Essays on Democracy and Economic Freedom



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Abstract

This thesis is composed of three essays, covering topics related to democracy and economic freedom. Chapter 2 examines how taxation influences democracy and economic freedom. Chapter 3 explores how remittances influence political and economic freedoms in developing countries. Chapter 4 investigates the influence of party ideology on economic policies. Endogeneity is a potential problem in all three chapters because the underlying relationships can be driven by reverse causality, measurement error, or omitted variable bias. I resolve this issue by relying on instrumental variables.

My results can be summarized as follows: Chapter 2 points out that tax reliance and tax to spending ratio promote democracy and economic freedom. However, the influence of tax revenue on political and economic freedom is non-linear hump-shaped. An increase in tax revenue initially encourages democracy and economic freedom until a turning point is achieved. After that, tax revenue causes a decline in political and economic freedom. Similarly, the results of Chapter 3 suggest that the effect of remittances on political and economic freedoms is also non-linear: initially, remittances promote political and economic freedoms until a turning point is achieved, and thereafter, they hurt both freedoms. Almost 24 percent of the countries in our sample are in the negative effect zone, showing high dependency on remittances causes institutional decline. Finally, chapter 4 finds evidence that left-wing and right-wing governments deliver convergent developmental outcomes in consolidated democracies. However, in unconsolidated democracies, divergence is possible in some developmental outcomes.

This research contributes to the literature by confirming that the taxation – democracy nexus exists and the impact of tax revenue on democracy and economic freedom is non-linear. It

shows an excessive tax burden may be associated with a decline in both freedoms. This thesis, furthermore, elaborates that remittances do not always play an unambiguously positive role in development. Finally, economic outcomes are found to converge in democracies, regardless of ideological differences. Nevertheless, ideologically driven policy divergence can be observed in hybrid regimes and among non-Western democracies.

Dedicated to the promotors of democracy and economic freedom for all, everywhere.

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Zeeshan Hashim August 2023

Declaration

I hereby declare that this thesis has not previously been accepted for any degree, award, or qualification by any other university or institution of academic learning, and is not concurrently submitted for any degree other than that of the PhD, being studied at Brunel University. I also certify that this thesis has been written by me and it is entirely the result of my own investigations except where otherwise identified by references and that I have not plagiarised another's work.

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Chapter 1 : Introduction

Democracy plays a crucial role in present-day societies since it empowers citizens and makes the governments accountable to them. Its ideal form, as Abraham Lincoln said, is 'government of the people, by the people, for the people'. Many previous studies (e.g., Acemoglu et al. 2019; Olson 1993) highlight the positive influence of democracy on developmental outcomes. Sen (2001), similarly, observes that democratic values are vital for development. He further argues that both development and freedom reinforce each other, and developmental outcomes must also encompass the elements of increasing human freedom. Democracy and economic freedom are thus highly correlated: the more economically free countries tend to be more democratic and vice versa (De Haan and Sturm, 2003; Friedman, 1962).¹ Hall and Lawson (2014) investigate the existing literature exploring the influence of economic freedom on desirable social outcomes like growth, standard of living, and happiness etc. Their metanalysis reveals that economic freedom promotes desirable outcomes "with almost no negative tradeoffs". Therefore, political and economic freedom have always been the subject of scholarly debate due to their key importance in our modern era. This thesis aims to contribute to this deliberation.

The motivation is two-fold. The first is personal, and the second is academic. I am from a country named Pakistan. The country gained independence on 14 August 1947 from Britain. Since then, democracy has been in crisis. Pakistan has witnessed both regimes, military

¹ In the words of Milton Friedman (1962); "historical evidence speaks with a single voice on the relation between political freedom and a free market. I know of no example in time or place of a society that has been marked by a large measure of political freedom, and that has not also used something comparable to a free market to organize the bulk of economic activity".

dictatorship and weak democracy, as indicated in Figure 1.1. Since my college days, I have often heard the question in the media and public discussions about the causes of instability of democracy in Pakistan. Moreover, Pakistan's citizens also asked what the benefit of democracy is. I was initially sceptical of democracy and thought a strong man was needed in Pakistan to solve all the political, social, and economic problems Pakistan was facing. However, after reading some literature (i.e., Haqqani 2010; Fukuyama 2015; Lieven 2011; Diamond 2008; Jaffrelot 2015), I changed my mind towards democracy because the outcome of all strong men (military generals) rulers in Pakistan was political, social and economic chaos. Passing through this intellectual journey motivated me to study the determinants of democracy, not only in Pakistan but also in different parts of the World.



Table 1.1: Political Evolution in Pakistan – 1947 to 2017

(Note: Polity2 score is on Y-axis)

Almost similar is the story of my interest in researching economic freedom. In Pakistan, the intellectual discussion on a good economic system majorly rotates around two alternatives: Islamization of the economy and socialism. The promoters of free market capitalism are rare. I have been actively engaged in this discussion. Initially, I was in favour of the Islamic

economic system². After some time, before starting my MBA, I started supporting the introduction of the Islamic-Socialist economic system in Pakistan. During my MBA, when I studied Economics and Business Studies, my mind evolved towards understanding and supporting the free market economic system. In 2017, I published a book, first in Urdu, defending the market-led economic policies.³ The book was well received by academia and civil society, boosting my confidence to work in this area.

The second motivation was academic. To contribute, I explored the existing literature to find that most studies related to the determinants of democracy and economic freedom contained only which limited work was available and were majorly related to the political economy of developing countries (non-OECD countries). It was because of this that I realised that non-OECD countries were majorly ignored in the academic literature because bulk of academic research was carried out in the OECD countries, and the researchers there were more concerned with their domestic or regional affairs. Since Pakistan is a non-OECD country, I believed that studying the determinants of democracy and economic freedom could help me understand the political economy of similar countries, enabling meaningful comparisons with Pakistan. This could lead to valuable insights for improving institutions in non-OECD countries, ultimately promoting both freedom and development, as argued by Sen.

Pursuing both motivations, I have completed three chapters. Following is a detailed explaination why I picked these topics.

² It is an idea to merge Islamic ideology with the socialist economic system. Islam provides ethical considerations in the economy, and socialism offers the mechanism to distribute economic resources. However, there are different versions of Islamic Socialism in different Muslim societies, making it difficult to find a single definition.

³ Zeeshan Hashim, Emel Publication, retrieved from <u>https://emel.com.pk/book-author/zeeshan-hashim/</u>, viewed on June 26, 2024.

Chapter 2 is about tax revenue, which is a central pillar of the state and ensures its survival (Olson 1993; Levi 1988; Beblawi and Luciani 2015). A state can only maintain its survival with sufficient resources to fund its activities. A state's capacity to maintain the rule of law in its territory and provide public goods to citizens depends on its revenue. Chapter 2 explores the impact of an increase in taxation on political and economic freedom in 133 countries between 1990 and 2018. Taxation is usually considered as a major determinant of democracy in the Western European countries, Australia, and the United States (e.g., Hoffman and Norberg, 2002; Moore, 1993; Tilly, 1992, Levi, 1988). However, the literature lacks a substantial amount of empirical investigation on it, especially for non-Western countries. We found only five empirical studies (Ross 2004; Jin Yi 2012; Baskaran and Bigsten 2013; Prichard et al. 2018; Kato and Tanaka 2019) in the existing literature, calculating the effect of taxation on contemporary democratization. But their results are also contradictory. Furthermore, among them, only two papers (Prichard et al. 2018; Baskaran and Bigsten 2013) address endogeneity concerns, but their results are also contradictory. We could not find any paper on taxation's effect on economic freedom published in a credible journal.

Chapter 3 is about the inflow of remittances into developing countries. Migration is a topic widely debated in all areas of academia, including politics and economy. Its importance for both developed and developing countries is well known. Remittances are monetary or in-kind transfers from migrants in host countries to their dependents in their home countries. The level of remittances received in developing countries is increasing over time. In 2020, low and middle-income countries received approximately \$540 billion in total remittances, corresponding to around 2.8 per cent and 1.2 per cent of their GDPs, respectively. This amount surpassed the combined sum of the next two significant forms of foreign inflows - foreign

direct investment (\$259 billion) and foreign aid (\$179 billion).⁴ Some economies such as Tonga, Lebanon, Samoa, Tajikistan, Kyrgyz Republic, Gambia, Honduras, Haiti, and Nepal receive remittances of more than 20 percent of their GDP.⁵

Chapter 3 in this thesis explores the impact of remittances inflow in the 109 developing countries on their political and economic institutions from 1984 to 2018. The influence of remittances on political freedom has not been extensively studied in the literature. Existing research on this topic offers conflicting views. Some scholars (Hassan and Rahman 2021, Konte 2016, Ahmed 2013, and Ahmed 2012) consider remittances to harm democracy, similar to natural resources and foreign aid. However, Islam and Lee (2023), Bearce and Park (2019), Deonanan and Williams (2017), Williams (2017), and Escribà-Folch et al. (2015) suggest a positive relationship between remittances inflow and democracy in the recipient countries. On the other hand, Bastiaens and Tirone (2019) found no significant effect of remittances on democracy. Moreover, we could not find any study that specifically analyses the influence of remittances on economic freedom.

Comprehending the role of remittances in institutional development in developing countries is vital since institutions play a crucial role in long-term sustainable economic development. However, the existing literature predominantly emphasises social remittances, which involve the transfer of socio-political and cultural norms, values, and ideas from migrants to their home countries. Previous studies have suggested that social remittances substantially impact home-country institutions (Perez-Armendariz 2014; Levitt 1998). In contrast, this research deals with

⁴ World Bank (May 12, 2021), retrieved from <u>https://www.worldbank.org/en/news/press-</u>

<u>release/2021/05/12/defying-predictions-remittance-flows-remain-strong-during-covid-19-crisis</u>, viewed on 15 December 2021.

⁵ World Bank's Migration and Development Brief 37, retrieved from

https://www.knomad.org/publication/migration-and-development-brief-37, viewed on 25 March, 2023.

conventional (i.e. monetary) remittances, arguing that migrants can also positively impact institutions in their home countries through their financial transfers. This is because monetary remittances enhance recipients' income levels and support the modernization of the economy and society. Hence, this enhances citizens' ability to organize effectively and improves their bargaining power against a political leader. In this way, monetary remittances complement social remittances, and together, they support liberal institutions.

Chapter 4 is about political parties' ideological biases and their macroeconomic performance in 71 democratic countries from 1995 to 2019. In democracies, policies are formed through interaction between citizens and political parties or leaders (Schattschneider 1960). Moreover, democratic politics is like a competitive market in which citizens demand policies and political parties provide them to win public support. The political Left usually differs from the political Right in terms of their ideological beliefs and policy stances. The existing literature in economics largely overlooks the influence of political parties' ideological biases on shaping economic policies and performance. The literature is mainly theoretical, lacking empirical analysis. Additionally, it has some limitations (such as methodological), leading to mixed results and inadequate explanations of the relationship between ideology and macroeconomic performance, such as economic growth and inflation (e.g., Potrafke 2012; Ferris and Voia 2010; Sakamoto 2008). Moreover, the effect of partisan ideology on economic inequality has not yet been investigated empirically.

The existing literature largely studies OECD member countries (e.g., Potrafke 2012; Ferris and Voia 2010; Sakamoto 2008; Suzuki 1993; Hibbs 1977), which are mainly consolidated democracies. However, there is a lack of research on non-OECD democracies, particularly those with an unconsolidated regime or a brief democratic tradition. Chapter 4 investigates how the ideological bias of different governments in democratic countries influences their

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developmental (economic growth, inflation, and inequality) and policy (economic freedom) outcomes.

This research remains in the domain of political and economic freedom. The first two analytical chapters (2 and 3) mainly focus on taxation and remittances as the potential determinants of democracy and economic freedom, and the final chapter (4) explores how political parties and their ideology matter in democracies in terms of pursuing developmental outcomes and promoting or discouraging economic freedom. Therefore, I have named this thesis, Essays on democracy and economic freedom.

Endogeneity is a big problem to address in each of the chapters. In Chapter 2, it is mainly because of reverse causality: democracies spend more on providing public goods and distributing income (Cao and Ward 2015; De Mesquita et al. 2005). Likewise, economic freedom promotes economic growth and citizens' willingness to pay taxes (e.g., Lawson et al., 2020; Hall and Lawson 2014; Riahi-Belkaoui 2004; Egger and Winner 2004).

In Chapter 3, endogeneity arises mainly because of two factors. First, reverse causality: lack of political freedom and economic opportunities are major push factors for migration (Nejad and Young 2016; Ashby 2010; Faist 2008; Styan 2007). Second, measurement errors in the calculation of official remittance figures and the unavailability of informal remittances data.

In Chapter 4, endogeneity is also a major issue, which occurs because of two factors. First, developmental outcomes (such as economic growth, inflation rate, and economic inequality) also influence citizens' voting behaviour and election outcomes (Lewis-Beck and Stegmaier 2019; Tufte 1978). Second, unmeasured voters' preferences (such as partisan loyalty and some personal biases supporting a political party) cause omitted variable bias.

Since the endogeneity is common in all chapters, this research uses a common method to deal with it, applying an instrumental variable approach by executing the Fixed Effect Two Stage Least Square (FE-2SLS) model. For the endogenous variable, tax revenue, it uses two instrumental variables – Terms of trade, and natural disaster (chapter 2). For remittances inflow (in percentage of GDP), it employs natural disasters and the country size (chapter 3). For the government ideology, it applies the closeness of the election and the current executive's (CE) years in office as the instrumental variables (chapter 4).

Our treatment of endogeneity in this thesis using an instrumental variable approach in each chapter has been successful mainly for two reasons. First, our theoretical justification explains that our IVs are exogenous to our dependent variables. Second, we use F-Statistics to confirm that our IVs are robust. F-statistics is considered a robust measure to find whether an instrument is strong or weak (Bascle 2008) if its value is equal to or more than 9.08 and 10.83 in the cases of three and five IVs, respectively, then IVs are strong and relevant (Stock and Yogo 2002). Our IVs meet this condition.

The results in Chapter 2 find that taxation is a determinant of both democracy and economic freedom. An increase in tax reliance on citizens by the government causes both freedoms. This research utilizes three proxies of taxation – tax reliance (tax revenue in percentage of total revenue), tax to (government) spending, and tax revenue in percentage of GDP. The effect of the first two tax variables on democracy and economic freedom is positive and linear. However, the relationship between tax revenue (% of GDP) is non-linear inverted U-shaped. An increase in tax revenue causally increases democracy and economic freedom until a turning point is reached. After that, it discourages both freedoms. The turning point for democracy and economic freedom is around 23% and 25% of GDP, respectively. It means excessive taxation damages political and economic freedom.

Exploring the influence of remittances on political and economic institutions (chapter 3), this research finds a non-linear inverted U-shaped relationship. Initially, an increase in remittances

promotes democracy and economic freedom. At the turning point, the marginal impact of remittances becomes zero. After that remittances negatively influence both freedoms. The turning points for democracy and economic freedom are close, around 13.36 and 14.30 percent of GDP, respectively. Thus, it finds that remittance dependency can cause institutional decline in the recipient countries. Almost 24% of countries in our sample are in the remittance dependency zone where an increased remittance inflow is causing their institutional decline.

Finally, the findings in Chapter 4 show that political parties' ideological bias does not matter for economic growth and inflation in democracies, whether they are consolidated democracies or hybrid regimes⁶. However, it matters for economic inequality and economic freedom in hybrid regimes but not in consolidated democracies. In a hybrid regime, inequality is reduced in the leftist government, and economic freedom is improved in the rightist government. It implies that policies tend to converge in consolidated democracies. However, in hybrid regimes, economic policy divergence is possible, which can be due to the higher manoeuvrability of governments in these regimes. Moreover, in a hybrid regime, the democratic system does not have a long and consistent history, and political parties lack significant legacies.

This thesis contributes significantly to the existing literature. Chapter 2 confirms that contemporary taxation also promotes democracy globally, so what is true for some Western liberal democracies is also true for non-Western countries. Moreover, our research does not support the (neo)-liberal idea of taxation, as proposed by Friedman in 1962 and Hayek in 1960, suggesting that a small government is beneficial for political and economic freedom. In fact, an increase in government size in terms of collecting revenue makes a government better able

⁶ The political system which has a mixed nature of both democracy and autocracy. Also called unconsolidated democracies. Its polity2 score is from 6 to 8.

to provide public goods that benefit society and contribute to the development of institutions. We also do not support the idea of higher taxation for distribution purposes, ⁷ as proposed by Piketty in 2014, this research suggests that a higher tax burden on citizens and firms and a larger government size can harm democracy and economic freedom. Instead, we suggest a middle-ground approach, a moderate tax-to-income ratio, and a smaller government.

Chapter 3 contributes to the literature investigating whether remittance inflows are beneficial for the development of institutions in developing economies. Remittances have a positive effect on institutions if they do not cause dependency. This research is the first empirical contribution to the literature demonstrating the existence of remittance dependency, which can hinder the development process in recipient countries. No previous study has tested this phenomenon empirically. We propose that remittance dependency negatively impacts developing countries by creating a situation akin to the resource curse, as it discourages investment in productive industries and provides incentives to avoid political and economic reforms. This demonstrates the limitations of international migration in promoting global development, as remittances are positively correlated with out-migration. However, we encourage further research to examine whether a higher level of out-migration harms institutions and hinders reforms.

My Chapter 4 delves into the public policy literature, demonstrating the role of political parties in democratic countries in shaping economic policies. Furthermore, this contributes to the existing literature by distinguishing between consolidated democracies and hybrid regimes (e.g., Mukand and Rodrik 2020; Bogaards 2009; Epstein et al. 2006; Levitsky and Way 2002). It demonstrates that political parties wield greater influence in hybrid regimes, allowing them to shape economic policies based on their ideological preferences. In contrast, in consolidated democracies, the emphasis is more on policy outcomes rather than ideology. In hybrid regimes,

⁷ However, it is possible that a higher taxation level may have some additional social benefits.

governments can introduce ideology-driven policies, such as welfare spending and pro-market policies, to mobilise their voters. Furthermore, it suggests that as countries develop democratically, their economic policies tend to converge, with diminishing differences between the economic policies of the political left and right. This suggests a continuity in economic policies within consolidated democracies, where a change in government from one political party to another does not cause a significant shift in economic policies and their outcomes. It also solves the puzzle - of why government ideology is largely ignored in the mainstream economic policy literature – by answering that it is because ideology does not matter in developmental outcomes. Thus, the chapter provides evidence that as democracies get consolidated, developmental outcomes converge.

Moreover, the thesis is also beneficial for understanding non-OECD countries' political economy. Chapter 2 suggests that taxation is a significant factor in democratization in developing countries. Moreover, if these countries strengthen their fiscal capacity by collecting more revenue, they will be better able to provide public goods and distribute income to citizens, which will strengthen their institutions. It also cautions that excessive taxation can damage their institutions. Thus, countries can make their institutions better by maintaining a moderate level of taxation.

Chapter 3 shows that developing countries, which are the main beneficiaries of remittances inflow, can benefit from this large sum of foreign capital if they do not create their dependency on it. If they utilize this money to diversify their economy in order to raise the productive

capacity of the economy⁸, this can result in strengthening their institutions. Otherwise, remittances inflow is like a curse for them, discouraging their institutional development.

Chapter 4 demonstrates that the political Left and Right matter in developing countries since a large number of hybrid regimes exist in non-OECD countries. The political Left reduces income inequality by manoeuvring some policies (such as income distribution) which can benefit their constituencies, given that lower income citizens are majorly the support base of the political Left (Lewis-Beck et al. 2013; Stubager et al. 2013; Nadeau et al. 2010; Hibbs 1977). Likewise, the political Right can also manoeuvre in a hybrid regime in terms of introducing pro-market policies (like lower taxation and lesser regulation) which can benefit their high-income voters. It implies that changing government in a hybrid regime can change the policies. This can cause a lack of continuity in government policies in a hybrid regime which can raise the systematic risk in developing countries before elections and can hamper the long-term economic development given that investors do not like a country to invest in which government ideology matters more than sound economic policies.

Furthermore, these chapters are helpful for multilateral and bilateral development institutions (such as the World Bank, the IMF, and the USAID) to suggest sound economic policies to developing countries before providing any credit facilities or donations. It is on the agenda of the IMF to suggest developing countries increase their tax base to finance their governmental activities, given that loans (external and internal) are the substitute for tax revenue. Some countries can avoid raising their tax revenue since it has a political cost for the status quo, as

⁸ Our independent variable is remittances inflow in percentage of GDP. If the GDP will increase by increasing the economic activities in the economy, the remittances as a percentage of GDP will decline. Thus, it will not exceed the threshold level to cause dependency.

an increase in taxation raises the demand for political and economic reforms, as Chapter 2 argues.

Likewise, chapter 3 provides evidence that remittances dependency can harm political and economic institutions in developing countries. Some countries can utilise remittances inflow, a significant source of foreign exchange earnings, as a pledge to qualify for external loans since remittances increase repayment capacity in the recipient countries. Therefore, Mijiyawa and Oloufade (2023) find that remittances positively affect external debts in low- and middle-income countries. Thus, our research suggests that multilateral organizations can provide loans on such conditions (like diversifying the economy) to help the countries not fall under the curse of remittances, and they should not consider remittances inflow as an only qualifying element to grant loans.

Chapter 4 is also helpful for comprehending public policies, suggesting that in non-OECD countries, political parties are stronger and have significant power to manoeuvre economic policies based on their partisan ideology. In these economies, policies can be changed with the government change, given that multilateral and bilateral development institutions desire continuity in policies. Otherwise, the effectiveness of policies will be low. In this situation, political parties can also face a trade-off; if they do not cooperate with these institutions, they may lose their financial support to the country. On the other hand, if they cooperate, they may not be able to mobilise voters effectively.

The last chapter provides concluding remarks along with suggestions for future research.

In the remainder of this thesis, I will take you along on my intellectual voyage of discovery into the intricacies of democracy and economic freedom. In Chapter 2, I analyse the effect of taxation on democracy and economic freedom. In Chapter 3, in turn, I explore the relationship between remittances and institutions in developing countries. Finally, in Chapter 4, I examine

political parties' ideological biases and their macroeconomic outcomes. In the final Chapter, our voyage of discovery concludes by summarizing the main findings, drawing conclusions, and charting paths for future voyages and voyagers.

Chapter 2 : The Effect of Taxation on Democracy and Economic Freedom

Abstract

We examine how taxation influences democracy and economic freedom in 133 countries from 1990 to 2018. Endogeneity is a potential problem since democracies redistribute more, and therefore collect more taxes. Our results, using instrumental variable (FE-2SLS approach, indicate a non-linear hump-shaped effect of tax revenue (% of GDP) on political and economic freedom. Moreover, we find that tax to (government) spending ratio and tax reliance (tax revenue in percentage of total revenue) positively influence both freedoms. Our research contributes to the literature by confirming the taxation-democracy nexus and showing that an excessive tax burden is associated with a decline in democracy and economic freedom.

KEYWORDS: Taxation; Democracy; Economic Freedom; Modernization; Big Government; Tax Burden; Public Goods.

2.1. Introduction

Historical analyses of some Western democracies (e.g., early modern Europe, United States) disclose that the tax demand of the rulers encouraged citizens to demand political representation (e.g., Hoffman and Norberg, 2002; Moore, 1993; Tilly, 1992; Levi, 1988; Bates and Donald Lien, 1985; Brennan and Buchanan 1980; Schumpeter and Swedberg, 1918). Based on this, many scholars (e.g. Schumpeter and Swedberg, 1918; Tilly, 1992; Levi, 1988) consider taxation a main driver of democratic development in Western countries. However, their analysis only presents the examples of a few Western European countries (like Austria, the United Kingdom, France), colonial America, Australia and Russia. Democratization in non-western countries also requires investigation since the patterns observed for Western democracies need not be reproduced also in other countries.⁹ Moreover, a careful search reveals that the influence of tax revenue on economic freedom has not been studied in the literature. Therefore, we explore the question of whether the taxation representation nexus exists. Furthermore, if taxation fosters (or discourages) political freedom, is this also true in the relationship between taxation and economic freedom? Thus, our scope is broad since we consider political, social and economic liberalisation.

