a powerful leveling effect on income distribution in Japan. In 1938, the trend of inequality started to reverse. Then a sharp and persistent decline in inequality continued over the course of the war. This set the stage for Japan to pay for war through a sweeping structural reform of the taxation system. In January 1939, Konoe resigned and appointed Kiichirō

Hiranuma as successor Prime Minister. Kiichirō Hiranuma set a mixed-membership advisory committee to discuss a plan for comprehensive reform. Later, the Hiranuma's cabinet resigned in August 1939 because of the massive defeat of the Japanese Army in Mongolia during the Nomonhan Incident against the Soviet Union. Despite Hiranuma's resignation, the advisory committee still continued its work. At last, the committee produced a plan for comprehensive reform that had many points in common with the Baba plan (Revelant, 2015: 442).

In May 1940, Japan's long march for tax reform finally reaped the fruits thanks to a declining trend of inequality. The Imperial Diet approved the plan, later known as the "1940 system," which provided the foundation for paying for the war through further tax hikes in the next years. Prime Minister Mitsumasa Yonai announced (Yonai, 1940):

> We have decided to carry out necessary revisions of the system of taxation in all departments, both national and local, with a view to readjusting and consolidating the system in consonance with the financial and economic conditions of the country now in the midst of the long-term construction of a new order in East Asia.

(2) The Development of Saving Campaigns

In addition to facilitating the enactment of the 1940 tax reform, the declining trend of inequality also contributed to Japan's pursuit of the saving campaigns. As indicated previously, Japan utilized multiple channels to direct citizens' savings into financial institutions, banks and the postal savings system. Then the Japanese government commanded those saving institutions to buy war bonds. In other words, Imperial Japan used an indirect way to finance war cost by citizens' savings. As Garon pointed out (2000: 53),

by drawing most of its funds from the vast pool of postal savings, the Ministry of Finance's Deposit Bureau alone purchased a further 35 percent of government debt by the end of the war. Because those saving institutions rivaled the Bank of Japan's network in buying government bonds, the Bank of Japan did not need to create too much new money to monetize government debt. This method was successful in controlling inflation, as table 6-3 suggests.

Table 6-4 shows how successful Japan's saving campaigns were during the Sino-Japanese War. Japan set the annual national savings target higher and higher after 1938. Especially, the national targets rose at a punishing pace after the attack on Pearl Harbor. Japan, nevertheless, met those goals with even higher performance.

Table 6-4 National Savings Target and Actual Savings Increases (million yen)

Year	Actual Savings	National Savings Target	Achievement Rate (Savings/Target)
1938	7,333	8,000	92%
1939	10,202	10,000	102%
1940	12,817	12,000	107%
1941	16,020	17,000	94%
1942	23,457	23,000	102%
1943	30,988	27,000	115%
1944	48,489	41,000	118%
1945	67,392	60,000	112%

Source: Garon, 2000: 56

Why was Japan so able to encourage its citizens to save? The saving campaigns, after all, required a lot of sacrifice. They asked citizens to cut private spending and to accept a lower living standard. How could Japan carry through the programs without causing severe social upheavals? In fact, some already doubted the feasibility of the programs in 1936. For example, Arisawa Hiromi, an influential economist and consultant to the Japanese government, argued: "I used to say that an economy has a lot of flexibility, and that, for example, a 10 percent cut in the national living standard could squeeze out about 1.5 billion

yen for military expenditures, so the limits could not be drawn so strictly. The real question was whether the people could endure the lowered living standard." (Garon, 2000: 42-43) Arisawa Hiromi's concern was echoed by public opinion. In one government survey of 38 towns and villages in late 1937, several local leaders reported that lower-income residents saved more in the campaigns than the rich. They pointed out the unfairness of the saving campaigns by saying: "In the sale of war bonds, it's the poorer people who put up the money and bought them. The big capitalists didn't purchase the bonds."(Garon, 2000: 61)