⁹ Moore et al. (2007) explain that the behaviour of taxpayers in present-day non-Western countries is different from the taxpayers of Western Europe in 18th and 19th centuries. Therefore, it is possible that they do not participate in collective action as the people in Western Europe did. They also highlight the complexity of tax regimes in developing countries in which some sectors are heavily taxed while others enjoy low tax rates or exemptions. There are also different types of taxes like income tax, sales tax, import tax, levies, etc. Skocpol (1995) explains that such differences in tax regimes influence differently the behaviour of citizens to act collectively. Gilley (2017) presents the Chinese fiscal model which relies more on non-intrusive transactional taxes and provides more services in those areas where political dissension is comparatively high.

Revenue is a critical pillar of the state (Olson 1993; Levi 1988) that ensures its survival (Beblawi and Luciani 2015). If a government has less revenue at its disposal, it cannot strengthen its institutions since strong institutions require investment in human capital and technology to develop. Moreover, without having enough revenue, a state cannot provide public goods and income distribution. Similarly, strong institutions are needed to provide public goods and to collect tax revenue efficiently. Thus, the relationship between revenue and institutions is bidirectional. We aim to find whether tax revenue causes institutional development. If yes, then what is the nature of association, linear or non-linear? We suggest it is non-linear since a state's and citizens' incentives compete in this case. Both need to maximize their income. When a state collects revenue from the citizens, citizens' disposable income declines. Citizens, in turn, require compensations or benefits, which can take the form of providing public goods and representation. This exchange can promote democracy until the level when citizens' utility gains from consuming public goods and income distribution is equal to their tax payments. Otherwise, they can rebel or their willingness to pay taxes decreases. Higher taxes are also associated with a higher tax burden on citizens and a bigger government size. Both discourage institutional development. A higher tax burden reduces citizens' purchasing power and firms' profitability. Likewise, a bigger government size is prone to inefficiencies and rent-seeking (Rose-Ackerman and Palifka 2016; Kotera et al. 2012; Alesina and Angeletos 2005).

We have found only five papers (Ross 2004; Jin Yi 2012; Baskaran and Bigsten 2013; Prichard et al. 2018; Kato and Tanaka 2019) which empirically test the relationship between tax revenue and democracy. Their main argument is based on two elements: 1) a historical analysis of a few Western countries (given above) and 2) presenting the case of non-tax revenue as an evidence (i.e., Lall, 2017; Wiens et al., 2014; Ramsay, 2011; Tsui, 2010; ensen and Wantchekon, 2004; Beblawi 1987; Luciani 1994; Ross 2001). It suggests that since non-tax

revenue causes autocracy, tax revenue should cause the opposite effect, promoting democracy. In fact, non-tax revenue is majorly derived from the natural resource rents, which are largely found in regions like the Middle East and North Africa (MENA), the Russian Federation, and Central Asia, which have their specific political economy largely shaped by religious, historical and geographic factors.

Moreover, the papers in the existing research also use different econometric techniques, data sources, indicators of tax revenue, and sample sizes. However, their results are contrasting. Ross (2004) finds that the tax to spending ratio positively affects democracy, while the effect of tax revenue is statistically insignificant in 113 countries between 1971 and 1997. Jin Yi (2012) indicates that the positive influence of the tax to spending ratio is conditional on income inequality in 130 countries from 1970 to 2000. Baskaran and Bigsten (2013) show that tax revenue (in % of GDP) promotes democracy in 31 African countries from 1990 to 2005. In Prichard et al. (2018) findings, covering 122 economies from 1981 to 2008, the positive effect of tax reliance¹⁰ is not robust in most of their specifications. Kato and Tanaka (2019) indicate a positive effect of VAT on democratization in 143 developing countries from 1960 to 2007. Among them, only two papers (Prichard et al. 2018; Baskaran and Bigsten 2013) address endogeneity concerns.

Our aim is to estimate the effect of tax revenue on political and economic freedom in 110 developed and developing countries from 1981 to 2018. In addition to tax revenue (% of GDP), we have utilized tax reliance and tax to spending ratio to enhance the robustness of our findings. Our outcome variable is Polity2, representing electoral democracy, the Freedom House index as a measure of liberal democracy, and the Fraser Institute index of economic freedom. Endogeneity is a potential problem for estimation since democracies spend more on providing

¹⁰ tax revenue as a percentage of total revenue.

public goods and redistribution (Cao and Ward 2015; De Mesquita et al. 2005). Likewise, higher economic freedom is also associated with higher economic growth (e.g., Lawson et al., 2020; Hall and Lawson 2014), tax compliance (Riahi-Belkaoui 2004) and governments' ability to raise taxes (Egger and Winner 2004). Therefore, the instrumental variable approach (FE-2SLS) is applied. We utilise two instrumental variables. 1) Natural disasters¹¹ displace people and reduce economic activities in the affected area. This can negatively affect the growth rate (e.g., Shabnam 2014) and, ultimately, tax collection (e.g., Milivojevic 2021). 2) Terms of trade (TOT) volatility is strongly associated with economic output (e.g., Schmitt-Grohé and Uribe 2018; Alimi 2016; Kose 2002).

Our results indicate that both tax reliance and the tax to spending ratio promote democracy and economic freedom. Their effect, in our estimation, is linear. This means that when a ruler relies on taxes as a main source of revenue, the level of both freedoms is enhanced. Democratization and economic freedom also advance when she collects more taxes than she provides public goods. However, we find that the influence of tax revenue on democracy and economic freedom is non-linear. An increase in tax revenue promotes democracy and economic freedom until a turning point is achieved, around 23% and 25% of GDP, respectively. After that, a further increase in tax revenue hurts both freedoms. The non-linearity, we suggest, is because of the higher tax burden and big government effect since the former negatively affects citizens' disposable income and firms' profitability, and the latter causes inefficiency, rent seeking and unaccountability (Rose-Ackerman and Palifka 2016; Kotera et al. 2012; Alesina and Angeletos 2005).

¹¹ such as wildfire, volcanic activity, storm, landslide, flood, extreme temperature, epidemic, earthquake, and draught.

This research contributes significantly to the literature exploring the determinants of democracy and economic freedom. The existing literature focuses more on education (Acemoglu et al. 2005; Barro 1999), income level (Acemoglu et al. 2008; Barro 1999), past experiences with democracy (Persson and Tabellini 2009), middle class (Chun et al., 2016; Easterly 2001; Moore 1993; Lipset 1959), religious structure of society (Barro 1999), modernization (Inglehart and Welzel, 2010) and inequality (Kotschy and Sunde, 2017; Jung and Sunde 2014; Boix, 2003) etc. We provide evidence that taxation is also one of their causes. We also expand the discussion on the rationality of taxes' effect on political and economic freedom by identifying some potential channels from economic literature such as tax burden, big government effect and modernization. If a ruler relies on tax revenue, she has no choice other than modernizing the society and economy to increase tax revenue.

Our research does not support the (neo)-liberal idea for taxation (e.g., Friedman 1962; Hayek 1960) that a small government is always beneficial in the context of freedom. We find 33 countries in our sample whose level of tax revenue is more than 25 percent of GDP.¹² When a government's revenue is lower, it cannot provide public goods at the level that benefits society and raises the level of development and freedom. It also does not support the idea of higher taxation for distribution purposes (e.g., Piketty 2014) since higher tax burden on citizens and firms and big government size are harmful to political and economic freedom.¹³ We suggest a middle ground, a moderate tax-to-income ratio and government size.

The next section presents the literature review. After that, we present the research design and methodology. The subsequent section is about results and interpretation. Finally, we conclude.

¹² The mean value is 17.038% of GDP.

¹³ However, it is possible that higher taxation has some other social benefits.

2.2. Literature Review

In this section, we discuss historical evidence and the channels, explaining the effect of tax revenue on democracy and economic freedom. First is the political economy of nontax revenue. The second shows how the tax demand of a ruler empowers citizens and stimulates them to demand public goods and representation. Then, we explain how the excessive tax burden can discourage institutional development, efficient resource allocation, control on corruption and accountability. Furthermore, we present modernization effect on economic freedom and political liberalization. Finally, we summarize existing literature on taxation to democracy nexus and present conceptual framework and hypotheses.

Historical Evidence:

The early democratization literature (i.e., Tilly 1992; Levi 1988; Hibbert 1981; North 1981; Huntington 1968; Schumpeter and Swedberg 1918) argues that it was the tax demands of rulers which stimulated public demand for representation. For instance, the slogan, *no taxation without representation* became one of the main causes of the American Revolution (Bates and Lien 1985). This was in response to the British government imposing three new taxes – the Sugar Act, the Stamp Act, and the new Townshend Law¹⁴ - on the American colonies to pay off the debts accumulated during the war between 1756 to 1763. The Declaration of Independence also mentions that one of its causes was: "for imposing Taxes on us without our Consent".¹⁵

¹⁴ In 1767, the British government imposed some taxes on goods (such as glass, lead, and tea) imported into the American colonies.

¹⁵ Declaration of Independence: A Transcription, retrieved from <u>https://www.archives.gov/founding-</u> <u>docs/declaration-transcript</u>, viewed on 03 April 2024.
Another example is the Glorious Revolution of 1688. It is also rooted in the crown's demand for taxes and, in return, Parliament's demand for representation (Mann 1980). Hoffman (1994) gives the example of France when Louis XV demanded taxes to save the crown from bankruptcy. This caused representative government. Tilly (1992) analyses the history of state formation in Western Europe. He describes how European rulers bargained over taxation, especially during wartime, with the citizens who had large sums of taxable assets. This bargaining, according to him, promoted democracy. Schumpeter and Swedberg (1918) provide the example of Austrian princes who exchanged political representation for taxes during the 14th to 16th centuries when they were heavily indebted due to war. Hibbert (1981) argues that regressive taxation was a cause of the French Revolution. The view of Moon (2014) on the Russian revolution is similar.

Based on such historical evidence, Schumpeter and Swedberg (1918) lay the foundation of fiscal sociology, suggesting that modern Western history is actually shaped by the transition from the demesne¹⁶ state to the tax state. In the former state model, government activities are mainly funded by the income from the ruler's own properties. In the later model, government activities are financed by citizens' taxes. Another proposition the authors make is that this transition to the tax state had transformed not only the private economy but also the politics and society.¹⁷ Based on this reasoning, Levi (1988) presents historical evidence from the Roman Republic and 20th-century Australia and concludes that the evolution of a modern state structure is attributed to progress in revenue collection.

Ansell and Samuels (2014) explain that an autocratic ruler's demand for tax revenue is also a main cause of property rights protection and democratic rights in third-wave democracies.

¹⁶ Properties directly controlled by the ruler.

¹⁷ To further read the literature on fiscal sociology and democratic development, see Moore (2004).

Baskaran and Bigsten (2013) show that African countries are currently in a state-building process similar to early Western democracies, and an increase in their fiscal capacity (indicated by the tax revenue to GDP ratio) is also causing democratization there.

Political Economy of Non-Tax Revenue vs Tax Revenue:

There exists a large amount of literature (i.e., Lall, 2017; Wiens et al., 2014; Ramsay, 2011; Tsui, 2010; Jensen and Wantchekon, 2004; Beblawi 1987; Luciani 1994; Ross 2001) indicating a negative relationship between non-tax revenue and democracy. Its rationality is simple; when a government relies on non-tax revenue, it needs less (or not any) taxes from the citizens, which in turn causes no public demand for political representation (Baskaran 2014; Ross 2001; Beblawi and Luciani 1987). Natural resource rents are substantial in scale in many resource-depending countries (for instance, Kuwait and Qatar) to generate (non-tax) revenue that they do not need to stimulate industrial production to generate taxes (Ross 2001; Beblawi 1987). This income from rent directly goes to the rulers without public interaction, hence reducing public scrutiny and demand for accountability and representation.

Natural resource revenue causes two main effects. 1) The repression effect occurs when that revenue is utilised to generate government capacity through internal security to suppress the dissents. 2) Spending effect: the revenue is used to distribute income to elites and citizens to buy their support (Ross 2001).

Morrison (2015; 2009) suggests differently that non-tax revenue causes less taxation for elites, generates social spending in autocracies, and provides stability to the regime, whether it is autocratic or democratic. However, according to Morrison, tax revenue causes democracy by destabilizing autocracies. This is mainly because of the *bargaining effect*; a ruler needs to bargain political representation against her tax demand (Prichard 2015 and Moore 1998).

All political regimes need legitimacy. Even the most authoritarian leaders attempt to justify their reign. The cost of sustaining an order negatively correlates with its legitimacy (North 1981). In democracies, voters provide legitimacy in exchange for public goods, while elites trade political alliances against private goods in autocracies.¹⁸ Collier (2010), De Mesquita et al. (2005) and other scholars argue that when a leader's survival depends on citizens' support, she supplies public goods, and when she relies on elites' winning coalition, she prefers to provide private (patronage) goods.

Public goods are mainly financed by taxes if a state does not rely on non-tax revenue. Moreover, to gain political legitimacy and raise fiscal capacity, rulers have incentives to introduce policies that increase per capita income.¹⁹ Democratic rights increase citizens' willingness to pay, and economic freedom causes economic growth, raising the taxable income of the citizens. However, when a ruler relies on non-tax revenue, she may prefer to buy legitimacy from a winning coalition of elites and from citizens by redistribution policies and avoid economic and political reforms.

¹⁸ Gilley (2006) finds that governance quality, democratic rights, and welfare benefits are the major causes of legitimacy. In autocracies, a small group of influential elites provides legitimacy to the ruler (Dahl 1973). Some scholars (e.g., Cao and Ward 2015; Doucouliagos and Ulubasoglu 2008; Deacon 2009; Olson 1993) also suggest that democracies supply more public goods. The political competition model of Downs (1957) shows that voters in democracies make their electoral decisions based on their public goods' preferences.

¹⁹ In democracies, a positive relationship exists between economic performance and the electoral success of a political leader (Becher and Donnelly 2013). Also, some economic reforms were initiated by autocrats like Pinochet in Chile, Park in South Korea, and Deng in China, mainly to prevent unrest and political upheaval in their countries. Therefore, a positive relationship is likely to exist between economic performance and the number of rebellions/uprisings in autocracies.

Tax Burden:

Citizens and firms consider taxes a burden (cost) that lowers their disposable income since they cannot spend that money on their private consumption to gain utility or invest in profitable opportunities. Balamatsias (2017) suggests that citizens' utility is inversely related to the tax rate. Therefore, when they pay taxes, they evaluate their marginal benefits (their desired outcomes) against their marginal cost (tax). Ross (2004) argues that it is not simply an increase in taxation which causes democratization. Instead, the lower marginal benefits of taxes than its marginal cost mobilize people against the regime. However, an experiment conducted by Paler (2013) in Indonesia found that citizens are more concerned about the potential loss of income from paying taxes than the potential benefits of government spending. Hence, an increase in taxes motivates them to be more active in politics by monitoring and punishing the ruler.

An increase in the tax burden also causes conflicts in different countries, indicating how seriously citizens take it and how an increase in the tax rate motivates them to engage in politics. In 1995, the government of Ghana announced a 17 percent value-added tax (VAT). Within two months, this resulted in violent riots, also called "VAT riots," showing that the effect of a sudden increase in the tax burden can start collective action immediately (Moore 2004). Such examples are also found in Venezuela (Kornblith 1998), Kenya (Prichard 2015) and Mexico (Bird and Gendron 2007). A laboratory experiment conducted by Martin (2014) in Uganda shows that an increase in taxes makes citizens willing to punish leaders and raises their demand for accountability. This also incentivises leaders to supply public goods, which citizens prefer.

In the Boix (2001) model, the optimal tax rate is the rate at which the cost of paying tax in terms of losing income equals its benefits from public investment and income redistribution. De Mooij et al. (1998) describe that the marginal benefit of taxation is utility gains from

consuming public goods, and the marginal cost is citizens' sacrifice in not consuming private goods. The welfare effect of taxation is positive when its marginal benefit is more than the marginal cost. Thus, it is possible that when the welfare effect of taxation is negative, it motivates citizens to demand changes in regime (or ruler) and policies.²⁰ Otherwise, as Becker (1968) explains, people's tax evasion increases when tax compliance costs are higher than their benefits. This, in turn, reduces tax revenue.

Buettner and Ruf (2007) and Yang (1996) show that firms move to countries where the tax burden is comparatively low since higher taxes lower profitability. Gao and Liu (2021) suggest that institutional quality and macroeconomic environment matter. For the same tax burden, capital outflow from low-income countries is higher than that of developed countries. This is because companies also consider a country's macroeconomic environment and institutional qualities. Egger and Winner (2004) elaborate that economic freedom raises the attractiveness of a location for businesses and enables governments to increase tax rates. However, economic freedom is also inversely related to tax burden.²¹

An increase in taxes increases citizens' bargaining power (Levi 1988) in the regime. If a ruler decides to use force, the cost of tax compliance would be relatively high (Timmons 2004; Levi 1988), which will not only reduce tax revenue but also hurts the ruler's legitimacy by raising the revolutionary threat (Wang, 2021). Hence, a ruler is better off fulfilling the public's demand against her tax desire. This is called a *fiscal contract* (Zheng et al., 2019). Democracy and market-oriented economic policies are the outcomes of this ongoing contractual association

²⁰ Morrison (2015) suggests that an increased fiscal burden can damage democracy since unhappy citizens can start supporting anti-democratic movements.

²¹ Approach, Economic Freedom, Fraser Institute. Retrieved from: <u>https://www.fraserinstitute.org/economic-freedom/approach</u>, viewed on 06 May 2024.

(Bates and Lien, 1985), in which citizens and rulers re-evaluate their utilities in real time (Levi, 1988; Becker, 1968). When citizens' disutility from paying taxes is higher than their utility from the consumption of public goods, this motivates them to use their bargaining power to demand either tax cuts or utility-maximizing policies²². Their preference for the political regime changes if this demand is not met.

Modernization:

To enhance tax revenue, a ruler needs to provide growth-enhancing policies like property rights protection and the rule of law. A substantial amount of research indicates a positive association between market-oriented policies and economic growth (e.g., Lawson et al., 2020; Easterly, 2019; Hall and Lawson 2014). Pro-market policies can spur industrialization and diversification.²³ This gives rise to a *modernization effect* by raising occupational specialization, urbanization, social capital, literacy level, and division of labour, and making society more complex, open, diverse, and advanced. Industrialization changes the incentive structure of society and produces a new growth coalition in which a new division of winners (i.e. entrepreneurs, business elites) and losers (i.e., feudal elites) emerges (Haggard 1986). Johnson (1989) calls it societal disequilibrium. He argues that it shapes a new value system in society and produces a modern division of labour, generating a modern understanding of

²² For instance, pro-growth policies which enhance disposable income, and utility maximizing public consumption goods.

²³ Industrialization increases economic growth and taxable income of the citizens (e.g., Opoku and Yan, 2019; Škare and Družeta, 2016).

freedom, justice, and equality. Therefore, Johnson's view is that without modern societal equilibrium, democracy cannot flourish.²⁴

Modernization influences the *fiscal contract* in three ways. 1) It raises citizens' income, which strengthens their effective organization and relative bargaining power (Inglehart, 2020; Moore and Putzel, 1999).²⁵ 2) The *elite size* expands, and *modern and diverse* groups of elites emerge (Truman 1959), which have no or less reliance on the state's patronage. This can create a tussle between the ruler-dependent and market-dependent elites, which further reduces the relative bargaining power of the ruler (Higley and Burton 1989) and raises the support for political and economic reforms as the latter type of elites becomes numerically stronger and dominates proceedings.²⁶ Democracy supports modern elites since it solves their commitment problem by protecting their private property (Fleck and Hanssen 2006; Olson 2000; Weingast 1997). However, an autocratic leader cannot credibly commit to protect property rights because she does not have to face the electorate and win by popular mandate. Therefore, Giuliano (2013) shows that democracy's effect on economic reform is positive.

When a ruler relies on a large *winning coalition* of elites, the likelihood of political and economic reforms increases. Otherwise, autocracy is more likely. Hence, there is a positive association between elite group size and liberalization of both polity (Ahmed, 2012; Gandhi, 2008; Geddes, 1999) and economy (Lizzeri and Persico 2004). To keep the coalition size small, it is essential to control economic policies (Olson, 2009; Acemoglu and Robinson, 2008; Olson,

²⁴ First, societal disequilibrium exists, which destroys the old traditional value system. Afterwards, a new social equilibrium emerges based on the modern production system, which flourishes modern values, including democracy and capitalism.

²⁵ Scholars like Rød et al. (2019) and Huntington (1997) explain that an increase in citizens' income levels promotes democracy.

²⁶ A regime is stable when there is consensual unity among the country's elites. Otherwise, it cannot be stable, and a transition to an alternative system occurs (Higley and Burton 1989).

1989; Mosca, 1939).²⁷ 3) Industrialization raises middle-class size, which strengthens modernization and promotes citizens' interests in politics (Chun et al., 2016; Moore, 1993; Lipset, 1959) and market-oriented policies (Easterly, 2001).²⁸

Inequality and Size of Government:

Income inequality can raise the threat to rebel against a political leader (MacCulloch 2005) and instigates her to provide public goods, especially promoting distributional policies.²⁹ To reduce inequality, a political leader can introduce policies (such as raising the tax burden) that discourage economic freedom (Karakotsios et al. 2020). If she successfully does so, it can benefit both modernization and democracy. However, lower economic freedom can discourage economic growth and result in more inequality and less tax revenue.³⁰

The tax collection volume (in percentage of GDP) determines the size of the government (Meltzer and Richard 1978) and its capacity to provide public goods and redistribution. Alesina

²⁷ It is also in a ruler's interest to have a larger winning coalition since it gives her more public approval. However, in a large winning coalition, especially when there is heterogeneity among elites, two factors can encourage improvement in freedom. 1) The rivalry among interest groups makes cooperation difficult (Olson 2009). 2) A ruler compares the costs of providing private (or patronage) and public goods. In the case of a large and diverse coalition group, the cost of supplying patronage goods is comparatively higher, which incentivizes the ruler to choose public goods over private goods (De Mesquita et al., 2005). Moreover, elite-centred policies can reduce economic growth and tax revenue. This can also make a ruler avoid the elites' interest in politics and the economy. ²⁸ Lipset (1959) theorizes the middle class as a critical characteristic of modernization. Easterly (2001) finds that the middle class promotes literacy, health, infrastructure, market-oriented policies, political stability, peace, modernization, and democratic development.

²⁹ Inequality reduces the modernization effect through its negative effect on growth (Wilkinson and Pickett, 2010) and destabilizing the political regime, whether democracy or autocracy (Kotschy and Sunde, 2017; Jung and Sunde 2014; Boix, 2003).

³⁰ Kuznets curve suggests that inequality first increases with growth and then declines (Barro 2008).

and Angeletos's (2005) dynamic model presents three insightful concepts. 1) Big governments control more resources, making them more prone to corruption, inefficiency, and rent-seeking. In a big government, different interest groups and individuals who have good connections with the government get an unfair advantage (in the form of favourable policies). 2) This creates inequality among people, and 3) citizens' concern for unfairness and inequality increases, reducing a regime's acceptance among them and mobilising them against the regime. Inequality generated by rent-seeking is considered unfair in this model, while inequality produced by market competition is considered fair.

Meltzer and Richard (1978) discuss that when the size of government grows, businesses find incentives to connect to state agencies and corporations to pursue their self-interests. Kotera et al. (2012) state that oversized governments are inefficient; they intervene in the market and reduce competition. The positive relationship between the size of government and corruption is also confirmed by Rose-Ackerman and Palifka (2016), Goel and Nelson (1998) and Becker (1968). This hurts both economic and political freedom since the market becomes uncompetitive and the regime unfair.

Empirical Research

We only find five empirical papers exploring the influence of tax revenue on democracy. The pioneering work is by Ross (2004), who covers 113 countries between 1971 and 1997. Ross employs OLS and fixed effect models by employing two proxies for the taxation – tax to GDP ratio and tax to government spending ratio. The results indicate that only the tax-to-spending ratio significantly affects democracy. There are two main potential problems in the paper. One is not addressing endogeneity, as accepted by the author. The second is the data source, the World Bank. It has many missing observations, including not separating the amount of taxes collected from natural resource-extracting companies and activities. In resource-dependent

economies, a substantial amount of corporate tax is collected from resource-extracting companies and activities (Prichard et al., 2018).