Japan eventually managed to achieve successful saving campaigns and proved capable of enduring enormous sacrifices especially during the Pacific War stage (1942-1945). In essence, the development of Japanese saving campaigns was associated with its trend of inequality. As mentioned earlier, there was a slowly increasing trend of inequality in Japan during 1931-1938. As a result, poorer citizens' grievance became stronger and they were less likely to accept further lowering of their living standards. This was one of the main reasons behind Arisawa Hiromi's concern in 1936, and citizens' complaints about unfairness of saving programs in 1937. And table 6-4 also shows that during the 8 years of the Sino-Japanese War, Japan failed to achieve the full savings target in 2 particular years (1938 and 1941, though Japan still reached above 90 percent of each target). These 2 "failing years" both fell in the first four years, a period when the trend of inequality just started to change into a persistently declining one. Also, in average, the performance of the saving campaigns during the first 4 years (1938-1941) was not as effective as the performance during the final 4 years (1942-1945).

The declining trend of inequality became much more dramatic from 1942 to 1945. And, as Moriguchi and Saez shows (Moriguchi and Saez, 2010), the declining trend was mainly driven by the collapse of "the super wealthy." For example, if we break down the group of

the top 1 percent, then the national income shares of the "top 1 percent – top 0.5 percent" group declined by 50% (from 4.0% to 2.0%) from 1941 to 1945. For the top 0.1 percent group, their national income shares fell by 80 percent (from 9.2 percent to 1.9 percent). For the top 0.01 percent – the super wealthy-, their income shares collapsed from 3.8 percent to 0.6 percent, meaning that almost 85 percent of their wealth was evaporated.

Because of the drastically declining trend of inequality, the grievances of poorer citizens were greatly mitigated. Therefore, in August 1944, the Ministry of Finance released to the press a survey about people's savings psychology. A notable difference between this survey and the 1937 one was that people no longer mentioned about unfairness of the saving campaigns. Instead, people pointed out their benefits and legitimacy. For example, people indicated that besides the goal of victory, the saving campaigns could also contribute to welfare for children and aged persons. They could also help people prepare for unexpected needs in the future (Garon, 2000: 62- 63). Therefore, even when the Japanese government set a much higher annual national savings target from 1942 to 1945, Japanese citizens were still willing to support the goal, achieving much better performance of the saving campaigns than that during the previous years.

6. Conclusion

In this chapter, I have compared China's and Japan's war finance strategies in the second Sino-Japanese War from 1937 to 1945 to show how economic inequality can be expected to affect war finance strategic choices in non-democratic, non-western, and developing country cases. The second Sino-Japanese War of 1937-1945 was a watershed for China and Japan, and both countries were forced to mobilize every resource to pay for fighting. During the war each country had to try multiple war finance strategies and spent every penny it

extracted. Although Chinese and Japanese war finance shared a lot of similarities, there were two striking differences: their contrasting attitudes toward money creation and foreign borrowing.

From the beginning of the war, China was eager to rely on money creation to fight. In contrast, Japan took a drastically different approach. Rather than finance the deficit by simply printing additional money, Japan managed to carry through tax increases, national savings and thrift campaigns, and reduction of nonmilitary spending. Why was China unable to resist over-reliance on money creation, while Japan was so much more successful in raising taxes, extracting revenues, and stabilizing prices?

Another salient difference between Chinese and Japanese war finance was their contrasting attitudes toward foreign borrowing. When the war erupted in mid-1937, China was never hesitant to resort to foreign borrowing for boosting its military capability. In stark contrast, Japan shied away from reliance on foreign borrowing in war preparation and fighting against China. Instead, Japan was committed to developing state capacity for taxation and extraction. Why was Japan so cautious about recourse to foreign borrowing during the Sino-Japanese War while China was keen to pursue foreign credits to fight? What exactly prevented China from successful taxation reforms in the face of war?