Jin Yi (2012) finds the influence of taxation on democracy in developing countries covering the period from 1970 to 2000. The author uses the event history model for the independent variable, the tax-to-government spending ratio. The results indicate that the influence of taxation on democracy is conditional on income inequality. In a society with a higher level of inequality, an increase in the tax-to-spending ratio motivates citizens against an autocratic regime, which ultimately causes democracy. This paper uses the World Tax Database at the University of Michigan and does not address the endogeneity concern.

Baskaran and Bigsten (2013) investigate the impact of tax revenue (in % of GDP) on corruption and democratic accountability in 31 African countries from 1990 to 2005. They address the endogeneity issue using an instrumental variable, the share of manufacturing export in total merchandise export. Their results confirm that taxation leads to democratization. However, their data sources for the tax revenue are the World Bank and the OECD's African Economic Outlook (AEO), which also has a considerable missing observation and does not separate the revenue collected from natural resource companies.

Prichard et al. (2018) use the International Centre for Tax and Development (ICTD) data for tax revenue to analyse its effect on democracy in 122 economies from 1981 to 2008. They use an instrumental variable approach by applying two instruments—the introduction of VAT and autonomous revenue authorities—and find that tax reliance (tax revenue as a percentage of total revenue) causes democratization. However, the variable tax reliance is not statistically significant in most of their results' specifications.

Kato and Tanaka (2019) analyse the influence of VAT on democratization in 143 developing countries from 1960 to 2007. They utilise a matching method called 'entropy-balancing' and find a positive effect of VAT on democratization.

Thus, the existing literature indicates that the causal effect of taxation on representation has received limited attention. These five papers also use different techniques, data sources, indicators of taxation, and samples. Therefore, the results vary. The endogeneity concern is also not addressed properly in three papers. Moreover, we could not find a single paper showing the effect of tax revenue on economic freedom.

Theoretical Framework and Hypotheses:

Our literature review presents historical evidence and four potential channels: non-tax revenue's effect on democracy, tax burden and fiscal contract, modernization and big government effects. It shows that a ruler's need for legitimacy and citizens' demand for public goods initiate an exchange between them. If a ruler relies on non-tax revenue, she can provide public goods without raising tax revenue since the political cost of taxation is higher. Relying on taxation, in contrast, leads to bargaining between a ruler and citizens, ultimately giving rise to a fiscal contract between them in which both fulfil each other's demands. Thus, we present the following hypothesis:

H1: An increase in tax reliance of a ruler has a causal effect on democracy.

Likewise, taxation needs growth-enhancing policies like protecting property rights and the rule of law since increased economic growth generates taxable income. Taxation also leads to alignment between the interests of the ruler and citizens, since both want growth-enhancing policies. Thus, a ruler has a strong incentive to pursue market-led policies. In the case of an abundance of non-tax revenue, such an incentive does not exist substantially since a ruler can simply distribute the natural resource rent to its allies and enhance government spending to win public support. Therefore, we suggest that tax reliance also generates economic freedom; in this way, both political and economic freedom go hand in hand.

H2: An increase in tax reliance of a ruler generates economic freedom.

We suggest that tax reliance positively affects political and economic freedom in the short and long run. In the short run, a ruler must allow political representation when introducing tax reform to raise tax revenue. Otherwise, if a ruler uses force without satisfying citizens, the cost of compliance will be higher, and citizens' willingness to pay taxes will also be lower. This can also ignite riots by undermining government legitimacy as we provided examples of tax riots in Ghana (Moore 2004), Mexico (Bird and Gendron 2007), Kenya (Prichard 2015) and Venezuela (Kornblith 1998) since citizens consider taxes as a burden or cost, and they respond immediately. In the long run, tax reliance creates a state formation effect, as we observe in the early Western democratisation examples, which changes the nature of politics and economy. This is what the advocates of fiscal sociology (such as Tilly 1992; Levi 1988; North 1981; Huntington 1968; Schumpeter and Swedberg 1918) suggest. Moreover, it is also because of the modernisation effect, which, according to scholars (Inglehart 2013; Wucherpfennig and Deutsch 2009), is a strong determinant of democracy and takes time to affect.

Taxes are also necessary to make a state function well in order to provide public goods and protect individuals' liberty in a society. The weaker states cannot protect individuals' liberties; therefore, a strong state must ensure the rule of law. Fiscal capacity is essential for quality institutions and vice versa (Akanbi 2019). However, a state should not raise its fiscal capacity beyond a certain point, as that would infringe upon individual liberties. When a state gets bigger in terms of tax to GDP ratio (Meltzer and Richard 1978), it can become inefficient and corrupt, different interest groups use it for their gains, and the government loses public support (Rose-Ackerman and Palifka 2016; Kotera et al. 2012; Alesina and Angeletos 2005; Meltzer and

Richard 1978). In other words, higher taxes reduce disposable income, purchasing power and utility, leading to decreased political and economic freedom. Hence, we suggest that the relationship between tax revenue and political and economic freedom is non-linear and present the following hypothesis.

H3: The influence of tax to GDP ratio on democracy and economic freedom is non-linear inverted U-shaped.

When a ruler collects more taxes relative to its spending, it turns people against the regime, as the cost of the regime gets larger than its benefits. Citizens evaluate their gains from public goods against their costs in terms of tax compliance. When their net gain is negative, they prefer to change the regime. We call it a *cost-benefit model* of taxation and suggest that it also promotes democracy. However, some natural resource-dependent economies (like Gulf countries) also distribute more income than they collect taxes. Therefore, their tax to government spending ratio is lower. Hence, we expect that the impact of the cost-benefit model will be more pronounced in countries that do not rely on natural resource rents.

H4: An increase in taxes relative to government spending has a causal effect on democracy.

All our hypotheses align with the rational choice model and public choice theory. Both suggest rational actors (citizens, bureaucrats and political leaders) are motivated by their self-interests. They evaluate their costs and benefits and decide to maximize their gains (Browning et al. 1999). The rational choice model especially focuses on rational actors' individual decision-making, and the public choice theory explains how their interaction with each other results in collective action. Taxes are the cost to citizens, while public goods and political representation are the benefits to them. Conversely, raising tax revenue benefits the government, while providing political representation and public goods is a cost for political leaders. Both citizens

and political leaders interact to maximize their gains and their interaction changes political and economic institutions.

2.3. Data Specification and Methodology

This paper deals with 133 world economies, covering 1990 to 2018, depending on data availability. Following are our bassline regression equations:

$$Y_{it} = \beta_0 + \beta_1 Tax_Reliance_{it} + \beta_3 X_{it} + \varphi_i + \delta_t + \epsilon_{it} \dots (Equation 2.1)$$
$$Y_{it} = \beta_0 + \beta_1 TaxR_{it} + \beta_2 TaxR_{it}^2 + \beta_3 X_{it} + \varphi_i + \delta_t + \epsilon_{it} \dots (Equation 2.2)$$

 $Y_{it} = \beta_0 + \beta_1 Tax/Spending_{it} + \beta_3 X_{it} + \varphi_i + \delta_t + \epsilon_{it} \dots (Equation 2.3)$

Here, *Y* show the outcome of interest which is democracy and economic freedom. *Tax* represents the main independent variables – tax reliance (*Tax_Reliance*), tax revenue in % of GDP (*TaxR*) and tax to government size ratio (*Tax/Spending*). *TaxR*² is the squared term of Tax Revenue. *X* indicates all control variables.
$$\varphi_i$$
 and δ_t represent country and time-specific effects, respectively. \in is the error term. *i* and *t* denote countries and time (in years), respectively.

Dependent Variables

Our dependent variables are democracy and economic Freedom

Democracy:

Out of the two most commonly used indexes of democracy, the Polity2 variable from the Polity IV dataset largely captures the electoral components of democracy, while the political freedom index by Freedom House³¹ is closely related to the concept of liberal democracy (Nelson and

³¹ It comprises both political and civil liberties.

Wallace 2017). Nevertheless, the two are closely correlated at around 82 percent. Some scholars (e.g., Mukand and Rodrik 2020; Diamond 2015) elaborate that since the fall of the Berlin Wall, the number of electoral democracies has increased, but the gain in liberal components of democracies is not substantial. Hence, taxation may affect electoral democracy differently from liberal democracy.

Polity2 and Freedom House Indices originally ranged from -10 to +10 and 1 to 100, respectively. In our normalised data, 1 shows the lowest democracy level, while 10 depicts the highest.

Figure 2.1 displays the global political development from 1980 to 2018. The graph shows that the number of democracies has increased, particularly from 1987 to 1992. This period is historically significant as it marked the fall of the Soviet Union (1991) and the Berlin Wall (1989). This is also known as the third wave of democratization (Huntington, 2012), during which the number of democracies worldwide increased. From 1992 onwards, the polity2 score has experienced a slight increase globally. However, the Freedom House index also increased slightly until 2005, after which it stabilized.



Figure 2.1: Global Trend in Democracy - 1980 to 2018

Source: Polity2 Index, Freedom House Index.

Table 2.1 shows the descriptive statistics for each 10 years of duration from 1980 to 2018. It also confirms the global increase in democracy over the period.

Years	1980 to 1990	1991 to 2000	2001 to 2010	2011 to 2018
Polity2				
Observation	1,433	1,491	1,491	1,088
Mean	6.46	6.99	6.99	7.41
Std. dev.	3.36	3.15	3.15	2.90
Min	0	0	0	0
Max	10	10	10	10
Freedom Hous	e Index			
Observation	1,219	1,672	1,758	1,406
Mean	5.21	5.80	6.22	6.25
Std. dev.	3.51	3.26	3.16	3.22
Min	0	0	0	0
Max	10	10	10	10

Table 2.1: Descriptive Statistics of the Democracy for 10 Years Duration

Economic Freedom:

Many papers (e.g., Grier and Grier 2021) have used economic freedom indices to account for market-oriented economic policies. The economic freedom index by the Fraser Institute indicates the level at which the institutions and policies of a state protect the economic freedom of citizens. It has five equally weighted major components: 1) the size of government spending; 2) the level of property rights protection; 3) sound money; 4) freedom to trade across national boundaries; and 5) the regulatory environment in the credit, labour, and business markets. For this research, we drop the size of government spending since government size and tax revenue are highly correlated.



Figure 2.2: Global Trend in the Change in Economic Freedom

Data Source: Fraser Institute

Figure 2.2 illustrates the worldwide trend of economic freedom. It highlights an increase in global economic freedom from 1985 to 2001, largely attributed to the collapse of the Soviet Union and the fall of the Berlin Wall. These events brought about a global belief that promoting economic freedom was the best economic model for achieving prosperity. The period after 2001 shows a slight increase in global economic freedom level. This is also indicated in Table 2.2.

Years	1980 to 1990	1991 to 2000	2001 to 2010	2011 to 2018
Economic Fre	edom (Fraser Instit	ute Index)		
Obs	276	231	1,278	1,168
Mean	5.71	6.38	6.77	6.91
Std. dev.	1.63	1.50	1.22	1.14
Min	2.10	2.68	2.34	2.10
Max	8.98	9.07	9.05	9.14

Table 2.2: Descriptive Statistics of the Economic Freedom for 10 Years Duration

We have decided not to use the economic freedom data from the Heritage Foundation because of four reasons. 1) It has a partisan agenda broadly supporting far right-wing politics like Donald Trump in the United States and Viktor Orban in Hungry.³² Some also call it "institutionalising Trumpism" efforts by the Heritage Foundation (Garcia-Navarro, 2024). 2) There are subjective adjustments in the Heritage Foundation data and methodology. Meanwhile, the Fraser Institute only uses "hard data" from third parties in its methodology (Murphy, 2016). 3) Inconsistencies exist in the findings if we use the Fraser Institute and Heritage Foundation data. Therefore, Ram (2014) urges caution in using them for robustness checks. 4) Researchers have used The Fraser Institute more frequently than the Heritage Foundation (Ram 2014).

Taxation

Taxation is our main independent variable. We are using three proxies based on our hypotheses. One is tax reliance. Prichard et al. (2018) have also used it in their research, exploring its effect on democracy. Its formula is given below:

$$Tax \ Reliance = \left(\frac{Tax \ Revenue}{Total \ Revenue}\right) * 100 \ \dots \ (Equation \ 2.4)$$

The second is tax revenue in percentage of GDP.³³ Two papers (Baskaran and Bigsten 2013 and Ross 2004) in the existing literature also use it to analyze the effect of tax revenue on democracy. The third proxy deals with the cost-benefit model of taxation indicated by the tax to government spending. Jin Yi (2012) and Ross (2004) have applied this variable in their estimation. Following is its formula:

$$\frac{Tax}{Spending} = \left(\frac{Tax}{Government Spending}\right) * 100 \dots (Equation 2.5)$$

³³ It can also be considered as per capita tax to income ratio because $\frac{Tax \ per \ capita}{Income \ per \ capita}$ is equal to $\frac{Tax}{GDP}$

³² For details, read "project 2025" produced by the Heritage Foundation. <u>https://www.project2025.org/</u> viewed on 5 March, 2024.

The main data source of tax revenue and total revenue is the International Centre for Tax and Development's (ICTD) Government Revenue Dataset, henceforth called the ICTD dataset.³⁴ The government spending data is from the World Bank. The ICTD dataset has some distinct advantages over alternative data sources, including the World Bank's World Development Indicator (WDI). 1) It has fewer missing observations than the World Development Indicator (WDI) dataset. In our sample, the total ICTD observations for tax revenue are 5,882, while WDI has just 3,958 observations. For non-OECD countries, this difference is even greater; ICTD has almost double observations than WDI. Previous studies (e.g., Baskaran and Bigsten 2013; Ross 2004) mainly depend on the WDI or other datasets covering comparatively fewer economies and periods than the ICTD. Both Kato and Tanaka (2019) and Prichard et al. (2018) have used the ICTD dataset for the independent variables, tax reliance and VAT, respectively.

2) Another advantage of ICTD is that it allows us to differentiate a government's natural resource revenue from tax revenue, which is impossible in other data sources. There are two methods by which a government collects natural resource revenue: corporate taxes on natural resource-extracting companies and different kinds of royalties and levies. However, in the IMF and World Bank datasets, corporate taxes on these firms are calculated as taxes, and loyalties and levies are non-tax collections that are measured as non-tax revenue. Both types of revenue extraction are, in fact, natural resource revenue and have common features influencing democracy and economic freedom. ICTD data counts them as natural resource revenue, a component of non-tax revenue, and does not add them to the total tax collection. We find the correlation between the tax revenue data from WDI and ICTD at 0.8072.

³⁴ Some authors such as Prichard et al. (2018) and Clist (2016) have also used this data source in their research. The weblink of data: <u>https://www.wider.unu.edu/about/government-revenue-dataset-grd</u>

According to Figure 2.3, the global tax revenue as a percentage of GDP remained quite stable between 1980 and 2001. However, from 2002 to 2008, it increased from around 16% to around 18% before declining slightly and then rising again. In 2018, it was around 19%. Figure 2.4 shows that tax to spending ratio was largely stable throughout the period, except during the global financial crisis 2007-2009 when a notable deviation is observed. Figure 2.5 indicates that the tax reliance remained stable between 76% to 80% of values. Table 2.3 provides descriptive statistics of independent variables for a 10-year duration from 1980 to 2018.



Figure 2.3: Global Trend in Tax Collection in Percentage of GDP

(Source: ICTD dataset)



Figure 2.4: Global Trend in Tax to Government Spending Ratio

(Source: ICTD dataset)



Figure 2.5: Global Trend in Tax Reliance

(Source: ICTD dataset)

Table 2.3: Description Statistics of the Tax Variables for 10 Years Duration

Years	1980 to 1990	1991 to 2000	1991 to 2000 2001 to 2010	
Tax Revenue	(% of GDP)			
Obs	1,294	1,655	1,767	1,151
Mean	16.62	16.09	17.19	18.63
Std. dev.	9.07	8.09	7.98	7.37
Min	0.61	0.09	0.82	0.61
Max	46.91	47.23	56.92	48.41
Tax Reliance				
Obs	1,044	1,523	1,681	1,068
Mean	76.31	77.08	77.15	78.59
Std. dev.	18.44	18.39	19.63	17.07
Min	1.71	0.3	1.07	0.84
Max	100	100	100	100
Tax to Gover	nment Size (in pe	rcentage)		
Obs	456	731	1,049	847
Mean	77.50	78.77	80.89	78.60
Std. dev.	29.78	27.99	31.15	30.88
Min	3	2	2	2
Max	150	194	262	338

Control Variables:

We have controlled for the GDP per capita (logged) and GDP growth rate to capture the effects of income and economic stability on institutions, respectively. An increase in citizens' per capita income raises their effective organisation and bargaining power against a political leader, which can cause changes in political and economic policies (Moore and Putzel 1999). When the economy is growing, citizens may have fewer incentives to change the regime than when it is not performing well (Rodrik 1996; Fernandez and Rodrik 1991). Income per capita also depicts the modernization effect, a main channel in our literature review, causing a positive effect of taxation on institutions. Income and modernization effects are also strong determinants of democracy (Lipscy, 2018; Anthony et al., 2014; Che et al., 2013; Acemoglu and Robinson, 2001).

We have also controlled for the level of secondary education in a society (in percentage of the population), which has a positive effect on both democracy and the modernization of society (Glaeser et al. 2007; Barro 1999). Trade openness indicates a nation's international connectivity in terms of international trade, in which citizens are also exposed to foreign institutions, norms, values, and ideas. This can influence their preferences for institutions and policies. The effect is stronger, especially when the citizens of an autocratic country trade with the citizens of democratic countries (Tabellini and Magistretti 2022). As trade openness is a component of the economic freedom index, we have excluded it as a control variable in our estimations while using economic freedom as a dependent variable.

External Debt (in percentage of GDP) is a substitute for tax revenue; a government can currently borrow from a foreign market and pay later. This can prolong the reforms. However, external debt can also positively influence political and economic reforms when a debtor (like IMF or foreign government) demands reforms (Nelson and Wallace 2017).

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Economic inequality can promote democracy and economic reforms since it raises the possibilities of revolt against a government and often results in redistributional policies. Jin Yi (2012) suggests that the positive influence of tax revenue on democracy is conditional on higher income inequality since it mobilizes people against government policies. In our estimation, the Palma Ratio indicates economic inequality. We have also controlled oil rents (in percentage of GDP) to capture the effect of non-tax revenue on political freedom. We have discussed in the literature review section that the political economy of non-tax revenue discourages democratization (Lall 2017; Wiens et al., 2014; Ramsay, 2011; Tsui, 2010; Jensen and Wantchekon, 2004; Beblawi 1987; Luciani 1994; Ross 2001).

To estimate the effect of tax variables on economic freedom, we have also controlled for the effect of gross capital formation (in percentage of GDP), which indicates the size and productive potential of a country's financial market.

Estimation Strategy

The levels of political and economic freedom influence the tax collection of the governments. Democracies spend more on providing public goods and bring about income redistribution (e.g., Cao and Ward 2015; De Mesquita et al. 2005). Therefore, democracies collect more taxes than autocracies (Balamatsias 2017). Moreover, economic freedom positively influences the growth rate (e.g., Lawson et al. 2020; Hall and Lawson 2014), tax compliance (Riahi-Belkaoui 2004) and the government's ability to increase taxes (Egger and Winner 2004). This causes endogeneity when the independent variable and error term are correlated (Lu et al., 2018). Durbin and Wu-Hausman test (p=0.000) also confirm that endogeneity exists between our main independent and dependent variables. Therefore, we apply the instrumental variable approach. We employ two instrumental variables – natural disasters and the commodity terms of trade –

for the endogenous variable, tax revenue, by applying the Fixed Effect Two-Stage least squares (FE - 2SLS) method.

The first instrument variable is *natural disasters* such as wildfires, volcanic activity, storms, landslides, floods, extreme temperatures, epidemics, earthquakes, and drought. Natural disasters displace people and reduce economic activities in the affected area. This can negatively affect the growth rate (Shabnam 2014; Raddatz 2009) and, ultimately, the tax collection³⁵ of the economy (Milivojevic 2021; Melecky and Raddatz 2011; Rasmussen 2004).³⁶ The data for natural disasters is taken from the international disaster database (EM-DAT)³⁷. The variable counts the number of natural disaster episodes per year.

The second instrumental variable, the *terms of trade (TOT)*, "the relative price of export in terms of imports (Schmitt-Grohé et al. 2022)", is considered exogenous since these prices are determined by the global business cycle and a political regime cannot influence them. Mendoza's (1995) pioneering research shows that TOT shocks explain 37 percent of business cycle fluctuations. Kose (2002) confirms that around 88 percent of the changes in an economy's output can be described by its TOT changes. Schmitt-Grohé and Uribe (2018) analyse the impact of TOT shocks on business cycle variation in 38 countries and find it around

³⁵ Here, tax collection refers to the amount of taxes collected, not the tax rates.

³⁶ Melecky and Raddatz (2011) estimate the effect of natural disasters on tax collection in the sample of high- and middle-income economies. They find that natural disaster, on average, reduces taxes by ten percent. Raddatz (2009) studies that natural disaster causes a 0.6 percent decline in the GDP per capita of the affected country. Moreover, the impact of drought is stronger than other climate-related disasters, causing a one percent decline in the GDP per capita. Rasmussen (2004) confirms that natural disaster causes economic decline, fiscal imbalances, and poverty in the affected countries. Shabnam (2014) also finds the negative impact of floods on the GDP per capita in 187 economies. Milivojevic (2021) shows that natural disasters cause GDP decline and fiscal imbalances.

³⁷ <u>https://www.emdat.be/</u>

10 percent. Some other researchers (i.e., Alimi 2016; Beck et al. 2006; Easterly et al. 2001) also find that TOT volatility is strongly associated with growth rate in their sample economies. Since TOT volatility affects the growth rate, this also causes variation in collection as well.

F-statistics is considered as a robust measure to find whether an instrument is strong or weak (Bascle 2008). If its value is equal to or more than 9.08 and 10.83 in the cases of three and five IVs, respectively, then IVs are strong and relevant (Stock and Yogo 2002). Our IVs meet this condition. Their values are higher than the threshold, 9.08.

Equations 2.6 and 2.7 present the first and second-stage equations.

$$Tax_{it} = \beta_0 + \gamma_1 X_{it} + \gamma_2 Z_{it} + Y_c + \epsilon_{it}^T \dots (equation 2.6)$$
$$Y_{it} = \beta_0 + \beta_1 \widehat{Tax_{it}} + \beta_2 \widehat{Tax_{it}^2} + \beta_3 X_{it} + \varphi_i + \delta_t + \epsilon_{it}^F \dots (equation 2.7)$$

We also use the general-to-specific (GETS) approach for robustness purposes. The GETS approach is a systematic method for choosing a concise and informative final model from a large set of potentially significant variables. This method helps researchers avoid making ambiguous or arbitrary decisions. It involves initially defining a comprehensive model covering a large set of potentially significant variables. Then, through a series of step-by-step statistical tests, "insignificant" variables are recognised and dropped, resulting in the final model (Clarke, 2014).³⁸ The method is well known in economic literature utilized by many researchers (e.g., Sucarrat and Escribano 2012; Hendry and Krolzig 2004; Campos and Ericsson 1999) in their estimation.

GETS has six steps. In step one, we create a general model incorporating all variables that could impact the relationship between our independent and dependent variables. We use 23

³⁸ To know more about the procedure and its advantage, see Campos et al. 2005; Clarke, 2014.

control variables³⁹ in this regard after checking their correlation matrix. If one variable is highly correlated (threshold of 80%) with any other control variable, we have dropped one between them. The second step is estimating the coefficients by regressing the general model. In the third step, we drop the variable with the lowest t-value that has a statistically insignificant coefficient.⁴⁰ In the fourth step, we estimate the model again by excluding the variable we left out in the previous step. We find another variable that has a statistically insignificant coefficient, with the lowest t-value, and remove it from the analysis. We keep repeating this process, also called backward elimination. Finally, we get the final model where all variables are statistically significant. As the process shows, GETS simplifies the process by accounting for all potential variables that can affect the relationship between independent and dependent variables, resulting in a final model with significant coefficients. Hence, it improves accuracy. Since FE-2SLS has advantages over pooled OLS and fixed/random effects models, we used it in the GETS approach for the Freedom House Index and economic freedom index by the Fraser Institute. The outcome model is then reapplied to the Polity2.