My theory suggests that economic inequality played an essential role behind each country's war finance strategy. When inequality is extremely high, the demand for redistributing wealth from the rich to the poor can be expected to be high and threatening. The wealthy elite will do their best to collude with the political leadership to engage instead in money creation and foreign borrowing. And this was exactly what happened in China.

Because Chinese wealthy elites became so powerful in the political process, they were able to induce the political leadership to pursue certain war finance strategies that served the

wealthy elite's interest. For example, the wealthy elite continued launching anti-tax campaigns that obstructed the Chinese government's attempt to finance the war through taxation. In addition, many of them profited from the Chinese government's policy combination of money creation and fixed exchange rate regime. In short, wealthy elites with influential political connections enriched themselves by black market currency arbitrage between the dollar and Chinese *fabi*. Many of them built up foreign asset holdings abroad and left nationalist China before its eventual collapse.

Japan's experience was different. Although inequality in Japan during 1930s was still high, it was not as severe as in China. More important, the Sino-Japanese war caused a more powerful leveling effect in Japan, creating a dramatically and persistently declining trend of inequality. Therefore, Japan was better able to restrain the desire to overly rely on money creation. For the same reason, Japan was also more capable of paying for war through tax reforms, the saving campaigns and spending cuts, a war finance strategy based on the principle of "equality of sacrifice."

I used several cases to illustrate how inequality affected Chinese and Japanese war financing during the Sino-Japanese War.

In the decision-making process of China's war finance, there were two salient situations where inequality caused an impact on China's strategic choices. The first situation was about the wealthy elites' resistance to taxes. After the beginning of 1937, the Chinese government made several attempts to raise taxes for financing the war. However, wealthy elites utilized business associations to mobilize protests against tax increases. They also cooked the books to evade taxation. Moreover, they bribed corrupt tax collectors to avoid tax hikes. At the local level, tax revolts by wealthy elites were even more common. The

wealthy elites were autonomous and powerful enough to cripple the attempts to raise taxes, forcing the Chinese government to resort instead to money creation and foreign borrowing.

The second situation was about the process of "currency war" and the Chinese government's currency statecraft in battling for Mainland China. During the Sino-Japanese War, Generalissimo Chiang Kai-shek and his Chinese government engaged in a "monetary rivalry/currency war" against the Imperial Japan-backed Manchukuo regime and the Chinese Communist Party. For Generalissimo Chiang and the Chinese government, the major challenge was to cope with the decline of the dominance of *fapi*, the Chinese legal tender. However, the Chinese government's policy priority was constrained by extreme inequality. Extremely high inequality led to a concentration of power in the wealthy elite, making it easier for them to promote their desired currency statecraft. Therefore, wealthy elites persuaded the Chinese government to continue exploiting the *fapi* status by money creation. As a result, China's currency statecrafts were inconsistent and sometimes contradictory, leading the eventual collapse of *fapi*.

In the case of Japan's war finance, there were also two situations where the declining trend of inequality affected Japan's strategic choices. The first situation was Japan's long march for taxation reforms after 1930. In reality, Japan's attempts to reform the tax system in 1930s did not always go smoothly. Between 1931 and 1934, the Japanese Tax Bureau prepared a series of plans. However, none of them reached the Imperial Japan Cabinet. The Sino-Japanese War became the turning point. After the outburst of the war in the middle of 1937, Japan enacted several important acts to engage in national mobilization. Hence, after 1938 a sharp and persistent decline in inequality continued over the course of the war. This set the stage for Japan to pay for war through a sweeping structural reform of the taxation system. In May 1940, Japan's long march for tax reform finally reaped the fruits. The

Imperial Diet approved the plan, later known as the "1940 system," which provided the foundation for paying for the war through further tax hikes in the next years.

The second situation was about the development of savings campaigns. During the Sino-Japanese War, Japan utilized multiple channels to direct citizens' savings to finance war costs. The success of the Japanese saving campaigns hinged on the declining trend of inequality. The persistently and drastically declining trend of inequality from 1937 to 1945 destroyed the wealth of "the super rich." Therefore, the grievances of poorer citizens were greatly mitigated. They thus became more willing to support the saving campaigns and to accept sacrifices in their living standards.

"**This distribution of burden [the proposal to tax the rich and reduce consumption] may be open to the criticism that it demands too heavy a relative sacrifice from the higher income group. It certainly uses the opportunity of war finance to effect a considerable redistribution of incomes in the direction of greater equality. Does any responsible leader of the working class… believe that… any other alternative will work out more justly than this or more advantageously to the lower income group?**"

——— *John Maynard Keynes, How to Pay for the War, 1940* ———

"**They [governments] are unwilling for fear of offending the people, who, by so great and so sudden an increase of taxes, would soon be disgusted with the war; and they are unable from not well knowing what taxes would be sufficient to produce the revenue wanted. The facility of borrowing delivers them from the embarrassment which this fear and inability would otherwise occasion. By means of borrowing they are enabled, with a very moderate increase of taxes, to raise, from year to year, money sufficient for carrying on the war, and by the practice of perpetual funding they are enabled, with the smallest possible increase of taxes, to raise annually the largest possible sum of money.**"

——— *Adam Smith, The Wealth of Nations, 1776* ———

Chapter VII. Conclusion

It has been universally acknowledged that "the sinews of war are infinite money." But how do states finance their war efforts and why in the way that they do? What determines states' choices among the five major financing instruments in interstate conflicts: (1)

taxation, (2) reduction in non-military spending, (3) domestic borrowing, (4) foreign borrowing, and (5) money creation? Why do states sometimes resort to taxation or spending cuts to fight, whereas at other times they pay for war through borrowing or money creation? Conventionally, the war finance literature emphasizes the effects of partisanship, regime type, bureaucratic capacity, international power structure, and globalization. I argue, however, that these factors do not fully explain observed variations in state war finance strategies because they overlook the role of domestic economic inequality. War finance can cause a profound redistributive impact, so the decision-making process is likely to involve fierce political competition. As a result, inequality can affect strategic war finance choices by shaping the outcomes of redistributive conflicts within a state.

Recap of the Redistributionist Theory of War Finance

In this dissertation, I have developed a "redistributionist theory of war finance" to explain how domestic economic inequality affects war finance strategies. I argue that the choice of war finance is made through triangular strategic interactions among three key sets of domestic actors: political leadership, the wealthy elite, and the public (the remaining state population that is poorer than the wealthy elite). I also argue that each war finance strategy is associated with specific redistributive consequences that create cleavages between the wealthy elite and public. The redistributive consequence of war finance and the risk of social instability vary with the level of domestic economic inequality. Therefore, different levels of inequality (low, high, extremely high) can influence state war finance choices by affecting fiscal bargaining between political leadership and societal actors during wartime.

Wars typically entail huge costs and sacrifices, in which the distribution of the war burden becomes a source of social instability. Faced with the exigencies of war, political leaders

need to secure a fiscal bargain that sustains the sacrifices of competing societal coalitions without generating serious upheavals. Domestic economic inequality affects the public's demand for redistribution and the balance of power between the wealthy elite and public and their respective capacities for political mobilization. Inequality thus becomes a critical factor determining whose interests are more likely to be catered to in the political process and by what means.

Domestic economic inequality affects the choice of war finance strategy by influencing the context in which political leadership can achieve a successful fiscal bargain. When inequality is low, or when there is a persistently declining trend in inequality, the public's dependence on social programs is expected to be relatively mild as is their demand for redistribution. On the other hand, the wealthy elite's expected tax burdens are likely to be moderate. As a result, political leaders are more likely to secure a consensus for an "equality of fiscal sacrifice" without causing much instability. Specifically, leaders can more successfully enact progressive taxation and reduce nonmilitary spending to pay for war.