Table 2.4 presents summary statistics.

³⁹ 1) Population growth. 2) Population ages 15 to 64 old (% of population). 3) Government debt (% of GDP). 4) external debt stock (% of GDP). 5) GDP growth rate. 6) GDP per capita (logged). 6) control on corruption (ICRG). 7) percentage of the population with education at the secondary level. 8) Gross capital formation (% of GDP); 9) Government stability (ICRG). 9) Quality of bureaucracy (ICRG). 10) Control on internal conflict (ICRG). 11) Control on military in politics (ICRG). 12) control on religious tensions (ICRG). 13) Control on ethnic tensions (ICRG). 14) Control on external conflict (ICRG). 15) Rate of inflation. 16) Unemployment rate. 17) Government expenses (% of GDP). 18) Palma Ratio. 19) Individuals using the Internet (% of the population). 20) Trade (% of GDP). 21) Urbanization (% of Population). 22) Official development assistance (ODA). 23) Ethnicity.

⁴⁰ In our 2SLS-FE estimation, we have dropped the variable with the lowest t-value in the second equation.

Variable	Label	Obs	Mean	Std. dev.	Min	Max	Source
Freedom House	Freedom House	6,232	5.91	3.31	0.00	10.00	Freedom House Index
Polity2	Polity2	5,198	6.52	3.43	0.00	10.00	Centre for Systematic Peace
Economic Freedom	Economic Freedom	2,984	6.70	1.31	2.10	9.14	Fraser Institute Index
Tax_Rev	Tax revenue (% of GDP)	5,821	17.03	8.20	0.09	56.92	The World Bank
Tax_Reliance	Tax Reliance in % of total revenue)	5,270	77.25	18.59	0.30	112.50	The World Bank
Tax_Spending	Tax Revenue in % of Government Spending	3,061	78.50	28.19	2.00	262.00	Author
CommodityTT	Trade	6,133	100.93	9.90	39.18	162.42	International Monetary Fund (IMF)
NDisaster_Episodes	Natural Disaster Episodes	5,959	1.85	3.51	0.00	43.00	The international disaster database (EM-DAT)
GDP_GrowthR	GDP Growth Rate	5,949	3.50	4.24	-19.70	19.68	The World Bank
External_Debt_Stock	External Debt Stocks (% of GDP)	3,813	60.35	48.95	0.00	423.55	The World Bank
Palma WIID	Economic Inequality	6.370	3.25	2.70	0.55	26.30	The World Income Inequality Database (WIID)
Trade_Openess	Trade Openness (% of GDP)	5,638	80.92	47.60	0.27	437.33	The World Bank
GDPPC_USD_log	GDP Per Capita (USD) Logged	6,085	7.90	1.58	4.44	11.69	The World Bank
Edu_Secondary	Secondary Education (% of Population)	4,394	69.29	32.02	1.40	132.82	The World Bank
oil_rev	Oil Rents (% of GDP)	7,467	3.72	9.63	0.00	87.09	The World Bank
G_Capital_formatin	(% of GDP)	5,329	23.21	8.20	-2.42	85.10	The World Bank
Population_Growth	Population Growth	6,243	1.579	1.397	-6.766	17.511	The World Bank
Inflation	Inflation Rate	5,396	8.122	11.678	-9.616	98.773	The World Bank
Urbanization	Urbanization (% of Population)	6,265	52.442	23.844	3.236	100	The World Bank
Regime_Durlog	Regime Duration (Logged)	4,948	2.719	1.173	0	5.342	The World Bank
Unemployment	Unemployment Rate	4,742	7.878	6.109	0.3	37.976	The World Bank

Table 2.4: Summary Statistics

2.4. Results and Interpretation

Table 2.5 shows that the relationship between tax revenue (as a percentage of GDP) and democracy is non-linear and hump-shaped, as we predicted in our hypothesis. An increase in tax revenue positively affects democracy until a turning point is achieved. After that, a further increase in tax revenue hurts both indicators of democracy.

Moreover, the table reveals that the marginal benefit of taxes on democracy declines as the tax on per capita income keeps increasing. The marginal benefit of taxes becomes zero at the turning point, which, in our estimation, is 23 per cent of GDP. Beyond that, a further increase in the tax burden causes a democratic decline. This means that if taxes per capita are more than 23 percent of per capita income, it causes a higher tax burden, discouraging democratic development. This 23 percent threshold is also indicative of the level of tax tolerance among citizens, as they may consider it justifiable.

The turning points of both indicators of democracy are close to each other. This means the tax burden affects liberal democracy (Freedom House Index) in the same way as it affects Polity2 (electoral democracy). This is also due to the fact that electoral democracy is highly correlated with citizens' political and civil rights.

If we do not add the squared term of tax revenue, it shows the negative effect of tax revenue on democracy (models 3 and 5), which is misleading since democracies collect more taxes than autocracies. The non-linearity is more plausible since it fits in with our rationality that substantial tax revenue is needed to provide public goods, ensure rules of law and strengthen the institutions. However, there is a limit, after which it becomes predatory and causes institutional decline.

Our results contradict the findings of Baskaran and Bigsten (2013), who found a linear positive effect of tax revenue (% of GDP) on democracy. However, their sample comprises only African

economies, covers the period 1990 to 2005, and relies on the World Bank and OECD's African Economic Outlook (AEO).

	Freedom House Index		ndex		Polity2 Index	
VARIABLES	1 st stage	Model 3	Model 4	1st stage	Model 5	Model 6
Tax_Rev		-0.713***	0.886***		-1.630***	1.305***
		(0.272)	(0.343)		(0.515)	(0.481)
Tax_Rev2			-0.019***			-0.028***
			(0.007)			(0.010)
GDP_GrowthR	0.010	0.029**	0.022**	0.021	0.059*	0.023*
	(0.016)	(0.014)	(0.009)	(0.017)	(0.031)	(0.013)
External_Debt_Stock	-0.010***	-0.005	0.004***	-0.011***	-0.016**	0.005**
	(0.002)	(0.003)	(0.002)	(0.002)	(0.007)	(0.002)
Palma_WIID	-0.135***	-0.130**	0.031	-0.136***	-0.358***	-0.045
	(0.046)	(0.052)	(0.037)	(0.047)	(0.104)	(0.053)
Trade_Openess	0.043***	0.037***	-0.006	0.045***	0.092***	-0.001
	(0.004)	(0.012)	(0.006)	(0.005)	(0.024)	(0.009)
GDPPC_USD_log	1.009***	1.076***	-0.058	0.938***	1.936***	-0.224
	(0.181)	(0.309)	(0.201)	(0.190)	(0.580)	(0.283)
oil_rev	0.049*	0.025	-0.027*	0.051*	0.066	-0.059***
	(0.027)	(0.027)	(0.016)	(0.028)	(0.057)	(0.023)
Edu_Secondary	0.041***	0.034***	-0.005	0.041***	0.083***	0.002
	(0.007)	(0.012)	(0.006)	(0.008)	(0.023)	(0.010)
CommodityTT	0.026*			0.035**		
	(0.015)			(0.016)		
NDisaster_Episodes	-0.083**			-0.083**		
	(0.034)			(0.035)		
Constant	0.961	4.217***	-2.176	0.226	7.272**	-4.394**
	(1.962)	(1.376)	(1.570)	(2.013)	(2.845)	(2.152)
Observations	2,085	2,085	2,085	1,951	1,951	1,951
Number of Countries	108	108	108	98	98	98
Turning Point			23.32			23.30
F-Statistics	33.41			27.98		

Table 2.5: Effect of Tax Revenue on Democracy – FE-2SLS Results

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

In Table 2.5, the GDP growth rate positively affects the level of democracy. The income per capita (logged) also positively affects democracy in models 1 and 3. However, when we add a squared term (models 2 and 4), its effect gets statistically insignificant. Per capita income also

has a strongly positive effect on tax revenue in first-stage equations. We have argued before that a ruler has a strong incentive to implement such policies, which potentially raise the per capita income of citizens since it increases tax revenue.

External debt is a substitute for tax revenue, as indicated in 1st stage equations. When a ruler relies on foreign debt, she can postpone the reforms to increase tax revenue (at least in the short run) to avoid the political cost of enhancing tax revenue. However, in the long run the effect could be different since lenders like the IMF can force the borrowing governments to introduce policies which increase tax revenue. In the table, their effect on democracy is inconsistent.

Inequality (Palma ratio) causes a democratic decline in models 1 and 3. However, its effect is insignificant in models 2 and 4. Income inequality reduces tax revenue in our first stage estimation. This could be because of unequal societies. Also, inequality can hinder economic growth (Wilkinson and Pickett 2010; Barro 2008), further reducing tax revenue.

Trade openness, which represents citizens' international exposure to foreign institutions, norms, ideas, and values, strongly affects democracy in models 1 and 3. It also promotes tax revenue since trade openness is positively associated with economic growth (Huchet-Bourdo et al. 2017; Chang et al. 2009).

Oil rent negatively affects democracy. In our first-stage estimation, oil rent also raises tax revenue, although the level of significance is statistically low. This can be because, in many oil-dependent countries, economic activities largely rely on oil rents. Therefore, oil prices may positively affect economic growth in oil-exporting countries (Abdelsalam 2020).

Secondary education, which proxies the human capital of a country, has a positive effect on tax revenue and on democracy (model 1 and model 3). This means that when the level of education increases in a country, the government's tax collection increases. It can be because of its positive effect on people's willingness to pay since education enhances citizens' understanding of tax compliance and being law-abiding when submitting tax returns. Since correlation is not causation, reverse causality can also exist here, meaning that when a government collects more taxes, it spends more on education.

Since the cost to benefit model of taxation is our main argument supporting tax to democracy nexus, we have tested this argument empirically, as suggested by Ross (2004). Its results are given in Table 2.6, confirming our hypothesis that the tax-to-spending ratio matters in promoting democracy.⁴¹ However, our results are only statistically significant in model 7 when we use the Freedom House index.

Our findings in Table 2.6 support Ross's (2004) findings that a higher tax-to-government spending ratio promotes democracy. However, Ross found that the tax-to-GDP ratio had no significant effect on democracy, whereas we found that it does have an impact. This difference is due to our approach to addressing endogeneity, which Ross did not do.⁴² Additionally, our study covers the period from 1980 to 2018, while Ross's study considered the period from 1971 to 1997. Furthermore, we use a better data source, the ICTD database, while Ross relied on the World Bank's data.

Our findings also contradict Jin Yi (2012), who suggests that the influence of taxation (indicated by the tax-to-government spending ratio) on democracy is conditional on income inequality. Our research shows no conditionality on any other variables, including inequality,

⁴¹ We have also tested non-linear relationship between tax/spending ratio and democracy. We found the insignificant coefficients for both linear and quadratic terms.

⁴² Even if we do not address endogeneity and utilize simple an OLS and Fixed Effect approach, our results (appendix 2.1) indicate a non-linear inverted U-shaped relationship between tax revenue and democracy. Moreover, if we drop the squared term, the findings (appendices 2.1 and 2.2) indicate a negative effect of tax revenue and tax to spending ratio on democracy.

when using the Freedom House index. The difference in results could be due to several reasons: Jin Yi (2012) does not address endogeneity, uses a different dataset (World Tax Database by the University of Michigan), and covers the period from 1970 to 2000.

The effect of control variables on endogenous variable and dependent variable is different for some variables compared to the previous table. The GDP growth rate positively affects tax revenue, but its effect is statistically insignificant for the dependent variables. External debt stocks positively affect the Freedom House index, which could be because of donors' effect. However, their effect is statistically insignificant on endogenous variable and the Polity2 index. Trade openness positively affects the tax to spending ratio and Polity2, but its effect is not significant for the Freedom House index and its first stage equation. GDP per capita and Oil rents behave similarly in terms of their nature of the relationship as in Table 2.5.

Secondary education positively affects democracy (model 8) and affects tax to government size negatively. It means when the level of secondary education increases in a country, it makes them not willing to pay taxes more than the benefit they receive in the form of public goods. Evaluation of utility gain (by consuming public goods) against utility loss (by paying taxes) is our main argument, which affects peoples' preferences for political regimes. This evaluation is more robust when people are well-educated.

Our instrumental variable, commodity terms of trade, is highly significant. However, natural disaster (episodes) is not significant statistically. F-statistics confirms the robustness of our IVs. The number of observations in Table 2.6 is comparatively lower than in Table 2.5. This is mainly because the government size data is available for a limited number of countries.

	Freedom H	Iouse Index	Polity2 Index		
VARIABLES	1 st Stage	Model 7	1 st Stage	Model 8	

Table 2.6: Effect of Tax to (Government) Spending Ratio on Democracy

Tax_Spending		0.034**		0.010
		(0.015)		(0.018)
GDP_GrowthR	0.800***	-0.010	0.813***	-0.015
	(0.119)	(0.016)	(0.126)	(0.019)
External_Debt_Stock	0.020	0.005***	0.027	0.003
	(0.020)	(0.002)	(0.021)	(0.002)
Palma_WIID	0.636	0.047	0.612	0.051
	(0.714)	(0.058)	(0.741)	(0.067)
Trade_Openess	0.049	-0.001	0.060*	0.016***
	(0.034)	(0.003)	(0.036)	(0.003)
GDPPC_USD_log	3.247***	0.408***	3.635***	0.468***
	(1.183)	(0.109)	(1.212)	(0.131)
oil_rev	0.897***	-0.053**	0.924***	-0.116***
	(0.224)	(0.024)	(0.226)	(0.029)
Edu_Secondary	-0.180***	0.001	-0.187***	0.012**
	(0.049)	(0.005)	(0.051)	(0.006)
CommodityTT	0.589***		0.559***	
	(0.112)		(0.116)	
NDisaster_Episodes	-0.107		-0.177	
	(0.217)		(0.224)	
Constant	-2.651	-0.170	-3.857	0.943
	(14.007)	(1.093)	(14.408)	(1.229)
Observations	1,025	1,025	959	959
Number of Countries	81	81	74	74
F-Statistics	54.54		69.46	

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Table 2.7 confirms our hypothesis (H1) that tax reliance is positively associated with democracy. The effect is stronger in terms of magnitude in Polity2 than in the Freedom House index. If the government's tax reliance increases by five percentage points, the level of electoral democracy in the country is expected to increase by one level. The same applies to liberal democracy if tax reliance is increased by nine percentage points. Hence, our results confirm the findings of Prichard et al. (2018). They also use the ICTD dataset to find a positive effect of tax reliance on democracy for a sample of 122 economies from 1981 to 2008. Our data, however, covers more time period from 1981 to 2018. Prichard et al. (2018) results are also not robust in a larger number of specifications, which is not the case for our results (see our robustness section).

Among our control variables, GDP growth rate, trade openness, GDP per capita and secondary education promote democracy. The effects of inequality and oil rents on democracy are negative. Secondary education and GDP per capita positively affect tax reliance, while oil rents negatively affect tax reliance. However, external debt stock positively influences tax reliance (Table 2.7) and negatively influences tax revenue (Table 2.5). It means when a government aims to go for external borrowing, it is mainly because the government's non-tax revenue is declining, which causes the ratio of taxes to total revenue (sum of tax and non-tax revenue) to increase.

Our instrumental variable, terms of trade, is highly correlated with the endogenous variable, tax reliance. However, its sign is negative which means TOT increases non-tax revenue more than it increases tax revenue. Terms of trade positively influence both tax and non-tax revenue since it is "the relative price of export in terms of imports (Schmitt-Grohé et al., 2022)". This is because non-tax revenue is mainly derived from natural resource rents, largely earned from foreign markets. In countries that heavily rely on natural resources, the major portion of their exports usually consists of commodities like oil. The second instrumental variable, natural disaster, is significant only in the 1st stage equation of model 14. For the 1st stage equation of model 13, its p-value is 0.127.

	Freedor	Freedom House		2 Index
VARIABLES	1 st Stage	Model 13	1 st Stage	Model 14
Tax_Reliance		0.111***		0.205***
		(0.032)		(0.054)
GDP_GrowthR	-0.025	0.022**	-0.018	0.029**
	(0.040)	(0.009)	(0.043)	(0.013)
External_Debt_Stock	0.016***	-0.000	0.014**	-0.001
	(0.006)	(0.001)	(0.006)	(0.002)
Palma_WIID	-0.016	-0.024	-0.004	-0.118***
	(0.112)	(0.024)	(0.115)	(0.036)
Trade_Openess	-0.002	0.009***	0.006	0.020***

 Table 2.7: Effect of Tax Reliance on Democracy – FE-2SLS Results

	(0.011)	(0.002)	(0.011)	(0.004)
GDPPC_USD_log	1.224***	0.229**	0.960*	0.286*
	(0.463)	(0.107)	(0.495)	(0.162)
Edu_Secondary	0.040**	0.004	0.033	0.018***
	(0.018)	(0.004)	(0.020)	(0.007)
oil_rev	-0.561***	-0.052**	-0.529***	-0.097**
	(0.069)	(0.025)	(0.070)	(0.039)
CommodityTT	-0.263***		-0.229***	
	(0.039)		(0.041)	
NDisaster_Episodes	-0.139		-0.155*	
	(0.091)		(0.092)	
Constant	98.326	-6.548***	96.497***	-14.797***
	(5.002)	(2.315)	(5.199)	(4.088)
Observations	1,905	1,905	1,769	1,769
Number of Countries	107	107	97	97
F-Statistics	403.244		518.264	

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

As we argued, taxation affects economic freedom in the same way as it affects democracy. This is because both political and economic equilibria are interconnected (Acemoglu and Robinson, 2013). Table 2.8 shows that the relationship between tax revenue and economic freedom is non-linear, with the turning point being at 24.91, which is almost 1.50 points higher than the turning point in Table 2.5. It means, initially, tax revenue promotes economic freedom in a country mainly because taxes are necessary to make institutions strong and efficient, so that they can provide public goods and implement better policies. This creates positive externalities for the market to develop. However, excessive taxation is predatory in nature as well. It reduces the firm's profitability and investment, and citizens' purchasing power. Therefore, big government is considered detrimental for market development and economic freedom (Friedman 2016): so, after a certain level, an increase in tax revenue causes a decline in economic freedom in the sample countries.

The table shows that the tax reliance of a ruler also facilitates economic freedom. The relationship is highly significant in model 11. However, the relationship between tax to

(government) spending is statistically insignificant. This means the tax to spending ratio only matters for political freedom.

In Table 2.8, the GDP growth rate has a positive influence on the tax to spending ratio. However, for tax reliance, its relationship is negative. It means economic growth raises nontax revenue more than tax revenue in the sample countries. GDP growth rate is also beneficial for economic freedom as indicated in models 9, 11 and 12.

External debt stocks reduce tax revenue, tax reliance and tax to spending ratio as expected. Their positive effect on economic freedom is only found in models 10 and 12. Here again we expect that its significant effect on economic policies is possible in the long run because of lenders' effect. Economic inequality is good for economic freedom, as shown in model 12, where the relationship is highly significant. However, in model 11, Palma's effect is negative, but it is statistically less significant. In other models, inequality is statistically insignificant. Gross capital formation has a positive relationship with tax revenue in all equations. GDP per capita (logged) has a positive effect on tax revenue but a negative effect on the tax to spending ratio. It means that higher per capita income is associated with more government spending in relation to tax collection. GDP per capita also has a strongly positive relationship with economic freedom in our models 9, 11 and 12.

Only TOT is significant among our instrumental variables. Its relationship with the endogenous variable is similar to that observed in Tables 2.5, 2.6, and 2.7. F-statistics confirm the robustness of these instruments.

		Economic Freedom Index					
VARIABLES	1 st Stage	Model 9	Model	1 st Stage	Model 11	1 st Stage	Model 12
			10				

Table 2.8: Effect of Tax Revenue, Tax Reliance and Tax/Spending Ratio on Economic Freedom
Tax_Rev		-0.836*	2.092*				
		(0.504)	(1.227)				
Tax_Rev2			-0.042*				
			(0.024)				
Tax_Reliance					0.058***		
					(0.014)		
Tax_Spending							-0.013
							(0.008)
GDP_GrowthR	0.031	0.041*	-0.015	-0.154***	0.023***	0.888***	0.016*
	(0.020)	(0.023)	(0.025)	(0.045)	(0.005)	(0.127)	(0.009)
External_Debt_Stock	-0.006**	-0.004	0.011*	-0.014**	0.001	-0.036*	0.003***
	(0.003)	(0.004)	(0.006)	(0.006)	(0.001)	(0.020)	(0.001)
Palma_WIID	0.013	-0.004	-0.058	0.040	-0.028*	-0.117	0.083***
	(0.066)	(0.058)	(0.060)	(0.143)	(0.015)	(0.768)	(0.031)
Gross_Capital_Formation	0.108***	0.097*	-0.074	0.064**	0.003	0.512***	0.007
	(0.013)	(0.055)	(0.049)	(0.029)	(0.003)	(0.088)	(0.005)
GDPPC_USD_log	1.397***	1.839**	-0.688	0.305	0.600***	-2.455**	0.647***
	(0.159)	(0.714)	(0.813)	(0.374)	(0.039)	0.976	(0.044)
CommodityTT	0.030*			-0.339***		0.607***	
	(0.017)			(0.044)		(0.121)	
NDisaster_Episodes	-0.001			-0.062		0.049	
	(0.032)			(0.074)		(0.193)	
Constant	-0.293	3.187*	-8.038	113.58***	-3.180***	24.749	1.763**
	(2.206)	(1.784)	(5.326)	(5.289)	(1.132)	(15.337)	(0.782)
Observations	1,574	1,574	1,574	1,423	1,423	927	927
Number of Countries	98	98	98	96	96	75	75
Turning Point			24.91				
F Statistics	65.22			308.91		56.21	

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

As we argued in our theoretical framework tax reliance has a long-term effect on democracy. To test this, we have applied different time lags (t1, t2, t3, t5, t7, t10) on our dependent variables. We find a strongly positive effect of tax reliance on democracy until the time lag5 (appendices; 2.5, 2.6, 2.7, 2.8, 2.9, 2.10). The magnitude of the coefficient is higher initially (for t0 and t1), which declines with time until it gets insignificant at t7. However, for economic freedom, all-time lags are positively significant.

For the variable tax revenue, the non-linear hump-shaped effect is significant until the time t1. After that, it becomes insignificant for the dependent variable, democracy (appendices 2.8, 2.9, 2.10). However, for the dependent variable economic freedom, it remains significant until the time lag 5. Likewise, for the tax variable, tax to spending ratio, the effect is significant for the time lag t1 only for the Freedom House index. For the economic freedom index, it is not significant for any time lag (appendices; 2.11, 2.12, 2.13).

Robustness Check:

Appendices 2.14, 2.15, 2.16 and 2.17 show the results when we use instrumental variables separately for each independent variable, tax revenue, tax-to-spending ratio and tax reliance, respectively. They show that the instrumental variable, terms of trade (TOT), is significant in all specifications. However, another instrumental variable, natural disaster, is only significant for the independent variable, tax revenue, for democracy. This shows our results are not robust when we only use natural disaster. Moreover, dropping natural disaster also enlarges the magnitude of our independent variables in all specifications except in the case when we use tax revenue for the dependent variables, democracy and economic freedom. Furthermore, in model 7 of Appendix 2.17, we observe the negative relationship between tax to spending ratio and economic freedom when we drop natural disaster. Thus, utilizing both instrumental variables together produces more meaningful and robust results.

Our number of observations for Polity2 and Freedom House index are different. This could cause a difference in their results. To test whether our results are robust or not, we use same number of observations for each category of independent variable. Appendices 2.18, 2.19 and 2.20 show that our results are comparable to Tables 2.5, 2.6 and 2.7 in terms of the nature of the relationship between independent variables and dependent variables and the turning point.