Conversely, when inequality is high, or when there is a persistently rising trend in inequality, the redistributive conflict between competing coalitions is likely to become more serious. Unable to strike a bargain of fiscal sacrifice without severe social instability, the rational response of political leadership is to delay the redistributive conflict by borrowing. A deficit-financing strategy enables leaders to defuse public unrest while appeasing the wealthy elite with potential investment opportunities and lower tax burdens. Especially when domestic economic inequality reaches the highest level, the leadership will have incentives to rely primarily on foreign borrowing to finance war efforts. Finally, because money creation is associated with two different redistributive effects, there is expected to be a U-shaped relationship between domestic economic inequality and the choice of money

creation. A state is more likely to include monetary creation in its war finance portfolio as income distribution either approaches equality or is highly unequal.

Summary of the Findings

To test my theory, I utilize a mixed-method design with both quantitative and qualitative methods.

In the first section of chapter IV, I conduct a quantitative analysis on domestic economic inequality and interstate war finance from 1950 to 2007. I analyze a full sample of all country years in the international system from 1950 to 2007, and I utilize both fixed-effect regression models and a lagged dependent variable approach. I found the following. First, the higher the level of domestic economic inequality the less likely it is that a state will pay for war by resorting to taxation and reducing nonmilitary spending. Second, the higher the level of domestic economic inequality, the more likely it is that a state will rely on domestic borrowing to finance war efforts. Third, when domestic inequality reaches the highest level, a state is most likely to finance war costs mainly through foreign borrowing. Lastly, there is a U-shaped relationship between domestic economic inequality and the choice of money creation to pay for war. A state is more likely to include monetary creation in its war finance portfolio if inequality in the state is either very high or very low.

In the second section of chapter IV, I present a narrative analysis of selected state war finance strategies in World War I and World War II. I show that the United States, the United Kingdom, France, and Canada could enact tax increases during the two world wars because they had recently experienced a persistent decline in economic inequality. Conversely, the efforts of Imperial Russia and the German Empire to tax were crippled by a

higher level of land and wealth inequality. Consequently, Russia and Germany had to rely much more on borrowing and money creation.

In chapter V, I compare US war finance in the Korean and Vietnam Wars. I show that the difference between the Truman and the Johnson administrations' war finance strategies was driven by divergent trends in inequality. Prior to the Korean War, inequality in the United States had persistently declined. As a result, Truman was better able to finance the war based on the principle of "equality of fiscal sacrifice." On the one hand, the Truman administration paid for the entire war effort in Korea by taxing the rich—raising individual income and corporate taxes and enacting an excess profits tax. On the other hand, Truman also adopted rationing and wage and price controls that created large burdens on the public. Furthermore, Truman also stopped pursuing many social programs that were part of his version of the New Deal—the liberal agenda of the "Fair Deal." Although Truman's price controls on and rationing of steel caused large producers to resist, they were unable to launch continuing and effective challenges when the trend in inequality was persistently declining. Truman eventually managed to reach a deal between employers and workers in steel and other industries.

In contrast, prior to the Vietnam War, the trend of inequality in the United States had reversed and started to rise. More important, after a decade of the civil rights movement, the Kennedy and Johnson administrations realized that racial inequality had become one of the driving forces of economic inequality. Therefore, the combination of a rising trend of economic inequality and worsening racial inequality created a structural constraint—"guns vs. butter"—on Johnson's war finance choice during the escalation of the Vietnam War. Over the course of the war, Johnson kept avoiding or delaying a request for any tax increase to pay for the war. Johnson understood that if he asked the wealthy to accept fiscal

sacrifices, Great Society programs would also face pressures for reduction. Social spending cuts, however, became more difficult and unpopular with the public due to the increasing trend in inequality. Consequently, Johnson needed to rely heavily on borrowing to save the Great Society while also fighting in Vietnam.