Moreover, using this treatment, our instrumental variables have become stronger and more significant (Appendices 2.18 and 2.19).

The General to specific approach (GTS) is our main strategy to confirm the robustness of our results. Its final model and results for democracy are given in Appendices 2.21, 2.22 and 2.23. Except for population growth, all other control variables are the same as we controlled in our main model specifications in Tables 2.6, 2.7, and 2.8. The number of countries and observations are also the same. Likewise, there is a minor difference in the turning points. However, the level of significance for the independent variable, tax to spending ratio, has improved from lower significance (Table 2.7) to high significance (Appendix 2.22).

The outcome model for economic freedom has, to some extent, changed. Except for GDP per capita (logged), all control variables are different from Table 2.8. Therefore, GTS captures more observations (2058 observations; 138 countries) than our main model in Table 2.8 (1574 observations; 98 countries). The results are similar for tax revenue and tax reliance (Appendix 2.25) in terms of their nature of relationship with the dependent variable. However, there are two contrasting effects. The turning point in Appendix 2.24 is almost 5 points higher than Table 2.8. Moreover, the effect of the tax to spending ratio is negative on economic freedom in Appendix 2.25, but it is insignificant in Table 2.9 with the negative sign of the coefficient.

We have also utilized World Bank data for tax revenue to check whether it confirms our hypothesis or not. Appendices 2.25 and 2.26 indicate a decline in the number of observations and countries since the data has a significant number of missing observations. Appendix 2.26 confirms the non-linear relationship between tax revenue and the Freedom House measure. However, its turning point is very low, at 17.76 % of GDP. Moreover, for Polity2, coefficients are not significant. Appendix 2.26 shows the negative influence of tax to spending ratio on Polity2, which is contrary to our results in Table 2.7, which shows a positive influence of tax

to spending ratio on democracy. This means our results depend on the ICTD dataset, and using the World Bank data, results could be different. Ross (2004) uses the World Bank data, and his results show an insignificant relationship between tax revenue and democracy and a positive relationship between tax to spending ratio and democracy. Jin Yi (2012) also uses the World Bank data and finds the conditional effect of the tax to spending ratio on democracy.

We also did some heterogeneity tests. First, we have divided our sample into resourcedependent and non-resource-dependent countries. Resource-dependent countries have an abundance of non-tax revenue. Therefore, it is possible that the taxation-democracy nexus does not exist there. Appendix 2.27 shows that tax revenue has a nonlinear inverted U-shaped effect on economic freedom at almost the same turning point, 23.87. Appendix 2.29 indicates that the tax reliance has a negative relationship with Polity2 but an insignificant relationship with Freedom House and Fraser Institute indices. Appendix 2.28 illustrates that the tax to spending ratio has a negative relationship with economic freedom and a statistically insignificant relationship with democracy. These results do not seem reliable because of three reasons: 1) The number of observations has declined significantly. We only have 6 to 11 countries in our sample, with just 60 to 157 observations. 2) The F-Statistics are significantly lower, showing non-robust results. 3) Our instrumental variable, natural disaster, behaves differently in Appendix 2.28, indicating that an increase in natural disaster causes an increase in the tax to spending ratio.

Using the non-resource-dependant countries sample, we have observed (Appendices 2.30, 2.31, and 2.32) that our results in Tables 2.5, 2.6 and 2.7 are robust. The effect of tax to spending ratio on the Freedom House index is stronger now (Appendix 2.31), as we predicted in our theoretical framework. It is because natural resource depending countries distribute more than they collect tax revenue since they mainly rely on non-tax revenue for spending.

Therefore, their tax to spending ratio is very small. When we drop them from our sample, the relationship becomes more significant.

For the second heterogeneity test, we have two sets of countries: democratic and nondemocratic countries. We find that the relationship between tax variables and democracy is largely insignificant (Appendices 2.33 and 2.34). Only tax revenue's non-linear effect on the Freedom House index is significant but with a turning point that is 4-points lower. We find a statistically strong effect of tax revenue and tax reliance on democracy in non-democratic countries (Appendices 2.35 and 2.36). It means tax variables cause democratization in autocratic countries and do not cause democratic breakdown in democratic societies.

Conclusion

This paper examines the influence of taxation on democracy. Moreover, we aim to find whether taxation influences economic freedom in the same way as it does in the case of democracy. We employ three indicators of taxation which capture its different aspects: tax revenue (% of GDP), tax reliance and tax to (government) spending ratio. Our results provide evidence that taxation causes democratisation, confirming that the taxation–representation nexus indeed exists. This is also true for economic freedom - an increase in taxation promotes economic freedom. We find a positive effect of tax reliance and tax to spending ratio on political and economic freedom. However, the effect of tax revenue is non-linear and hump-shaped. It first promotes democracy and economic freedom until the turning point is reached, around 23 percent of GDP in our estimation, where its marginal effect becomes zero. After that, a further increase in tax revenue negatively affects both freedoms. We suggest that a higher tax burden and a *bigger size of government* seem to affect the dependent variable negatively, as the existing literature indicates. Moreover, they increase rent-seeking, regulatory barriers, and the overall inefficiency in the economic system.

We also find a consistently strong association between secondary education and tax variables in our estimation. The secondary education level promotes tax revenue and tax reliance on one hand and reduces the tax to spending ratio on the other hand. It means that the education level encourages tax compliance may be for the benefit of better institutions and public goods. It also narrows the gap between taxes and spending, discouraging higher taxes against lower spending. This effect is majorly caused by citizens' rational behaviour which is positively affected by their education level. However, there could be an endogeneity between taxation and education level. When a government collects more tax revenue, it also spends more on education. Moreover, citizens' higher income level (which is also associated with their higher tax payments) also causes their higher spending on education. Thus, exploring the association between education and tax revenue by addressing endogeneity can lead to a significant contribution to the existing literature and public policy. This paper invites research on it.

Appendix A2

		Freedon	n House		Polity2						
	Poole	d OLS	Fixed	Effect	Poolee	IOLS	Fixed	Effect			
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8			
Tax_Rev	0.007	0.090***	-0.017*	0.140***	-0.014	-0.000	-0.008	0.175***			
	(0.010)	(0.029)	(0.010)	(0.025)	(0.012)	(0.035)	(0.013)	(0.033)			
Tax_Rev2		-0.002***		-0.004***		-0.000		-0.005***			
		(0.001)		(0.001)		(0.001)		(0.001)			
GDP_GrowthR	-0.020*	-0.019	0.022***	0.022***	-0.008	-0.008	0.026***	0.026***			
	(0.012)	(0.012)	(0.007)	(0.007)	(0.015)	(0.015)	(0.010)	(0.010)			
External_Debt_Stock	0.000	0.000	0.002*	0.002**	-0.002	-0.002	0.002	0.002			
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)			
Palma_WIID	0.041**	0.046**	-0.037*	-0.026	-0.029	-0.028	-0.149***	-0.135***			
	(0.018)	(0.018)	(0.021)	(0.021)	(0.021)	(0.021)	(0.027)	(0.027)			
Trade_Openess	0.004**	0.004**	0.008***	0.006***	0.002	0.002	0.021***	0.019***			
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)			
GDPPC_USD_log	1.117***	1.083***	0.357***	0.295***	0.814***	0.809***	0.441***	0.366***			
	(0.073)	(0.074)	(0.080)	(0.080)	(0.090)	(0.091)	(0.108)	(0.108)			
oil_rev	-0.122***	-0.116***	-0.013	-0.014	-0.110***	-0.109***	-0.033**	-0.035**			
	(0.009)	(0.009)	(0.012)	(0.012)	(0.011)	(0.011)	(0.016)	(0.016)			
Edu_Secondary	0.008***	0.008***	0.008**	0.007**	0.025***	0.025***	0.022***	0.020***			
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)			
Constant	-3.585***	-3.986***	1.743***	1.045**	-0.493	-0.559	0.878	0.091			
	(0.452)	(0.470)	(0.503)	(0.508)	(0.558)	(0.581)	(0.670)	(0.677)			
Observations	2,158	2,158	2,158	2,158	2,021	2,021	2,021	2,021			
R-squared	0.315	0.318	0.069	0.089	0.253	0.253	0.169	0.185			
Number of Countries	111	111	111	111	101	101	101	101			
Turning Point		22.5		17.50		-		17.50			
Hauman Test			0.00				0.00				
Durbin Wu-Hausma Test	0.0000		0.0000		0.0000		0.0000				

Appendix 2.1: Effect of Tax Revenue (% of GDP) on Democracy – OLS and FE Results

	Freedom H	ouse Index	Polity2	Index
	OLS	Fixed	OLS	Fixed
		Effect		Effect
VARIABLES	Model 1	Model 2	Model 3	Model 4
Tax_Spending	0.001	-0.009***	0.004	-0.006*
	(0.003)	(0.002)	(0.003)	(0.003)
GDP_GrowthR	-0.039**	0.025***	-0.036*	-0.003
	(0.018)	(0.008)	(0.020)	(0.011)
External_Debt_Stock	0.006**	0.006***	-0.003	0.003*
	(0.002)	(0.001)	(0.003)	(0.002)
Palma_WIID	0.276***	0.064	0.231***	0.057
	(0.034)	(0.048)	(0.038)	(0.064)
Trade_Openess	0.008***	0.001	0.007***	0.016***
	(0.002)	(0.002)	(0.003)	(0.003)
GDPPC_USD_log	0.909***	0.557***	0.463***	0.526***
	(0.098)	(0.080)	(0.112)	(0.107)
oil_rev	-0.156***	-0.006	-0.161***	-0.098***
	(0.012)	(0.015)	(0.013)	(0.020)
Edu_Secondary	0.004	-0.008**	0.022***	0.009**
	(0.004)	(0.003)	(0.005)	(0.004)
Constant	-2.652***	2.272***	1.290	1.756**
	(0.667)	(0.556)	(0.789)	(0.740)
Observations	1,052	1,052	982	982
R-squared	0.311	0.089	0.255	0.185
Number of Countries	84	84	77	77
Turning Point				
Hausman Test				
Durbin Wu-Hausman Test	0.00	0.00	0.00	0.00

	Appendix 2.2: Effect of Tax to	Spending Ratio on Democracy	y – OLS and FE Results
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	Freedom	n House	Polity2	2 Index		
-	OLS	FE	OLS	FE		
VARIABLES	Model 1	Model 2	Model 3	Model 4		
Tax_Reliance	0.040***	0.018***	0.031***	0.014**		
	(0.004)	(0.004)	(0.005)	(0.006)		
GDP_GrowthR	-0.001	0.020***	0.016	0.026**		
	(0.012)	(0.008)	(0.016)	(0.010)		
External_Debt_Stock	0.001	0.002	-0.002	0.002		
	(0.001)	(0.001)	(0.002)	(0.002)		
Palma_WIID	0.027	-0.028	-0.050**	-0.126***		
	(0.018)	(0.021)	(0.021)	(0.027)		
Trade_Openess	0.004**	0.010***	-0.000	0.021***		
	(0.002)	(0.002)	(0.002)	(0.003)		
GDPPC_USD_log	1.070***	0.319***	0.723***	0.470***		
	(0.075)	(0.087)	(0.095)	(0.117)		
Edu_Secondary	0.009***	0.010***	0.025***	0.026***		
	(0.003)	(0.003)	(0.004)	(0.005)		
oil_rev	-0.087***	-0.005	-0.080***	-0.016		
	(0.010)	(0.013)	(0.012)	(0.017)		
Constant	-6.514***	0.010	-2.549***	-1.035		
	(0.580)	(0.631)	(0.739)	(0.848)		
Observations	1,972	1,972	1,833	1,833		
R-squared	0.329	0.087	0.245	0.183		
Number of Countries	110	110	100	100		
Hausman test		0.00		0.00		
Durbin Wu-Hausman	0.00	0.00	0.00	0.00		

	OLS	OLS	FE	FE	OLS	FE	OLS	FE
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Tax_Rev	0.019***	0.113***	0.007	0.072***				
	(0.004)	(0.012)	(0.005)	(0.013)				
Tax_Rev2		-0.002***		-0.002***				
		(0.000)		(0.000)				
Tax_Reliance					0.023***	0.007***		
					(0.001)	(0.002)		
Tax_Spending							-0.001	-0.004***
							(0.001)	(0.001)
GDP_GrowthR	0.019***	0.018***	0.016***	0.015***	0.026***	0.015***	0.006	0.008
	(0.006)	(0.006)	(0.004)	(0.004)	(0.006)	(0.004)	(0.007)	(0.005)
External_Debt_Stock	0.001*	0.001	0.001***	0.002***	0.001	0.001	0.004***	0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Palma_WIID	-0.022**	-0.008	-0.019	-0.020	-0.022**	-0.024*	0.011	0.089***
	(0.010)	(0.010)	(0.013)	(0.013)	(0.009)	(0.013)	(0.012)	(0.030)
Gross_Capital_Formation	0.011***	0.011***	0.006**	0.005*	0.015***	0.007***	0.010***	0.002
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
GDPPC_USD_log	0.385***	0.344***	0.677***	0.644***	0.524***	0.619***	0.461***	0.675***
	(0.025)	(0.025)	(0.032)	(0.032)	(0.021)	(0.033)	(0.028)	(0.038)
Constant	2.636***	2.124***	0.770***	0.466*	-0.049	0.806**	2.461***	0.908**
	(0.198)	(0.203)	(0.251)	(0.255)	(0.238)	(0.327)	(0.279)	(0.357)
Observations	1,593	1,593	1,593	1,593	1,434	1,434	942	942
R-squared	0.277	0.308	0.296	0.311	0.402	0.269	0.265	0.286
Number of Countries	100	100	100	100	98	98	77	77
Hausman Test			0.00	0.00		0.00		0.00
Durbin Wu-Hausman	0.00	0.00			0.00		0.00	

Appendix 2.4: Effect of Tax Revenue, Tax to Spending Ratio and Tax Reliance on Economic Freedom

	Freedom Ho	use Index	Polity2	2 Index	Fraser Inst	itute Index	Freedom H	ouse Index	Polity2	2 Index	Fraser Inst	itute Index
VARIABLES	1 st stage	Model 1	1 st stage	Model 2	1 st stage	Model 3	1 st stage	Model 4	1 st stage	Model 5	1 st stage	Model 6
Tax_Reliance_lag1		0.104***		0.195***		0.063***						
		(0.026)		(0.042)		(0.013)						
CommodityTT_lag1	-0.317***		-0.288***		-0.330***							
	(0.039)		(0.040)		(0.040)							
NdisasterEp_lag1	-0.154*		-0.181*		-0.024							
	(0.090)		(0.095)		(0.073)							
Tax_Reliance_lag2								0.107***		0.215***		0.062***
								(0.028)		(0.048)		(0.011)
CommodityTT_lag2							-0.293***		-0.274***		-0.346***	
							(0.040)		(0.042)		(0.038)	
NdisasterEp_lag2							-0.121		-0.117		-0.022	
							(0.092)		(0.097)		(0.073)	
Constant	105.502***	-6.063***	105.18***	-14.296***	114.806***	-3.157***	110.108***	-6.628***	110.640***	-16.670***	116.587***	-3.038***
	(5.010)	(1.980)	(5.265)	(3.333)	(5.009)	(1.087)	(5.213)	(2.307)	(5.531)	(4.066)	(4.893)	(0.974)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,892	1,892	1,728	1,728	1,462	1,462	1,882	1,882	1,688	1,688	1,471	1,471
Number of Countries	107	107	97	97	96	96	107	107	96	96	97	97
F-Statistics	402.364		510.96		313.41		402.949		494.21		324.194	

Appendix 2.5: Effect of Tax Reliance (Lag1 & Lag2) on Democracy and Economic Freedom – FE-2SLS Results

	Freedor	n House	Polity2	Index	Fraser Inst	itute Index	Freedom H	ouse Index	Polity2	Index	Fraser Inst	itute Index
	Inc	dex										
VARIABLES	1 st Stage	Model 1	1 st Stage	Model 1	Model 1	Model 1	1st Stage	Model 1	1st Stage	Model 1	Model 1	Model 1
Tax_Reliance_lag3		0.101***		0.220***		0.064***						
		(0.031)		(0.061)		(0.014)						
CommodityTT_lag3	-0.272		-0.221***		-0.290***							
	(0.041)		(0.043)		(0.038)							
NdisasterEp_lag3	-0.125		-0.141		-0.030							
	(0.089)		(0.092)		(0.072)							
Tax_Reliance_lag5								0.082**		0.185**		0.042***
								(0.040)		(0.077)		(0.012)
CommodityTT_lag5							-0.190***		-0.153***		-0.271***	
							(0.042)		(0.045)		(0.037)	
NdisasterEp_lag5							-0.133		-0.155		-0.071	
							(0.091)		(0.095)		(0.077)	
Constant	109.208	-5.906**	105.501***	-16.574***	113.11***	-3.126***	98.124***	-3.551	105.501**	-11.935*	111.247**	-0.873
									*		*	
	(5.540)	(2.504)	(5.842)	(5.126)	(5.040)	(1.170)	(5.962)	(3.117)	(5.843)	(6.236)	(5.195)	(0.989)
Control Variables	Yes	Yes	yes	Yes	Yes	yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,825	1,825	1,636	1,636	1,470	1,470	1,708	1,708	1,528	1,528	1,466	1,466
Number of Countries	107	107	96	96	97	97	106	106	95	95	97	97
F-Statistics	387.29		475.83		328.66		358.175		469.93		304.615	

Appendix 2.6: Effect of Tax Reliance (Lag3 & Lag5) on Democracy and Economic Freedom – FE-2SLS Results

	Freedom H	ouse Index	Polity2	Index	Fraser Inst	itute Index	Freedom H	ouse Index	Polity2	Index	Fraser Insti	tute Index
VARIABLES	1 st Stage	Model 1	1 st Stage	Model 2	1st Stage	Model 3	1 st Stage	Model 4	1 st Stage	Model 5	1 st Stage	Model 6
Tax_Reliance_lag7		0.122		0.394		0.037***						
		(0.086)		(0.396)		(0.010)						
Tax_Reliance_lag10								0.014		-0.073		0.018*
								(0.047)		(0.060)		(0.010)
CommodityTT_lag7	-0.108**		-0.053		-0.284***							
	(0.050)		(0.056)		(0.036)							
NdisasterEp_lag7	-0.045		-0.064		-0.026							
	(0.106)		(0.114)		(0.078)							
CommodityTT_lag10							0.108		0.177**		-0.298***	
							(0.067)		(0.075)		(0.046)	
NdisasterEp_lag10							-0.292**		-0.279**		-0.009	
							(0.127)		(0.136)		(0.095)	
Constant	88.607***	-6.294	85.912	-27.715	110.25***	0.084	48.935***	0.676	44.26***	7.823**	108.55***	1.428*
	(7.089)	(6.630)	(7.629)	(31.720)	(5.372)	(0.845)	(8.782)	(2.984)	(9.701)	(3.971)	(6.623)	(0.779)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,599	1,599	1,427	1,427	1,432	1,432	1,423	1,423	1,262	1,262	1,395	1,395
Number of Countries	104	104	94	94	97	97	102	102	91	91	97	97
F-Statistics	356.87		464.317		324.833		327.13		428.62		332.54	

Appendix 2.7: Effect of Tax Reliance (Lag7 & Lag10) on Democracy and Economic Freedom – FE-2SLS Results

	Freed	om House I	ndex	Р	olity2 Index	ζ.	Fraser Institute Index			
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4	1 st Stage	Model 5	Model 6	
Tax_Rev_lag1		-0.670***	0.906**		-1.418***	1.408**		-1.088	1.881*	
Tax_ Rev_lag1		(0.220)	-0.020** (0.008)		(0.401)	(0.373) -0.031** (0.012)		(0.897)	(1.079) -0.035* (0.020)	
CommodityTT_lag1	0.029* (0.015)		(0.000)	0.031* (0.016)		(0.012)	0.025 (0.020)		(0.020)	
NdisasterEp_lag1	-0.099*** (0.033)			-0.107*** (0.035)			-0.006 (0.038)			
Constant	2.168 (1.982)	5.316*** (1.492)	-2.083 (1.729)	2.233 (2.049)	9.195*** (2.955)	-4.602* (2.542)	3.239 (2.658)	8.383 (5.460)	-10.265 (7.223)	
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Observations	2,077	2,066	2,077	1,902	1,902	1,902	1,141	1,141	1,141	
Number of Countries	108	108	108	98	98	98	91	91	91	
Turning Point			22.68			23.29			26.87	
F Statistics	33.17			26.86			44.60			

Appendix 2.8: Effect of Tax Revenue (Lag1) on Democracy and Economic Freedom – FE-2SLS Results

Appendix 2.9: Effect of Tax Revenue (Lag2) on Democracy and Economic Freedom – FE-2SLS Results

	Freed	om House I	ndex	I	Polity2 Index	ζ.	Fraser Institute Index				
VARIABLES	1st stage	Model 1	Model 2	1st stage	Model 3	Model 4	1 st	Model	Model 6		
							stage	5			
Tax_ICTD_lag2		-0.616***	0.584		-1.214***	0.807		-1.270	0.889***		
		(0.196)	(0.385)		(0.327)	(0.524)		(1.246)	(0.281)		
Tax_ICTD2_lag2			-0.013			-0.018			-0.018***		
			(0.008)			(0.011)			(0.006)		
CommodityTT_lag2	0.037**			0.047***			0.017				
	(0.016)			(0.016)			(0.017)				
NdisasterEp_lag2	-0.098***			-0.098***			-0.003				
	(0.034)			(0.036)			(0.031)				
Constant	3.333	6.229***	-0.483	2.911	11.570**	-1.662	0.340	4.146	-2.719*		
					*						
	(2.035)	(1.720)	(1.779)	(2.145)	(3.137)	(2.392)	(2.118)	(3.055)	(1.422)		
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Observations	2,043	2,043	2,043	1,848	1,848	1,848	1,618	1,618	1,618		
Number of Countries	108	108	108	97	97	97	98	98	98		
Turning Point			-			-			24.69		
F Statistics	64.51			39.28			69.42				

	Freed	om House In	ıdex	Po	olity2 Index		Fraser Institute Index			
VARIABLES	1st Stage	Model 1	Model 2	1st Stage	Model 3	Model	1 st	Model 5	Model 6	
						4	Stage			
Tax_ICTD_lag3		-0.522***	0.354		-0.999***	0.661		-0.658*	0.800***	
		(0.156)	(0.325)		(0.243)	(0.438)		(0.391)	(0.297)	
Tax_ICTD2_lag3			0.008			-0.015			-0.017***	
			(0.007)			(0.009)			(0.006)	
CommodityTT2_lag3	-0.051***			0.063***			0.023			
	(0.016)			(0.017)			(0.017)			
NdisasterEp_lag3	-0.091***			-0.093***			-0.029			
	(0.035)			(0.036)			(0.030)			
Constant	2.261	6.461***	0.762	1.740	10.994***	-0.516	-1.082	2.538**	-2.275	
	(2.179)	(1.513)	(1.506)	(2.305)	(2.605)	(2.005)	(2.143)	(1.031)	(1.499)	
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Observations	1986	1986	1986	1,795	1,795	1,795	1,615	1,615	1,615	
Number of Countries	107	107	107	97	97	97	98	98	98	
Turning Point			-			-			23.53	
F Statistics	28.54			22.09			38.57			

Appendix 2.10: Effect of Tax Revenue (Lag3) on Democracy and Economic Freedom – FE-2SLS Results

Appendix 2.11: Effect of Tax to Spending Ratio (Lag1) on Democracy and Economic Freedom – FE-2SLS Results