In chapter VI, I compare Chinese and Japanese financing of the second Sino-Japanese War of 1937 to 1945. I show that different trends in inequality caused China and Japan to choose divergent war finance strategies during the war. Because inequality in China during the 1930s was extremely high, wealthy Chinese elites became powerful in the political process. They were able to induce political leaders to pursue war finance strategies that served the wealthy elite's interests. For example, they continued launching anti-tax campaigns that obstructed the Chinese government's attempt to finance the war through taxation. As a result, the Chinese top leadership, Generalissimo Chiang Kai-shek and the Nationalist government, had to rely on money creation and foreign borrowing to fight. The wealthy elite also profited handsomely from the Chinese government's policy combination of money creation and a fixed exchange rate regime. For instance, wealthy elites with influential political connections enriched themselves by black market currency arbitrage between the dollar and Chinese *fabi*. Many of them built up foreign asset holdings abroad and left China before the Nationalist government's eventual collapse.

Conversely, the Sino-Japanese War from 1937 to 1945 created a more powerful leveling effect in Japan, causing a dramatically and persistently declining trend in inequality. This set the stage for Japan to pay for war through a sweeping structural reform of the tax system, savings campaigns, and spending cuts. For example, in May 1940, Japan's long march for tax reform finally reaped its rewards. The Imperial Diet approved tax reform, later known as the "1940 system," which provided the foundation for paying for the war through further tax

hikes in the following years. Furthermore, the persistently and drastically declining trend in inequality from 1937 to 1945 destroyed the wealth of "the super rich." Therefore, the grievances of poorer citizens were greatly mitigated. They thus became more willing to support the savings campaigns and to accept reductions in their living standards.

Contributions

My dissertation contributes to deeper understandings of four topics: (1) war finance, (2) inequality and redistribution, (3) economic policy making during exigencies, and (4) regime type literature and the democratic advantage theory. First, the literature on war finance has paid little attention to the changing pattern of modern war finance and the causal impact of domestic economic inequality. My dissertation fills the gap. Second, the literature on redistributive politics largely focuses on the effect of inequality on democratization. My research furthers the knowledge about how inequality may affect redistributive policies during wartime. Third, in showcasing the relationship between economic inequality and war finance, my dissertation identifies a novel mechanism of how inequality affects the distribution of the financial burdens of war. It also contributes to understanding fiscal, financial, and monetary policy making in the exigencies of war. Wars are costly. Politicians, military experts, scholars, and public intellectuals have been seeking to improve the efficiency of war conduct, and to achieve "equalities of sacrifice" in war. To accomplish their goals, my dissertation points out the urgent importance of economic inequality that needs to be addressed first.

Finally, there is a burgeoning literature on the effect of regime type on sovereign borrowing. The representative work is the "democratic advantage theory," which argues that democracies tend to finance war by borrowing because they can receive better credit. My

theory and empirical findings show that after controlling for inequality, regime type no longer has a significant impact on borrowing. Therefore, my work complements democratic advantage theory by pointing out an important constitutive condition for a regime type to receive credit: economic inequality.

Limitations and Future Research

This dissertation offers a number of possibilities for future research. First, it has focused only on interstate war finance. But the numbers of intrastate and civil conflicts have been increasing recently. Thus the question arises whether my theory can be extended to explain financing strategies in those conflicts as well. Because intrastate conflicts usually involve more types of actors and different kinds of financing strategies, such as plundering, my theory may not adequately explain intrastate conflict cases. Future research should gather more data on intrastate and civil war finance strategies. It also needs to develop a more refined taxonomy to identify the key actors involved in redistributive conflicts in intrastate wars.

A related point involves my definition of inequality. In this dissertation I primarily focus on the effects of economic inequality. I pointed out in chapter I, however, that different forms of inequality may have an impact on redistributive conflicts and the choice of war finance. For example, gender, racial, or ethnic inequality all could potentially affect redistribution. Ethnic inequality is especially important in analyzing intrastate war finance because conflicts between different ethnic groups are often the main cleavages in intrastate and civil wars. Future research should explore different dimensions of inequality on war finance choices.