	Freedom H	ouse Index	Polity2	Index	Fraser Inst	itute Index
VARIABLES	1st Stage	Model 1	1 st Stage	Model 2	1st Stage	Model 3
Tax_Spending_lag1		0.032*		-0.036		0.002
		(0.017)		(0.023)		(0.011)
CommodityTT_lag1	0.525***		0.461***		0.334***	
	(0.113)		(0.116)		(0.105)	
NdisasterEp_lag1	-0.222		-0.251		0.152	
	(0.222)		(0.232)		(0.192)	
Constant	6.769	-0.325	9.950	3.602**	62.396	1.389
	(14.441)	(1.218)	(14.859)	(1.580)	(14.243)	(1.162)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,016	1,016	927	927	943	943
Number of Countries	80	80	74	74	76	76
F Statistics	54.89		67.78		50.61	

	Freedom	Freedom House		2 Index	Fraser Inst	itute Index
	Ind	ex				
VARIABLES	1 st stage	Model 1	1 st stage	Model 2	1 st stage	Model 3
Tax_Spending_lag2		0.036		-0.067		-0.012
		(0.033)		(0.047)		(0.013)
CommodityTT_lag2	0.273**		0.267**		0.306***	
	(0.119)		(0.125)		(0.112)	
NdisasterEp_lag2	-0.141		-0.148		0.222	
	(0.228)		(0.237)		(0.195)	
Constant	40.46***	-1.013	39.67**	6.749**	60.14***	2.805**
	(15.686)	(2.466)	(16.341)	(3.431)	(14.750)	(1.233)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	978	978	883	883	927	927
Number of Countries	80	80	72	72	76	76
F Statistics	57.93		65.46		39.52	

Appendix 2.12: Effect of Tax to Spending Ratio (Lag2) on Democracy and Economic Freedom – FE-2SLS Results

Appendix 2.13: Effect of Tax to Spending Ratio (Lag3) on Democracy and Economic Freedom – FE-2SLS Results

	Freedom Ho	ouse Index	Polity2	2 Index	Fraser Inst	itute Index
VARIABLES	1 st Stage	Model 1	1 st Stage	Model 2	1st Stage	Model 3
Tax_Spending_lag3		0.050		-0.172		-0.004
		(0.051)		(0.162)		(0.012)
CommodityTT_lag3	0.203		0.143		0.302***	
	(0.124)		(0.127)		(0.101)	
NdisasterEp_lag3	-0.083		-0.055		0.131	
	(0.210)		(0.211)		(0.195)	
Constant	61.696***	-2.679	69.399	16.930	55.14***	2.152**
	(16.542)	(4.427)	(17.097)	(13.999)	(14.126)	(1.073)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	933	933	840	840	902	902
Number of Countries	78	78	70	70	76	76
F-Statistics	57.15		63.51		32.28	

	Free	dom House	Index		Polity2 Inde	X	Freed	lom House l	Index	F	olity2 Index	
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4	1 st Stage	Model 5	Model 6	1 st Stage	Model 7	Model 8
Tax_Rev		-1.019*	1.346***		-1.569**	2.907***		-0.532*	-2.691		-1.636**	-7.566
		(0.539)	(0.463)		(0.644)	(0.925)		(0.279)	(2.661)		(0.707)	(6.068)
Tax_Rev2			-0.029***			-0.061***			0.055			0.155
			(0.010)			(0.019)			(0.055)			(0.125)
CommodityTT	0.031**			0.041***								
	(0.015)			(0.016)								
NDisaster_Episodes							-0.083**			-0.085**		
							(0.034)			(0.035)		
Constant	1.049	6.049**	-4.305**	0.323	8.032**	-11.626***	4.017***	3.783***	13.169	4.210***	7.896**	32.543
	(1.949)	(2.632)	(2.167)	(2.002)	(3.514)	(4.234)	(1.116)	(1.373)	(11.516)	(1.163)	(3.630)	(25.634)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,123	2,123	2,123	1,985	1,985	1,985	2,120	2,120	2,120	1,987	1,987	1,987
Number of Countries	110	110	110	100	100	100	109	109	109	99	99	99
Turning Point			23.21			23.83			-			-
F-Statistics	121.75			86.39			18.334			9.89		

Appendix 2.14: Effect of Tax Revenue on Democracy – Using IVs Separately

	Freedom House Index		Polity2	Index	Freedom H	louse Index	Polity2 Index	
VARIABLES	1 st Stage	Model 1	1 st Stage	Model 2	1 st Stage	Model 3	1 st Stage	Model 4
Tax spending		0.038**		0.029		-0.413		-0.607
		(0.015)		(0.020)		(0.639)		(0.658)
CommodityTT	0.595***		0.563***					
	(0.111)		(0.116)					
NDisaster_Episodes					-0.141		-0.208	
					(0.220)		(0.225)	
Constant	-3.615	-0.387	-4.517	-0.049	57.67***	25.596	53.13***	33.678
	(13.912)	(1.107)	(14.317)	(1.298)	(8.161)	(36.986)	(8.288)	(35.305)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,042	1,042	972	972	1,035	1,035	969	969
Number of Countries	83	83	76	76	82	82	75	75
F-Statistics	40.49		51.96		53.12		65.17	

Appendix 2.15: Effect of Tax to Spending Ratio on Democracy – Using IVs Separately

	Freedom House Index		Polity2	2 Index	Freedom H	ouse Index	Polity2 Index	
VARIABLES	1 st Stage	Model 1	1st Stage	Model 2	1st Stage	Model 3	1st Stage	Model 4
Tax Reliance		0.136***		0.313***		-0.671		-1.545
		(0.034)		(0.070)		(0.734)		(1.350)
CommodityTT	-0.258***		-0.226***					
	(0.039)		(0.041)					
NDisaster_Episodes					-0.089		-0.110	
					(0.091)		(0.095)	
Constant	96.547	-8.213***	95.492***	-22.612***	71.34***	49.105	73.65***	113.734
	(4.993)	(2.460)	(5.184)	(5.197)	(2.913)	(52.378)	(3.082)	(99.455)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,937	1,937	1,797	1,797	1,940	1,940	1,805	1,805
Number of Countries	109	109	99	99	108	108	98	98
F-Statistics	781.65		1014.98		19.20		16.61	

Appendix 2.16: Effect of Tax Reliance on Democracy – Using IVs Separately

		(1)	(2)		(3)	(4)		(5)		(6)		(7)		(8)
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4	1 st Stage	Model 5	1 st Stage	Model 6	1 st Stage	Model 7	1 st Stage	Model 8
Tax_Rev		-0.842*	2.079*		-3.234	7.238								
		(0.509)	(1.214)		(17.964)	(36.095)								
Tax_Rev2			-0.042*			-0.144								
			(0.024)			(0.719)								
Tax_Reliance								0.061***		-0.788				
								(0.014)		(3.064)				
Tax_Spending												-0.014*		-0.160
												(0.008)		(0.618)
CommodityTT	0.030*						-0.337***				0.603***			
	(0.017)						(0.044)				(0.119)			
NDisaster_Episodes				-0.006					-0.020				-0.051	
				(0.032)					(0.075)				(0.195)	
Constant	-0.101	3.358*	-8.113	2.756**	9.673	-30.583	113.22***	-3.428***	79.405***	63.881	25.137*	1.842**	88.720***	14.760
	(2.187)	(1.867)	(5.347)	(1.266)	(49.559)	(156.418)	(5.252)	(1.152)	(3.042)	(243.137)	(15.066)	(0.780)	(8.880)	(54.750)
Control Variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,590	1,590	1,590	1,577	1,577	1,577	1,431	1,431	1,426	1,426	941	941	928	928
Number of Countries	100	100	100	98	98	98	98	98	96	96	77	77	75	75
Turning point			24.75											
F Statistics	103.608			24.111			617.64		13.663		67.961		37.34	

Appendix 2.17: Effect of Tax Revenue, Tax to Spending Ratio and Tax Reliance on Economic Freedom – Using IVs Separately

	Free	dom House In	ıdex		Polity2 Index	
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4
Tax_Rev		-0.683***	0.838**		-1.622***	1.279***
		(0.243)	(0.345)		(0.513)	(0.474)
Tax_Rev2			-0.018**			-0.027***
			(0.007)			(0.010)
CommodityTT	0.035**			0.035**		
	(0.016)			(0.016)		
NDisaster_Episodes	-0.083**			-0.083**		
	(0.035)			(0.035)		
Constant	0.270	4.410***	-1.694	0.270	7.351***	-4.224**
	(2.015)	(1.347)	(1.547)	(2.015)	(2.843)	(2.127)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,947	1,947	1,947	1,947	1,947	1,947
Number of Countries	98	98	98	98	98	98
Turning Point			23.28			23.69
F-Statistics	28.35			28.35		

Appendix 2.18: Effect of Tax Revenue on Democracy – Using Equal Observations

Appendix 2.19: Effect of Tax to Spending Ratio on Democracy – Using Equal Observations

	Freedom H	ouse Index	Polity2 Index			
VARIABLES	1 st Stage	Model 1	1 st Stage	Model 2		
Tax spending		0.027*		0.010		
		(0.016)		(0.018)		
CommodityTT2	0.559***		0.559***			
	(0.116)		(0.116)			
NDisaster_Episodes	-0.177		-0.177			
	(0.224)		(0.224)			
Constant	-3.857	0.079	-3.857	0.943		
	(14.408)	(1.056)	(14.408)	(1.229)		
Control Variables	Yes	Yes	Yes	Yes		
Observations	959	959	959	959		
Number of Countries	74	74	74	74		
F Statistics	68.94		68.94			

	Freedom H	louse Index	Polity2	2 Index
VARIABLES	1st Stage	Model 1	1 st Stage	Model 2
Tax Reliance		0.125***		0.203***
		(0.039)		(0.054)
CommodityTT	-0.229***		-0.229***	
	(0.041)		(0.041)	
NDisaster_Episodes	-0.155*		-0.155*	
	(0.093)		(0.093)	
Constant	96.431***	-7.558***	96.431***	-14.556***
	(5.206)	(2.895)	(5.206)	(4.076)
Control Variables	Yes	Yes	Yes	Yes
Observations	1,765	1,765	1,765	1,765
Number of Countries	97	97	97	97
F-Statistics	518.78		518.78	

Appendix 2.2	20: Effect	of Tax	Reliance of	on Democracy -	- Using	Equal	Observations
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	Free	Freedom House Index			Polity2 Index	Σ.
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4
Tax_Rev		-0.781***	1.183***		-1.430***	2.239***
		(0.282)	(0.438)		(0.412)	(0.797)
Tax_Rev2			-0.026***			-0.047***
			(0.009)			(0.017)
Population_Growth	0.498***	0.460***	-0.114	0.487***	0.777***	-0.304*
	(0.109)	(0.177)	(0.095)	(0.113)	(0.276)	(0.171)
Edu_Secondary	0.078***	0.078***	-0.016	0.077***	0.141***	-0.036
	(0.005)	(0.022)	(0.014)	(0.006)	(0.031)	(0.027)
Palma_WIID	-0.133***	-0.140***	0.049	-0.132***	-0.330***	0.021
	(0.046)	(0.053)	(0.046)	(0.047)	(0.086)	(0.082)
Trade_Openess	0.043***	0.041***	-0.011	0.047***	0.086***	-0.019
	(0.004)	(0.013)	(0.008)	(0.004)	(0.020)	(0.015)
External_Debt_Stock	-0.014***	-0.011**	0.005**	-0.015***	-0.022***	0.009**
	(0.002)	(0.005)	(0.002)	(0.002)	(0.007)	(0.004)
NDisaster_Episodes	-0.058*			-0.060*		
	(0.034)			(0.035)		
CommodityTT	0.040***			0.051***		
	(0.015)			(0.016)		
Constant	4.041**	9.910***	-4.324	2.720	14.627***	-11.386**
	(1.692)	(2.331)	(2.970)	(1.736)	(3.368)	(5.288)
Observations	2,099	2,099	2,099	1,963	1,963	1,963
No. of Countries	108	108	108	97	97	97
Turning Point			22.75			23.82
F Stat	33.4053			27.9766		

Appendix 2.21: Effect of Tax Revenue on Democracy - Using the General to Specific Approach

	Freedom		Polity2 Index	
	House Index			
VARIABLES	1 st Stage	Model 1	1 st Stage	Model 2
Tax_Spending		0.033***		0.005
		(0.012)		(0.015)
CommodityTT	0.746***		0.737***	
	(0.117)		(0.121)	
NDisaster_Episodes	-0.069		-0.168	
	(0.228)		(0.235)	
Constant	2.029	2.209**	1.861	3.904***
	(13.057)	(1.060)	(13.519)	(1.213)
Control Variables	Yes	Yes	Yes	Yes
Observations	1,010	1,010	942	942
Number of Countries	81	81	73	73
Turning Point				
F Statistics	54.54		69.45	

Appendix 2.22: Effect of Tax to Spending Ratio on Democracy - Using the General to Specific Approach

Appendix 2.23: Effect of Tax Reliance on Democracy - Using the General to Specific Approach

	Freedom Ho	ouse Index	Polity2	2 Index
VARIABLES	1 st Stage	Model 1	1st Stage	Model 2
Tax Reliance		0.101***		0.189***
		(0.029)		(0.049)
CommodityTT	-0.282***		-0.249***	
	(0.039)		(0.041)	
NDisaster_Episodes	-0.155*		-0.168*	
	(0.094)		(0.097)	
Constant	104.67***	-4.292*	100.79***	-11.312***
	(4.330)	(2.213)	(4.484)	(3.662)
Control Variables	Yes	Yes	Yes	Yes
Observations	1,919	1,919	1,780	1,780
Number of Countries	107	107	96	96
F Statistics	403.24		518.26	

	Fraser Institute Index								
VARIABLES	1st Stage	Model 1	Model 2						
Tax_Rev		-2.106***	7.842*						
		(0.788)	(4.158)						
Tax_Rev2			-0.141*						
			(0.075)						
Regime_Durlog	0.063	0.499**	-0.151						
	(0.095)	(0.242)	(0.425)						
Inflation	-0.005	-0.283***	-0.230***						
	(0.009)	(0.022)	(0.037)						
Urbanization	0.085***	0.181**	-0.355*						
	(0.023)	(0.088)	(0.208)						
GDPPC_USD_log	0.786***	5.100***	0.432						
	(0.159)	(0.770)	(1.637)						
Population_Growth	-0.377***	-0.852**	1.010						
	(0.101)	(0.362)	(0.703)						
Unemployment	-0.028	-0.185***	-0.027						
	(0.025)	(0.066)	(0.098)						
NDisaster_Episodes	0.034								
	(0.026)								
CommodityTT1	0.038***								
	(0.013)								
Constant	3.508**	57.344***	-0.111						
	(1.754)	(6.471)	(23.053)						
Observations	2,054	2,054	2,054						
No. of Countries	138	138	138						
Turning Point			27.81						
F Stat	38.9739								

Appendix 2.24: Effect of Tax Revenue on Economic Freedom - Using the GTS

	Fraser Institute Index							
VARIABLES	1 st Stage	Model 1	1 st Stage	Model 2				
Tax_Spending		-0.028***						
		(0.008)						
Tax_reliance				0.062***				
				(0.017)				
CommodityTT	0.360***		-0.145***					
	(0.079)		(0.028)					
NDisaster_Episodes	0.355**		0.007					
	(0.160)		(0.057)					
Constant	93.788***	8.126***	92.733***	-0.604				
	(11.845)	(1.051)	(3.779)	(1.380)				
Control Variables	Yes	Yes	Yes	Yes				
Observations	1,521	1,521	1,946	1,946				
Number of Countries	110	110	135	135				
F-Statistics	56.21		308.91					

Appendix 2.25: Effect of Tax to Spending Ratio and Tax Reliance on Economic Freedom - Using GTS

Appendix 2.26: Effect of Tax revenue and Tax to Spending Ratio on Democracy - Using the World Bank Data

	Freed	lom House	Index	I	Polity2 Index	K	Freedom House		Polity2 Index	
							Ind	lex		
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4	1 st Stage	Model 5	1 st Stage	Model 6
Tax_Rev		-0.556**	0.604*		-1.227***	0.248				
		(0.235)	(0.324)		(0.456)	(0.409)				
Tax_Rev2			-0.017*			-0.008				
			(0.009)			(0.011)				
Tax_Spending								-0.014		-0.071***
								(0.017)		(0.027)
CommodityTT	-0.006			-0.002			0.326***		0.324***	
	(0.018)			(0.018)			(0.100)		(0.105)	
NDisaster_Episodes	-0.01***			-0.101***			-0.522***		-0.590***	
	(0.034)			(0.034)			(0.199)		(0.205)	
Constant	4.638**	3.853**	-1.993	3.500	5.437**	-0.129	27.227**	2.805**	22.621*	5.757***
		*								
	(2.134)	(1.252)	(2.021)	(2.216)	(2.220)	(2.530)	(12.187)	(1.160)	(12.776)	(1.684)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,150	1,150	1,150	1,057	1,057	1,057	1,080	1,080	988	988
Number of Countries	83	83	83	76	76	76	80	80	73	73
Turning Point			17.76			-				
F-Statistics	169.04			161.12			105.09		98.53	

	Free	dom House I	ndex	l	Polity2 Inde	ex	Fraser Institute		
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4	1 st Stage	Model 5	Model 6
Tax_Rev		0.034	-0.233		-0.372**	1.241***		-0.067	0.155
		(0.078)	(0.261)		(0.189)	(0.465)		(0.100)	(0.131)
Tax_Rev2			0.005			-0.026***			-0.003
			(0.006)			(0.010)			(0.003)
CommodityTT	0.165***			0.158***			0.117		
	(0.062)			(0.062)			(0.080)		
NDisaster_Episodes	0.146			0.089			0.003		
	(0.281)			(0.285)			(0.258)		
Constant	6.146	5.474***	5.594***	5.908	8.094**	6.908**	14.587	8.664***	7.729***
	(7.192)	(1.631)	(1.622)	(7.268)	(3.719)	(3.049)	(10.752)	(2.350)	(1.371)
Observations	157	157	157	154	154	154	129	129	129
Number of Countries	11	11	11	10	10	10	10	10	10
Turning Point			-			23.87			
F Statistics	1.95			2.00			1.54		

Appendix 2.27: Effect of Tax Revenue on Democracy in Oil Rich Countries

Appendix 2.28: Effect of Tax to Spending Ratio on Democracy in Oil Rich Countries

	Freedom House Index		Polity	2 Index	Fraser 1	Institute
VARIABLES	1 st stage	Model 1	1 st stage	Model 3	1 st stage	Model 5
Tax Spending		-0.001		-0.012		-0.041*
		(0.013)		(0.028)		(0.024)
CommodityTT	0.867***		0.867***		0.205	
	(0.300)		(0.300)		(0.290)	
NDisaster_Episodes	2.269*		2.269*		-2.084*	
	(1.292)		(1.292)		(1.110)	
Constant	-72.357*	2.772	-72.357*	7.214*	306.05***	14.615**
	(42.347)	(1.915)	(42.347)	(4.219)	(64.390)	(7.360)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	60	60	60	60	67	67
Number of Countries	6	6	6	6	6	6
F-Statistics	10.105		9.35		4.12	

	Freedom H	ouse Index	Polity2	Index	Fraser I	institute
VARIABLES	1 st stage	Model 1	1 st stage	Model 2	1 st stage	Model 3
Tax_Reliance		0.056		-0.218*		-0.016
CommodityTT	0.004 (0.121)	(0.030)	0.044 (0.119)	(0.124)	-0.416^{***} (0.155)	(0.017)
NDisaster_Episodes	-1.084** (0.541)		-1.132** (0.537)		-1.344*** (0.494)	
Constant	122.71 (13.918)	-1.381 (6.820)	122.228*** (13.738)	31.047** (15.221)	124.38*** (20.955)	8.318*** (2.184)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	154	154	151	151	125	125
Number of Countries	11	11	10	10	10	10
F-Statistics	1.39		1.12		3.66	

Appendix 2.29: Effect of Tax Reliance on Democracy in Oil Rich Countries

Appendix 2.30: Effect of Tax Revenue on Democracy in Oil Scarce Countries

	Freed	om House I	ndex	I	Polity2 Index		Fraser Institute Index		
VARIABLES	1 st stage	Model 1	Model	1 st stage	Model 3	Model 4	1 st stage	Model 5	Model 6
			2						
Tax_Rev		-0.472**	-1.577		-1.421***	-4.818*		-0.219	-1.238
		(0.227)	(1.218)		(0.505)	(2.846)		(0.108)	(1.651)
Tax_Rev2			0.031			0.098*			0.025
			(0.025)			(0.059)			(0.033)
CommodityTT	0.004			0.015			0.072***		
	(0.020)			(0.019)			(0.025)		
NDisaster_Episodes	-			-0.095***			-0.001		
	0.085***								
	(0.032)			(0.035)			(0.029)		
Constant	1.954	2.772***	8.031	1.289	4.906**	20.330*	-5.431*	0.890	5.923
	(2.489)	(0.985)	(5.257)	(2.50)	(2.362)	(12.042)	(2.899)	(0.428)	(7.413)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,940	1,940	1,940	1,806	1,806	1,806	1,445	1,445	1,445
Number of Countries	97	97	97	88	88	88	88	88	88
Turning Point			-			24.58			-
F-Statistics	37.86			40.02			22.17		

	Freedom H	ouse Index	Polity2	Index	Fraser Insti	itute Index
VARIABLES	1 st stage	Model 1	1 st stage	Model 2	1 st stage	Model 3
Tax_Spending		0.066**		0.023		-0.022
		(0.027)		(0.027)		(0.015)
CommodityTT	0.546***		0.521***		0.474***	
	(0.150)		(0.157)		(0.162)	
Disaster_Episodes	-0.201		-0.292		0.071	
	(0.221)		(0.228)		(0.190)	
Constant	9.070	-2.786	7.872	-1.102	31.803*	2.407*
	(18.739)	(2.095)	(19.549)	(1.937)	(19.273)	(1.298)
Control variables	yes	yes	yes	yes	yes	yes
Observations	966	966	900	900	860	860
Number of Countries	75	75	68	68	69	69
F Statistics	28.04		38.67		16.64	

Appendix 2.31: Effect of Tax to Spending Ratio on Democracy in Oil Scarce Countries

Appendix 2.32: Effect of Tax Reliance on Democracy in Oil Scarce Countries

	Freedom Ho	ouse Index	Polity2	Index	Fraser Instit	tute Index
VARIABLES	1 st Stage	Model 1	1 st Stage	Model 2	1 st Stage	Model 3
Tax_Reliance		0.025		0.085*		0.071**
		(0.031)		(0.049)		(0.030)
CommodityTT	-0.344***		-0.298***		-0.227***	
	(0.051)		(0.054)		(0.058)	
NDisaster_Episodes	-0.088		-0.097		0.030	
	(0.089)		(0.092)		(0.069)	
Constant	107.115***	-0.567	103.485***	-6.460*	101.643***	-4.442*
	(6.549)	(2.159)	(6.887)	(3.534)	(6.766)	(2.329)
Control Variable	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,763	1,763	1,627	1,627	1,298	1,298
Number of Countries	96	96	87	87	86	86
F Statistics	19.22		19.80		10.36	

	Freedom House Index			Polity2 Index				
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4		
Tax_Rev		0.104	0.727*		-0.071	0.293		
		(0.125)	(0.432)		(0.088)	(0.345)		
Tax_Rev2			-0.019**			-0.009		
			(0.010)			(0.008)		
CommodityTT	0.104***			0.128***				
	(0.03)			(0.032)				
NDisaster_Episodes	0.004			0.005				
	(0.049)			(0.051)				
Constant	-3.650	2.364*	-0.023	-6.663*	6.095***	4.510***		
	(3.746)	(1.262)	(2.284)	(3.984)	(0.908)	(1.696)		
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes		
Observations	828	828	828	712	712	712		
Number of Countries	38	38	38	31	31	31		
Turning Point			19.13					
F-Statistics	79.51			45.65				

Appendix 2.33: Effect of Tax Revenue on Democracy in Democratic Countries

Appendix 2.34: Effect of Tax Reliance and Tax to Spending Ratio on Democracy in Democratic Countries

	Freedom House Index		Polity2 Index		Freedom House Index		Polity2 Index	
VARIABLES	1 st Stage	Model 1	1 st Stage	Model 2	1 st Stage	Model 3	1 st Stage	Model 4
tax_reliance		-0.159		-0.490				
		(0.626)		(5.640)				
Tax_Spending						0.032		0.008
						(0.026)		(0.029)
CommodityTT	-0.023		0.005		0.476***		0.338*	
	(0.059)		(0.065)		(0.171)		(0.185)	
NDisaster_Episodes	0.027		0.007		-0.044		-0.142	
	(0.093)		(0.097)		(0.249)		(0.254)	
Constant	60.242***	12.435	56.245***	33.097	15.597	1.654	23.874	5.480***
	(7.411)	(36.071)	(8.097)	(320.077)	(21.342)	(1.951)	(22.717)	(1.861)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	698	698	579	579	545	545	489	489
Number of	37	37	30	30	34	34	29	29
Countries								
F-Statistics	0.776		24.44		33.02		50.85	

	Free	dom House	Index		X	
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4
Tax_Rev		-0.533*	0.668***		-1.687**	0.975***
		(0.277)	(0.215)		(0.684)	(0.302)
Tax_Rev2			-0.013***			-0.019***
			(0.004)			(0.006)
CommodityTT	001			0.005		
	(0.018)			(0.018)		
Edu_Secondary	-0.122***			-0.123***		
	(0.045)			(0.046)		
Constant	2.277	1.929	-1.236	2.412	2.018	-6.055***
	(2.390)	(1.384)	(1.078)	(2.411)	(3.730)	(1.566)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,257	1,257	1,257	1,239	1,239	1,239
Number of Countries	70	70	70	67	67	67
Turning point			25.69			25.66
F-Statistics	14.49			11.18		

Appendix 2.35: Effect of Tax Revenue on Democracy in Non-Democratic Countries

Appendix 2.36: Effect of Tax Reliance and Tax to Spending Ratio on Democracy in Non-Democratic Countries

	Freedom House Index		Polity2 Index		Freedom House Index		Polity2 Index	
VARIABLES	1 st Stage	Model 1	1 st Stage	Model 2	1 st Stage	Model 3	1 st Stage	Model 5
Tax_Reliance		0.089***		0.154***				
		(0.026)		(0.051)				
Tax_Spending						0.037		-0.031
						(0.024)		(0.029)
CommodityTT	-0.368***		-0.268***		0.587***		0.586***	
	(0.050)		(0.050)		(0.164)		(0.165)	
NDisaster_Episodes	-0.364***		-0.323***		-0.135		-0.180	
	(0.140)		(0.139)		(0.380)		(0.390)	
Constant	119.553***	-7.184***	109.877***	-17.02***	-26.514	-1.791	-28.082	-5.403***
	(6.715)	(2.336)	(6.748)	(4.482)	(20.366)	(1.462)	(20.512)	(1.750)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,219	1,219	1,190	1,190	480	480	470	470
Number of	70	70	67	67	47	47	45	45
Countries								
F-Statistics	327.10		341.32		58.79		69.51	

Chapter 3 : Too Much of a Good Thing? Non-Linear Effect of Remittances on Institutions.