Third, my dissertation analyzes how inequality mainly affects wartime financing choices. It is possible, however, that inequality may also affects a state's fiscal, financial, and monetary policy choices during peacetime or in other crisis situations short of war. For example, a state's policy response to financial crisis could be influenced by domestic inequality. Future research could explore the potential of my theory for explaining state financing strategies during other types of crises.

Finally, my dissertation treats war solely as a background condition and analyzes the relationship between economic inequality and state war financing. The process of war, however, may interact with economic inequality and war finance strategies, and those two factors may also affect outcomes (i.e., war duration, war termination). As noted in the literature on the political economy of grand strategy, different war finance strategies may lead to different conflict outcomes (Slantchev, 2012; Kreps, 2018). Future research could seek a more dynamic, interactive model to analyze the synergy between inequality, war finance, and war. It could also study the joint effects of inequality and financing strategy on the outcomes of crisis and intra-war bargaining. Furthermore, a potential research direction might explore the underlying connections between inequality, war finance, and democratic peace. More precisely, one implication of my research is that economic inequality is likely to give political leaders incentives to seek out war finance strategies, such as domestic and foreign borrowing, that can bypass domestic resistance and institutional constraints. Therefore, inequality creates the condition for a deficit-financing strategy, which may encourage leaders to pursue costly military doctrines and prolonged conflicts.

If a state's financing strategy has an impact on its propensity for war, and if economic inequality is negatively associated with its democratic accountability, the relationship

between inequality and war finance could turn to be one of underlying mechanisms for democratic peace.

Policy Implications

Since the September 11 attacks, the United States has engaged in a global war on terrorism and other wars. The United States launched the Afghanistan War in 2001 and the second Iraq War in 2003. US troops withdrew from Iraq in 2011 (*NY Times*, 12/18/2011). But since 2014 the United States had started sending troops to Iraq and Syria to fight the Islamic State. U.S. troops gradually withdrew from Afghanistan after 2014. Then the United States returned after 2016 because of the resurgence of the Taliban and the presence of Islamic terrorists. As of 2014, the financial costs of those wars amounted to $1.6 trillion, according to the Congressional Research Service in a 2014 report (Belasco, 2014). Stiglitz and Bilmes (2008) took into account the medical costs and estimated an even higher number: the Iraq War alone cost three trillion dollars. The United States, however, did not even try to raise taxes to pay for the war on terror. President Donald Trump, elected in 2016, has engineered the largest tax cuts since the end of the Cold War, while also seeking an "historic" increase in military spending. The United States national debt has reached 21.6 trillion dollars. The federal deficit soared last year to $779 billion and is projected to approach $1 trillion in 2019 (USA Today, 2018).

The United States' reliance on borrowing as its main war finance strategy has raised concerns about financial instability and a lack of democratic accountability. Three centuries ago, Philosophers Immanuel Kant, David Hume, and Adam Smith, the founding father of economics, warned that borrowing could be a dangerous war finance strategy because it decreases or even removes public awareness of a government's action in crisis, dispute, or

war. This allows extraordinary discretionary power for political leaders to engage in aggression. Adam Smith (1776) long ago pointed out the risk of utilizing borrowing to hide the financial costs of war:

> In great empires the people who live in the capital, and in the provinces remote from the scene of action, feel, many of them, scarce any inconveniency from the war; but enjoy, at their ease, the amusement of reading in the newspapers the exploits of their own fleets and armies. To them this amusement compensates the small difference between the taxes which they pay on account of the war, and those which they had been accustomed to pay in time of peace. They are commonly dissatisfied with the return of peace, which puts an end to their amusement, and to a thousand visionary hopes of conquest and national glory from a longer continuance of the war

Many scholars argue that the United States should return to the old war finance doctrine — taxation — to pursue more equality of sacrifice. My dissertation suggests that if the United States cannot enact more fundamental reforms to mitigate economic inequality first, the prospects for paying for future wars through taxation are probably dire.

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