Abstract

This paper explores how remittances influence political and economic freedoms in developing countries. The results using instrumental variable (FE-2SLS) approach show that the effect of remittances on political and economic freedoms is non-linear – initially, remittances promote political and economic freedoms until a turning point is achieved, and thereafter, they hurt both freedoms. Around 24% of the countries in our sample are in the negative effect zone, showing a higher dependency on remittances causes institutional decline. Our research rejects the idea that remittances play an unambiguously positive role in development. These results are robust to controlling for potential endogeneity of the relationship.

KEY WORDS: Remittances; Democracy; Economic Freedom; Migration; Institutions; Natural Disaster.

3.1. Introduction

Remittances are transfers in cash or in kind from migrants to their relatives in their home countries. Migration and remittances are not modern phenomena. In fact, they are centuries old (Manning 2022; Jacks and Tang 2018). However, the scale and speed of remittance transfers have increased in recent decades.⁴³ In 2020, the total remittances received by low and middle income countries were around \$540 billion which is even more than the sum of the next two forms of foreign inflows, according to importance—foreign direct investment (\$259 billion) and foreign aid (\$179 billion).⁴⁴ Some economies like Tonga, Lebanon, Samoa, Tajikistan, Kyrgyz Republic, Gambia, Honduras, Haiti, and Nepal receive remittances equivalent to more than 20 percent of their GDP.⁴⁵

Remittances are a crucial source of foreign exchange for developing economies, as remittances are fast-growing, resilient over time, and considered a financial lifeline for many countries (Fullenkamp et al. 2008). Therefore, the research on remittances covers a broad range of areas such as economic growth (e.g., Cazachevici et al. 2020), inequality (e.g., WouTerSe 2010), financial development (e.g., Aggarwal et al. 2011), education (e.g., Edwards and Ureta 2003), control on corruption (e.g., Abdih et al., 2012), rule of law (Berdiev et al., 2013), exchange rate appreciation (Amuedo-Dorantes and Pozo 2004), political protest (Acevedo, 2013), poverty (i.e., Bertoli and Marchetta 2014) and also political participation (e.g., Germano, 2013).

⁴³ World Bank's data, retrieved from <u>https://data.worldbank.org/indicator/BX.TRF.PWKR.CD.DT</u>, viewed on 28 February 2022.

⁴⁴ World Bank (May 12, 2021), retrieved from <u>https://www.worldbank.org/en/news/press-</u> <u>release/2021/05/12/defying-predictions-remittance-flows-remain-strong-during-covid-19-crisis</u>, viewed on 15 December 2021.

⁴⁵ World Bank's Migration and Development Brief 37, retrieved from

https://www.knomad.org/publication/migration-and-development-brief-37, viewed on 25 March, 2023.

However, research on the political consequences of remittances still needs further exploration (Escribà-Folch 2015, Meseguer and Burgess (2014).

One potential impact of remittances, which we attempt to capture in this paper, is its influence on the political and economic institutions of recipient economies. This aspect has received limited attention in the literature. Moreover, the existing research, limited as it is, tends to disagree on the remittances' influence on democratization. Some scholars view remittances as detrimental to institutions, similar to natural resources and foreign aid (Hassan and Rahman 2021; Konte 2016, Ahmed 2013 and Ahmed 2012). On the other hand, Islam and Lee (2023), Bearce and Park (2019), Deonanan and Williams (2017), Williams (2017), and Escribà-Folch et al. (2015) suggest a positive effect of remittances on democracy. Bastiaens and Tirone (2019), in turn, found that remittances do not affect democracy.

The aforementioned studies examine a linear relationship between remittances and democratization. We have found only two papers that attempt to establish a non-linear relationship between remittances and democracy, but their results are also contradictory. Lacheheb et al. (2022) discover an inverted U-shaped relationship, while Williams (2018) shows a U-shaped relationship. Both studies use the same methodology, system GMM, but their sample period and size differ.

These differences in findings are mainly because of the differences in methodology. For instance, some researchers use Two-Stage Least Squares (2SLS), while others use the Generalized Method of Moments (GMM). At the same time, some opt for alternative methods, sample period and countries, and potential channels explored. This requires a study to re-examine the relationship between remittances and political institutions using a robust methodology and revisiting the existing literature. Moreover, we could not find any paper that specifically examines the impact of remittances on economic freedom.

Our research therefore has three main contributions. First, we add to the literature investigating whether the remittance inflows are beneficial for the development of institutions in developing economies. As institutions play a significant role in long-term sustainable economic development, particularly in less developed countries, understanding remittances' role in institutional development is essential. Second, the existing literature largely deals with social remittances. These are transfers of socio-political and cultural norms, values, and ideas from migrants to their home countries. The previous literature has found that social remittances have an important impact on home-country institutions (Perez-Armendariz 2014; Levitt 1998). Our paper focuses on conventional (i.e. monetary) remittances. We argue that migrants can also affect institutions positively in their home countries by their financial transfers. This is because monetary remittances increase recipients' income levels and facilitate the modernization of the economy and society. This, in turn, raises citizens' effective organization and bargaining power against a political leader. As such, monetary remittances complement social remittances and together they strengthen liberal institutions. Third, we show that the remittances' net effect is non-linear (inverted U-shaped). Thus, overreliance on remittances' turns the effect negative. At low to moderate levels, remittances are a blessing, facilitating institutional development. At a high level, however, they are a curse like natural resources (oil and natural gas) and foreign aid in developing countries.

When estimating empirically the influence of remittances on institutions, endogeneity can be a potential problem since many studies (e.g., Nejad and Young 2016; Ashby 2010; Faist 2008; Styan 2007) argue that the lack of development and political freedom in a country is a significant push factor for its citizens to migrate. Moreover, freedom (especially economic freedom) fosters economic development (e.g., Lawson, et al., 2020; Easterly, 2019; Hall and Lawson 2014), so a lack of freedom translates into a lack of development, and, in turn, generates a greater need for remittances. Furthermore, measurement error can also occur since

it is likely that our model specification omits some variables (i.e., remittances through informal channels), which might have a strong impact on the interaction between our independent and dependent variables. Measurement error in calculating the exact amount of remittances inflow is also a significant concern that can cause biased estimates.

We use the instrumental variables technique to address endogeneity, specifically, the Fixed Effect Two-stage Least Squares model (FE-2SLS). Two instrumental variables (IVs) are applied. First, we use natural disasters⁴⁶, as Mallick and Siddiqui (2015) and Smith and Ward (1998) argue, natural disasters force the affected people to migrate. Second, population size since a country's size can affect the migration rate (Docquier et al. 2016). Larger countries have limited resources to supply public goods (such as education, health, and housing) compared to their population size. They are usually congested, environmentally polluted and have many negative externalities (Borck and Schrauth 2021; Yang et al. 2021). These factors cause higher out-migration. Therefore, the top eight remittance recipients are among the top fifteen largest countries in terms of population size.⁴⁷ Furthermore, we apply each IV separately to confirm our estimation is not biased. We also use the System GMM for robustness checks since our dependent variable, democracy, is largely consistent.

Our outcome variables are political and economic freedoms. Electoral democracy is measured by the Polity2 variable of the Polity IV dataset, and the Freedom House Index represents liberal democracy. For economic freedom, we use data from the Fraser Institute. The main

⁴⁶ Such as wildfire, volcanic activity, storm, landslide, flood, extreme temperature, epidemic, earthquake, and drought.

⁴⁷ Tables 3.6 and 3.7 provide the list of these countries.
independent variable is the remittances inflow (in the percentage of GDP). We also use remittances per capita⁴⁸ for a robustness test.

Our results covering 109 developing countries from 1984 to 2018 suggest that the relationship between remittances and institutions is non-linear and hump-shaped. An increase in remittances (in percentage of GDP) is associated with an improvement in political and economic freedoms until a turning point is achieved; thereafter, remittances cause a decline in both freedoms. The turning points for liberal and electoral democracy are 13.28 and 13.36, respectively. Regarding economic freedom measured by the Fraser Institute index, the turning point is 14.30 % of GDP. 26 and 25 countries in our sample have remittance inflows exceeding 13.28% and 14.30, respectively, indicating that a higher value of remittance inflow causes a decline in their political and economic institutions.⁴⁹

Using the Granger Causality test confirms that remittances Granger cause democratization and economic freedom. Additionally, we perform heterogeneity tests such as sampling based on regime type differences and the periods before and after the *availability of the internet*⁵⁰. We also use robustness techniques, especially a general-to-specific approach, to confirm the validity of our findings. This research stands out for its unique approach to exploring various regression techniques and robustness tests to add to the existing literature, confirming that an excessive reliance or dependency on remittances damages political and economic institutions.

⁴⁸ Remittances per capita = total remittances received (current USD) / total population

⁴⁹ Using system GMM, we also find inverted U-shaped relationship with the turning points 9.75 for Freedom House index and 11.00 for Polity2. The number of countries in our sample whose remittances level is more than 10% of GDP are 36.

⁵⁰ It shows the home countries' people's access to the internet.

Our research is the first empirical contribution to the literature that shows remittances dependency exists, which can harm the development process in the recipient countries. No one before us has tested this phenomenon empirically. We suggest that the remittance dependency harms developing countries, causing a resource curse by curbing investment in productive industries and providing incentives to avoid political and economic reforms. That way, it also shows the limitation of international migration promoting international development since remittances are positively correlated with out-migration. However, we invite further research on whether excess levels of out-migration damage institutions and curb reforms.

The following sections will cover various aspects related to remittances, starting with an overview of the institutions involved and their relationship. A brief summary of the existing literature will also be provided, along with hypotheses to guide the research. The subsequent section will then outline the research design and methodology. After that, the fourth section will present the results and provide an interpretation and discussion of the findings. Finally, we will conclude the paper.

3.2. Literature Review

This section presents six main channels that make the remittances–freedom nexus possible. The income and modernization effects positively influence democracy and pro-market economic policies. Furthermore, social remittances complement monetary remittances since they go hand in hand with each other, strengthening their positive effects on institutions. However, the substitute, dissenters' exit, and stability effects of remittances negatively affect political and economic freedom. Thus, the net effect of remittances largely depends on these channels' interaction.

Substitution Effect:

Ahmed (2013) argues in favour of the remittance curse hypothesis⁵¹ occurring because of a substitution effect. Accordingly, remittances reduce citizens' dependence on public goods, i.e., education and healthcare, since recipients can buy them from the market if a government is not adequately supplying them. This can ultimately reduce the citizens' demand for democracy.⁵² Moreover, Escribà-Folch et al. (2015) and Abdih et al. (2012) explain that the substitution effect indirectly favours an autocratic ruler since she can provide more private goods to her allies.

If remittances' substitution effect exists, it can positively influence corruption level in the recipient economies. However, scholars have reached no consensus on the relationship between remittances and corruption. Some studies (e.g., Berdiev et al. 2013; Abdih et al. 2012) find a negative association between remittances and control on corruption. Its underlying mechanism, according to them, is also the substitution effect. Berdiev et al. (2013) explain that due to the substitution effect, recipients have little incentive to engage in activities that hold governments accountable. This raises free-riding in the market and a lack of accountability in government institutions (Ahmed 2012). On the other hand, some scholars (e.g., Ajide and Olayiwola 2020; Borja, 2020; Tyburski 2012) support a positive nexus between remittances and accountability. Their main argument is that migration and remittances do not make migrants and their dependents politically inactive. Tyburski (2014; 2012) discusses that due to remittances' income effect, recipients become more politically active in demanding accountability.

⁵¹ The idea that the reliance on remittances negatively influences institutional development.

⁵² Easton and Montinola (2017), Doyle (2015) and Ahmed 2013 show that an increase in remittances reduces a government's social spending.

The phenomenon, migrants' *voice after exit*, is studied by many scholars such as Meseguer and Burgess (2014), and Hirschman (1978). These scholars (e.g., Careja and Emmenegger 2012; Kapur 2010; Levitt 1998) elaborate that migrants remain actively engaged in political affairs of their home countries and keep raising their voices. There is, however, information asymmetry between citizens living in their country and migrants abroad, since the former have a better understanding of local conditions. Therefore, migrants may demand different reforms than citizens living there.

Moreover, remittances raise the availability of resources (time and income), which further facilitates recipients to engage in politics. They also reduce their recipients' dependence on the state's patronage (Escribà-Folch et al 2015), raising their bargaining power in politics and the economy. Dionne et al. (2014) and Escribà-Folch et al. (2018) show that recipients are more likely to protest in non-democratic countries than non-recipients. Remittances also boost the probability of civil war when migrants become a major source of funding for rebel groups (Miller and Ritter 2014; Collier and Hoeffler 2004).

Tyburski (2014) points out that both the positive and negative impacts of remittances on corruption are possible, depending on the political regime of the recipient economies. Remittances promote political patronage in an autocratic regime since an autocratic ruler depends on a small coalition of elites, and the cost of political activism is higher there. While in democracies, recipients as the voters have higher bargaining power against governments, and their political participation cost is also relatively lower than in autocracies.

Dissenters' Exit Effect:

A long-held consensus exists among scholars (e.g., Faist 2008; Styan 2007) that economic development in the destination countries is a major pull factor for migration. Therefore, people from low-income countries migrate to higher-income countries. Political and economic

freedoms raise development levels, standard of living, and happiness (Nikolova and Graham 2015; Gehring 2013). Freedom is also attractive to most people since it enables them to live their life based on their personal choices. Therefore, both political and economic freedom are significant pull factors for migrants (Nejad and Young 2016; Ashby 2010).

People with migration intentions are more politically mobilized, critical to their governments, liberal, risk-averse (Berlinschi and Hartunyan 2019), modern in values (Van Dalen et al. 2005), and gender-egalitarian (Docquier et al. 2020) than those without migration intentions. Due to such factors, Berlinschi and Fidrmuc (2018) theorize that migration makes homogeneous home countries more homogeneous and heterogeneous host countries more heterogeneous. It is therefore advantageous to an autocrat and the status quo to remain in power and maintain exclusive economic policies since their potential critics leave the country, which leads to a lower level of political resistance. We call it the *dissenters' exit* effect of migration.

Social Remittances:

Although social remittances differ from monetary ones, they influence the interaction between remittances and institutions.⁵³ Social remittances are the result of contact between migrants and their friends, family members, and relatives (Levitt 1998). Remittances from democratic countries raise social learning by creating spillover effects of liberal and democratic values, which can change the political preferences and behaviour of recipients and become a stimulus for political, economic, and societal transformation at the household, community, and national level in the recipient countries (Bryceson and Vuorela 2020; Perez-Armendariz 2014).

⁵³ Sending money back to their country of origin is more likely to transmit norms and values as well. Furthermore, it gives migrants more leverage over their dependents, which improves norm transfer.

Here, the migrants' host country's political system matters most. Social remittances from democratic and authoritarian countries can promote liberal and authoritarian institutions, respectively (Ahmed 2013). It is also possible that migrants in autocratic regimes can caution their relatives and friends in their home countries about the absence of democratic values and norms in their host countries and how autocratic regimes behave – and they would have first-hand knowledge of that. Many papers (e.g., Ansari 2016; Tyburski, 2014; Al Rawashdeh and Maxwell, 2013; and Abdih et al., 2012) discuss that the natural resource curse in terms of autocratic norms can also transfer through remittances from a resource-cursed authoritarian regime to recipient economies. For this, Al Rawashdeh and Maxwell (2013) present the example of Jordan, and Ansari (2016) shows the case of Yemen.

Modernization Effect

Remittances encourage industrialization and diversification in the recipient countries (Adeoye, 2020; Efobi et al., 2019) which can cause a modernization effect by bringing about occupational specialization, urbanization, social capital, literacy levels and division of labour.⁵⁴ Remittances influence diversification in three ways. 1) Adeoye et al. (2020) find that the positive influence of remittances on industrialization is conditional on *financial development* in their sample of African economies.⁵⁵ 2) Remittances promote *investment* by encouraging entrepreneurship (Hossain and Hasanuzzaman 2015). 3) *Trade effect* is about creating demand for and promoting home countries' products and services in the host countries. This helps exporters in migrants' home countries to bring their products to host countries' markets, further encouraging diversification. The significantly positive association between some ethnic

⁵⁴ To read how modernization causes democracy, Johnson (1989).

⁵⁵ The positive link between remittances and financial development is also discovered by many studies such as Azizi (2020) and Fromentin (2017).

networks and international trade has been studied by some scholars (e.g., Felbermayr et al. 2010; Bandyopadhyay et al. 2008; Rauch and Trindade 2002). Felbermayr et al. (2010) explain that ethnic networks solve information asymmetry related problems between buyers and sellers and promote mutual trust.

Remittances can discourage industrialization by appreciating the real exchange rate, a phenomenon called Dutch disease, so that exporters can lose their competitive advantage in international trade (Acosta et al., 2009). However, researchers disagree on whether remittances cause the Dutch disease effect or not. Some researchers (like Ito 2017; Lartey et al. 2012; Acosta et al. 2009; Amuedo-Dorantes and Pozo 2004) find that remittances cause Dutch disease while others (e.g., Martins 2013; Elbadawi et al. 2008; Nyoni 1998) find that remittances have little or no effect on real exchange rate appreciation. Ratha and Moghaddam (2020) show that the Dutch disease effect of remittances is evident only in the long run – an increase in 10 percent of the remittances to GDP ratio causes real exchange rate appreciation by around 0.009 units.

Income Effect

In economic and political modernization, an increase in income per capita is highly significant since it increases the effective organization of the citizens (Moore and Putzel 1999) and boosts their relative bargaining power against political leaders. Many authors (e.g., Ruiz and Vargas-Silva 2010; Pradhan et al. 2008; Aggarwal and Peria 2006; Taylor 1999; Taylor 1992) find that remittances raise economic growth in the recipient countries. Cazachevici et al. (2020) perform a meta-analysis and find 40 percent of studies showed a positive effect of remittances on economic growth, 20 percent showed a negative effect, and 40 percent showed no effect. Their results show a positive but small effect of remittances on growth.

Besides investment (Leblang 2010; Osili, 2007) and financial development (Coulibaly et al. 2020; Aggarwal et al. 2006) channels, the existing literature provides five more channels through which remittances produce growth outcomes. 1) Remittances raise the level and stability of household *consumption* (Mondal and Khanam 2018; Combes and Ebeke 2011). 2) They are a significant source of *foreign exchange* (Ratha, 2005) that not only raises the money supply for lending but also provides liquidity to the economy (Fayissa and Nsiah 2010). 3) They are a *better substitute for debt* for low income recipients, facing credit restraints from financial institutions (Giuliano and Ruiz-Arranz, 2009). 4) Economic freedom works as a complement to remittances and establishes a positive association between remittances increase the income of the recipients, they raise their consumption, savings, and investments in human and physical capital which ultimately boosts economic output. Glytsos (1993) estimates that the overall multiplier effect of remittances on industries is around 1.7 and on basic goods – foods, clothing, etc – is about 2.0 in Greece. Nishat and Bilgrami (1991) find that the remittances' multiplier effect for Pakistani industries is more than 2.0.

Stability Effect

In an autocratic state, stability means the ruling elites are satisfied with their share of rents and the status quo is steady. However, during an economic crisis, a ruler is unable to finance both patronage and public goods, and maintaining the status quo becomes hard (Higley et al. 1992; North, 1981). This situation calls for structural reforms that promote productivity and innovation in the market so that the economic growth increases. Therefore, most economic reforms occur in response to the economic crisis when ruling elites have no option other than bearing the political cost of reforms (Rancière and Tornell 2016; Alesina and Drazen 1991; Lal 1987). The factors that promote economic stability in an autocratic regime or in a regime with uncompetitive economic policies are responsible for its survival. Remittances can be one of

them since they act as a cushion by maintaining stability, averting crises, and curbing the need for reforms.

There is a lot of literature (e.g., Chami et al. 2012; Craigwell et al. 2010; Bugamelli and Paterno 2009; Chami et al. 2008) that supports the assumption that remittances contribute to economic stability by reducing output volatility. Therefore, they are called counter-cyclical when they raise their recipients' consumption and reduce an economy's volatility (Ajide et al. 2015). Remittances maintain stability when foreign direct investment suddenly flows out and sparks a current account crisis. They provide foreign currency to maintain foreign exchange rates when the trade balance is negative and foreign currency reserves are drying out. They also reduce the likelihood of a current account crisis even when the country has an abundance of external debt by providing foreign currency stock (Bugamelli and Paternò, 2009). Taylor (2004) finds remittances a vital source of foreign exchange earnings which act as a shield against balance of payment crisis and foreign reserves depletion. Coulibaly et al. (2020) point out that remittances boost national savings and facilitate current account balance in the home country but have opposite effects in the host country. Bugamelli and Paterno (2009) explain that remittances stabilize an economy's financial system by minimizing the probability of current account setbacks. Singer (2010) provides evidence that remittances stabilize the fixed exchange rate regime even when the economy faces economic shocks.

If remittances provide economic stability to an autocratic regime and/or failed economic policies, this prolongs their survival by averting crisis. Ahmed's (2012) findings also confirm that remittances prolong autocratic leaders' survival. Chami et al. (2008) explain that remittances reduce ruling elites' incentives to reform their policies to promote fiscal discipline.

Some scholars, such as Luciani (2015), Abdih et al. (2012), Ahmed (2012), and Smith (2008), argue that remittances are a type of unearned foreign income, therefore, they have a curse-like

nature as foreign aid and natural resources⁵⁶ have, in order to discourage political and economic liberalization. Escribà-Folch et al. (2015) discuss that remittances are different from aid and natural resources since they do not raise government revenue significantly. However, Asatryan et al. (2017) find that remittances actually raise value-added tax (VAT) collection since they boost consumption.

The Cuban example is worth mentioning. The Soviet Union's collapse in 1991 eroded Cuba's dependence on the Soviet Union for aid and trade. Consequently, the Cuban economy contracted by more than 30 percent during the period from 1989 to 1993. At that time, the socialist regime was about to collapse mainly due to the dire absence of hard foreign currency to finance imports, meet the requirement of external loans, and boost domestic investment. The Cuban government at that time decided to encourage migration to receive hard currency in the form of remittances (Eckstein 2010). The plan succeeded and Cuba still has an autocratic regime and state control over the economy. In 2018, Cuban remittances (\$6.67 billion) were more than the sum of its seven major export commodities (3.69 billion) (Morales 2018). However, as Eckstein explains, remittances are a two-edged sword: they help the Cuban government maintain its status quo, but also strengthen its civil society informally by introducing transnational culture and reducing its citizens' dependency on the government.

A Summary of Existing Research:

Table 1 summarises existing literature by showing a disagreement among the researchers in their findings mainly because of their differences in sample size and period, methodologies and the potential channels explored. Some papers (i.e., Islam and lee 2023; Bearce and Park 2019; Deonanan and Williams 2017; Williams 2017; Escribà-Folch et al., 2015) show a positive relationship between remittances and democracy. However, Hassan and Rahman (2021), Konte

⁵⁶ For foreign aid and resource curse (Djankov et al. 2008) and Ross (2001), respectively.

(2016), Ahmed (2013) and Ahmed (2012) find that remittances deteriorate democratic development. On the other hand, Bastiaens and Tirone (2019) present no effect of remittances on democracy. All these studies explore a linear relationship between independent and dependent variables. Only two papers aim to find a non-linear relationship, but their results also contrast. Lacheheb et al. (2022) find that the relationship between remittances and democracy is inverted U-shaped. However, Williams (2018) shows that the relationship is U-shaped. Both studies use the same method, the System GMM. However, their sample periods and sizes are different. We could not find any paper specifically exploring remittances' effect on economic freedom.

Conceptual Framework and Hypothesis:

Based on our literature review, we predict that the remittance-freedom nexus exists, but its nature is non-linear inverted U-shaped. Initially, the income and modernization effects positively influence democracy and pro-market economic policies. Furthermore, social remittances complement monetary remittances since they go hand-in-hand, strengthening their positive effects on institutions. However, the substitute, dissenters' exit, and stability effects of remittances negatively affect political and economic freedom. Their effect gets stronger when the level of remittances is higher, and a political leader mainly relies on them. This causes dependency on remittances on both the individual level (substitution effect) and the country level (stability effect), turning the remittances' effect negative. Gerber (2018) explains the resource curse that the abundant endowment of a single valuable resource (remittances in our case) in a national economy can crowd out other economic activities. This can be through different means, such as Dutch disease (Ratha and Moghaddam 2020) and reducing transparency and accountability in the political system (Tyburski 2014; Berdiev et al. 2013).

We suggest this economic effect also translates to the political effect by causing a resource curse of remittances on institutions.

Thus, we suggest that overreliance on remittances turns the effect of remittances negative. The effect is positive initially because of the income, modernization, and social remittances channels. But the magnitude of the positive effect marginally declines since the strength of countervailing channels - substitution, stability, dissenters' exit and crowding out - causes the dependency effect to get stronger with the increase in remittances. Over-reliance or dependency on remittances eventually prevails when these countervailing channels dominate the political economy and offset the positive effect channels. Hence, we suggest non-linearity since remittances' positive effect on institutions at the initial stage before the threshold level has the feature of diminishing returns, which causes the effect to zero at the threshold level. After that, the effect turns negative. Therefore, we present the following hypothesis.

H1: An increase in remittances causes improvement in the level of democracy and economic freedom in a country until a turning point is achieved. After that, remittances cause a decline in both political and economic freedom.

The linear effect of each channel can be positive or negative, as discussed earlier. Our motivation is not to find out how, individually, each channel affects institutions. Our primary variable of concern is remittances inflow, and our goal is to discover their net effect on political and economic freedom in the recipient countries, which we expect is non-linear hump-shaped.

Authors	Sample	Independent Variable	Dependent Variable	Methodology	Outcome	Potential Channels
Islam and Lee (2023)	156 developing countries; From 1972 to 2020	Remittances-to-GDP ratio (%)	Freedom House index and the Polity index	System GMM	Remittances promote democracy	Modernization Effect
Lacheheb et al. (2022)	97 developing countries; from 2009 to 2017	Remittances-to-GDP ratio (%)	Freedom House Index	System GMM	Inverted U-shaped relationship with the turning point between 1.43 to 4.20% of GDP.	N/A
Hassan and Rahman (2021)	Bangladesh, From 1973 to 2012	Shock in remittance flows	Freedom House index	Structural VAR (SVAR) approach	Negative effect in the short term (t1) but a positive effect in the long term (between t3 to t5).	N/A
Bastiaens and Tirone (2019)	Non-OECD countries, from 1975 to 2011	Remittances-to-GDP ratio (%)	Freedom House index and the Polity index	System GMM	The effect only exists in the mixed regime, not in consolidated democracies and autocracies. There is no effect on the Freedom House Index.	Governments can bargain political representation against taxes from remittances income. This bargain has more effect in mixed regimes than consolidated regimes (democracies and autocracies).

Table 3.1: Summary of Existing Literature

Bearce and Park (2019)	164 developing countries	Remittances-to-GDP ratio (%)	Polity and Vanhanen's Index of Democracy	Error correction model	Remittances promote democratization	Income Effect, and multiplier effect on the economy
Williams (2018)	84 developing countries from 1982 to 2011	Remittances-to-GDP ratio (%)	Freedom House Index	System GMM, with an external IV - income gap between remittances recipient countries and the United States.	U-shaped relationship with the turning point of 22% of GDP.	Substitution Effect, Income Effect
Escribà-Folch et al., (2018)	Global panel data; micro-level data of eight nondemocracies in Africa	Remittances per Capita	Political Protests	2SLS-IV with instruments: 1) Remittances received in high-income OECD countries; 2) average distance from the coast.	Remittances cause protests in autocratic countries, but not in democracies	Income Effect
Deonanan and Williams (2017)	133 developing countries; From 1972 to 2012	Remittances-to-GDP ratio (%)	Freedom House Index and the Polity index	GMM	Remittances promote democratization	Substitution Effect
Rahman (2017)	District-Level Election Results Data of 2014 in Bangladesh	Overseas employment	Probability of Incumbent turnover	Probit Regression Model	Remittances cause incumbent turnover	Dominant party regime

Williams (2017)	45 Sub-Saharan African economies; From 1975 to 2014	Remittances per capita	Freedom House index and the Polity index	System-GMM	Remittances promote democratization	Income effect by raising the education level and reducing poverty level.
Konte (2016)	27,000 remittance recipients interviewed from 20 sub-Saharan African countries	Remittances' recipients	Degree of support for democracy	Multilevel finite mixture model	Mixed results (negative and neutral effect) depending on class characteristics	Remittances' effect on support for democracy depends on citizens' class characteristics and their preferences for national priority (Freedom vs security).
Escribà-Folch et al., (2015)	137 autocratic regimes; 1975 to 2009	Remittances per capita (logged)	Regime Collapse (democratic transition)	2SLS with instruments 1) Remittances received in high-income OECD countries; 2) share of a country's land that lies within 100 km of a coastline and that contains fertile soil.	Remittances promote democratization	Income Effect: reducing people's reliance on the state's patronage goods.
Ahmed (2013)	57 Muslim non-oil- producing countries; From 1984 to 2004	Remittances from Muslim oil- producing countries	Polity2 and Control on Corruption by ICRG	2SLS: with instrument oil prices interacted with a country's distance to Mecca.	Remittances deteriorate governance and democratic development	Substitution Effect

Ahmed (2012)	97 developing countries from 1975 to 2004	Remittances-to-GDP ratio (%); unearned foreign income (foreign aid + remittances).	Government Turnover	2SLS with the instrument, oil price– driven aid and remittance flows to sample countries. Case study of Jorden.	Remittances increase Autocrats' survival in office.	Substitution Effect
Rother (2009)	Interviews with 1,000 returned migrants (from 1993 and 2003) to the Philippines.	Filipino labour migrants	Support for democracy	Case studies, interviews, and Survey Analysis.	Migration experience causes lesser support for democracy	Social Remittances
Pfutze (2007)	Municipality elections data in Mexico; from 2000 to 2002.	Remittances from migrants living in the United States	Electoral victories of opposition parties	Instrumental variable probit model: rail distance to the main entry point into the United States is the instrument.	Remittances enhance the probability of opposition parties winning the election.	Income Effect

3.3. Data Specification and Methods

This paper deals with developing countries since they are the main beneficiaries of remittance inflows (Ratha et al. 2016). Equation 3.1 presents our baseline regression model:

$$Y_{it} = \beta_0 + \beta_1 Remit_{it} + \beta_2 Remit_{it}^2 + \beta_3 X_{it} + \varphi_i + \delta_t + \epsilon_{it} \dots (Equation 3.1)$$

Here, Y stands for the main outcome variables – democracy and economic freedom. *Remit* represents our main variable of interests, remittances inflow, and *Remit*² is its squared term. *X* collects all control variables. φ_i and δ_t are individual (country) and time (year) specific effects, respectively. \in denotes the error term.

Outcome Variables:

Democracy's electoral components are largely captured by the Polity IV dataset, while the Freedom House's political freedom index⁵⁷ is closely associated with liberal democracy (Nelson and Wallace 2017). Both are correlated at around 82 per cent. We have normalised both the proxies of political freedoms. Originally, Polity2 and Freedom House Index ranged from -10 to +10 and 1 to 100, respectively. Based on our normalised data, 1 indicates the lowest level of democracy, while 10 indicates the highest level.

Figure 3.1 shows the political evolution of democracy in developing countries from 1984 to 2018. It shows the number of democracies has increased over time, especially during the 1990s when the Soviet Union and the Berlin Wall collapsed. The period after that is called the third wave of democratisation (Huntington 2012) when the number of democracies worldwide increased. The rate of democratic development is higher from 1984 to 1994, after that it gets

⁵⁷ It comprises both political and social liberties.

slow down. Figure 3.2 indicates the global trend in democracy from 1980 to 2018, also showing that the number and freedom level of democracies has increased over time.



Figure 3.1: Democratic Development in Developing Countries, 1984 - 2018

Source: Polity V.

Figure 3.2: Global Trend in the change in political regime, 1980 - 2018



Table 3.2 indicates that the mean value of polity2 in our sample countries significantly increased from 1984 to 1983. Thereafter, it is growing slowly until 2018. It does not show the recession at the global democracy level. Instead, the democracies are stable over the time from 1994 to 2018. The table also shows that the mean value of the Freedom House index in our data also increases over time. The jump is significant from the period 1984 – 1989 to the period 1989 – 1993. Thereafter, there is a slight improvement. The table does not show any recession

in the level of both electoral and liberal democracies. It only indicates that the global spread of democracies has slowed down in the last two decades, but it has not been reversed.

Veena	1984 to	1989 to	1994 to	1999 to	2004 to	2009 to	2014 to
rears	1988	1993	1998	2003	2008	2013	2018
Polity2							
Obs	303	351	407	444	504	540	441
Mean	3.87	5.37	6.17	6.47	6.60	6.68	6.78
Std. dev.	3.35	3.23	2.95	2.84	2.95	2.89	2.86
Min	0.00	0.00	0.50	0.50	0.00	0.00	0.00
Max	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Freedom	House Index						
Obs	372	431	489	535	613	662	665
Mean	4.59	5.12	5.25	5.46	5.56	5.45	5.42
Std. dev.	3.14	2.88	2.75	2.69	2.78	2.83	2.90
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Table 3.2: Descriptive Statistics of Political Freedom in 5 Years.

We use the Fraser Institute dataset for economic freedom.⁵⁸ Figure 3.3 shows the global trend in the change in economic freedom, indicating that the level of economic freedom has increased since 1990. However, after the year 2000, the improvement was significantly slower. A similar trend is shown in Table 3.3: economic freedom has increased substantially from 1985 to 2003. After that, there is no decline but a slight improvement. Moreover, the maximum values of economic freedom have also increased during the sample period, indicating that many countries' economic freedom levels have improved significantly. From 1984 to 1988, the maximum value was 6.57; from 2014 to 2018, it was 8.27.

 $^{^{58}}$ We have decided not to utilize the economic freedom data from the Heritage Foundation for two reasons: its partisan agenda and subjective adjustment in the data. We have discussed this in detail in the prevous chapter (page 52 – 53).

We also use the investment profile dataset of different countries provided by the International Country Risk Guide (ICRG) for the robustness check. It captures the market-oriented policies of the governments in terms of providing an investment-friendly macroeconomic environment.



Figure 3.3: Trend in the Change in Economic Freedom

(Source: Fraser Institute)

Years	1985 to 1988	1989 to 1993	1994 to 1998	1999 to 2003	2004 to 2008	2009 to 2013	2014 to 2018		
Economic Freedom (Fraser Institute)									
Obs	51	62	69	283	422	495	535		
Mean	4.93	5.32	5.82	6.28	6.42	6.51	6.55		
Std. dev.	0.94	0.84	0.96	0.79	0.79	0.79	0.82		
Min	2.68	3.08	3.59	3.77	3.83	3.16	2.72		
Max	6.57	7.09	7.50	7.75	7.93	8.19	8.27		

Table 3.3: Descriptive Statistics of Economic Freedom in the duration of 5 Years.

Remittances

The inflow of remittances to developing countries is our primary independent variable. Figure 3.4 shows the level of remittance inflow to developing countries. This indicates that the value remittances in the percentage of GDP started to increase mainly after 1995. It achieved its peak value in 2005, and after that, it became stable. Table 3.4 shows that the mean value of

remittances started rising from 1999 to 2003, and since then, it has stabilized. However, the maximum values between 1984 and 2018 are more than 30 per cent of GDP, except for the durations from 1994 to 2003. This means a higher level of remittance dependency in the sample countries is not a recent phenomenon.



Figure 3.4: Trend in the Change in Remittances Inflow (% of GDP).

(Data Source: World Bank)

Years	1984 to 1988	1989 to 1993	1994 to 1998	1999 to 2003	2004 to 2008	2009 to 2013	2014 to 2018		
Remittances (% of GDP)									
Obs	365	422	478	518	605	655	644		
Mean	3.27	3.12	3.02	3.75	5.23	5.36	5.38		
Std. dev.	5.10	4.92	4.50	4.77	6.48	6.25	5.88		
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Max	30.60	30.23	25.42	27.40	30.62	30.75	30.03		

Table 3.4: Descriptive Statistics of Remittances in the duration of 5 Years.

Control Variables

We have controlled the GDP per capita (logged) and GDP growth rate to account for the impact of income and economic stability on democracy and economic freedom. An increase in citizens' income enhances their effective organization and bargaining power against a political regime, potentially leading to changes in political and economic policies (Moore and Putzel 1999). When citizens' income level is increasing, they might have less incentive to change the regime (Rodrik 1996; Fernandez and Rodrik 1991). Income per capita and urbanization also indicate the modernization effect which are the strong determinant of both remittances and democracy (Lipscy, 2018; Anthony et al., 2014; Che et al., 2013; Acemoglu and Robinson, 2001.

Trade openness indicates the international connectivity of a nation in terms of international trade in which citizens are also exposed to foreign institutions, norms and values and ideas. This can influence their preferences for institutions and policies. The effect is stronger especially when the citizens of an autocratic country trade with the citizens of democratic countries (Tabellini and Magistretti 2022). Trade openness also represents trade globalization which according to some (i.e., Li and Reuveny 2003) discourages democratic development. Rodrik's (2018; 2015; 2011) work is very influential in this regard, suggesting that trade globalization raises income inequality among citizens, which ultimately hurts democratic institutions and promote populism. Since trade openness is a major component of economic freedom in almost all indicators of economic freedom including Fraser Institute index⁵⁹, we have dropped this variable in the equations estimating remittances' effect on economic freedom.

Foreign aid and external debt stocks are the substitutes of remittances for foreign capital inflow. They also influence the levels of democracy and economic freedom in a country (Carnegie and Marinov, 2017; Nelson and Wallace 2017). We have also controlled financial development as

⁵⁹ Approach, Economic Freedom, Fraser Institute, retrieved from <u>https://www.fraserinstitute.org/economic-</u> <u>freedom/approach</u>, viewed on 28 February 2024.

indicated by gross capital formation for the interaction between remittances and economic freedom. It indicates the market's size (total net investment) and productive capacity.

The above-mentioned control variables are part of our benchmark model. For robustness check, we have also controlled government size and internet access (% of the population). The variable, government size, captures the substitution effect, and the variable, internet access, captures the effect of citizens' digital connectivity to the outside World. However, their observations are very limited in numbers. Therefore, we have dropped them from our main model and included their results in our robustness analysis.

Table 3.5 shows summary statistics.

Variable	Label	Obs	Mean	Std. dev.	Min	Max	Source
Polity_N	Polity2	3,447	5.79	3.25	0.00	10.00	Polity IV database
Lib_Dem_N	Freedom House	4,252	4.80	2.87	0.00	10.00	Freedom House
RemitGDP	Remittances (% of GDP)	4,174	4.16	5.55	0.00	30.75	World Bank
	Remittances Per Capita						World Bank
RemitCapita_log	(logged)	4,173	3.00	2.29	0.00	7.48	
							The international
							disaster database
Disaster_Episodes	Disaster, Number of Episodes	4,035	1.81	2.88	0.00	23.00	(EM-DAT)
	Country Size indicated by size						World Bank
Country_Size	of Population (Logged)	4,297	15.44	2.24	8.66	21.05	
OilR	Oil Revenue	4,045	2.86	6.93	0.00	39.56	World Bank
	Official Development						World Bank
ODAGNI	Assistance (% of GNI)	4,087	6.03	7.16	-0.43	39.93	
	External Debt Stock (% of						World Bank
ExtDebtStock	GDP)	3,527	54.95	39.97	0.00	246.04	
GDPGrowthR	GDP Growth Rate	4,164	4.13	4.14	-10.96	19.68	World Bank
PopulationG	Population Growth	4,249	1.84	1.16	-2.85	5.88	World Bank
							Index of Ethnic
Ethnicity	Ethnicity	3,414	0.50	0.26	0.00	0.89	Fractionalization
Inflation	Inflation Rate	3,577	8.20	8.97	-7.80	59.46	World Bank

Table 3.5: Summary Statistics

Unemployment	Unemployment Rate	2,989	7.81	6.07	0.11	29.86	World Bank
	Internet Users (% of						World Bank
Internet_Users	Population)	2,831	16.55	21.21	0.00	99.65	
Trade_Openess	Trade Openness (% of GDP)	3,868	74.27	34.61	0.17	196.73	World Bank
	Urbanization (% of						World Bank
Urbanization	Population)	4,282	44.17	19.98	4.18	100.00	
							The International
							Country Risk Guide
miltary_politics	Control on Military in Politics	2,373	3.05	1.59	0.00	6.00	(ICRG)
conflict_intr	Control on Internal Conflict	2,373	8.23	2.08	0.00	12.00	ICRG
GDPPC_USD_log	GDP Per Capita (Logged)	4,270	7.33	1.18	4.34	11.35	World Bank
IMF_GDP	IMF Debt (% of GDP)	3,634	2.13	2.61	0.00	15.96	World Bank
							The World Income
	Income Inequality (Gini						Inequality
gini_wiid	Coefficient)	4,351	49.02	9.38	15.00	77.00	Database (WIID)
Corruption_ICRG	Control on Corruption	2,373	2.38	0.89	0.00	5.00	ICRG
GCapitalF	(Gross Capital Formation)	3,579	23.69	8.44	3.15	59.73	World Bank
Inv_Profile	Investment Profile (ICRG)	3,026	6.747	2.01	0	11.50	ICRG
Government_Size	Government Size (% of GDP)	1,779	21.70	8.37	7.02	55.77	World Bank

3.3. Estimation Strategy

Since our objective is to calculate the incremental effect of any change in remittances inflow (% of GDP) on political and economic freedom in the recipient countries, we do not use Cheibub et al. (1996) and Gasiorowski (1995) method in which the dummy variable of the dependent variable (absence or presence of freedom) is used.

Endogeneity is the main issue when measuring the effect of remittances on institutions, which can lead to biased results (Docquier et al. 2016). It has two leading causes. First is the potential reverse causality between remittances and institutional quality in the recipient countries since a lack of freedom pushes citizens to migrate. Moreover, political and economic freedom foster economic development (e.g., Lawson et al., 2020; Easterly, 2019; Hall and Lawson, 2014), so a lack of freedom translates into a lack of development and a greater need for remittances.

The second is measurement error. The data for remittances transferred through informal channels (i.e., Hawala and Hundi⁶⁰) are unavailable. Amjad et al. (2012) studied the values of remittances received through formal and informal means in Pakistan. They estimate that the ratio is 60 to 40, respectively. Seddon et al. (2002) found that remittances received through unofficial networks are ten times higher than official sources in Nepal. This shows that the unofficial remittances data for some countries can be considerably high, and its unavailability can lead to false estimations. We cannot be sure whether an increase in remittances in a country is due to changes in government policy or technology to curb unofficial channels.

Finding the exact remittance figures is challenging. Amjad et al. (2012) offer five factors responsible for the ten-fold surge in remittances inflow into Pakistan from 2001 to 2011. 1) The number of migrants has increased during the period. 2) A large portion of remittances shifted from unofficial to official networks. 3) An increase in payments for illegal transactions (i.e., corruption, drugs, terrorism) through the remittances channel. 4) Some exporters used the remittances channel to avoid taxes. 5) To avoid taxes, some investors also transferred their capital through remittances. Separating actual migrant remittances from existing official data is impossible. Due to measurement error, our data only cover formal remittances, and informal remittances can vary non-randomly across countries and time.

⁶⁰ Hawala and Hundi are informal remittances channels through which migrants deposit money to a person in their host country. That person gives them a reference in their home country where from the migrant's family member or friend can collect that money in local currency units. These traditional channels have their different local names in different countries like feichien in China, hui kuan in Hong Kong, padala in Philippines, hundi in India and Pakistan, hawala in some Middle Eastern countries, and phei kwan in Thailand.

The Durbin and Wu-Hausman test also confirms our endogeneity concern. It provides a p-value equal to 0.000, indicating that remittances inflow is an endogenous variable.

To address endogeneity, we use an instrumental variable approach. We apply two instrumental variables (IVs) for the endogenous variable, remittances, by applying the Fixed Effect Two-Stage Least Squares (FE - 2SLS) method. 1) Natural Disasters, which displace people, forcing them to migrate internally and externally, as the affected people lose their livelihoods and employment opportunities (Mallick and Siddiqui 2015; Smith and Ward 1998; Pedersen 1995). Their occurrence is a natural phenomenon (act of God); therefore, they are exogenous to a political and economic system in a country. There exists a positive relationship between a natural disaster and remittances inflow in an affected country (World Bank 2016; Le De et al. 2015; Attzs 2008; Savage and Harvey 2007; Clarke and Wallsten 2003) since migrants remit more funds to support their affected dependents. We use "the number of episodes of natural disaster" in a year as an IV to indicate the level of natural disaster in the sample countries.

2) Following Docquier et al. (2016), *country size*, indicated by the population size, is another instrumental variable that influences external migration. Larger countries may offer more opportunities for internal migration. There would be no international migration if the world were one country. On the other hand, larger countries have limited resources to provide public goods (i.e., policing, housing, healthcare, and education) compared to their size of population, which can cause higher external migration. They can be congested, polluted, and have many negative externalities (Borck and Schrauth 2021; Yang et al. 2021). These factors can work as push factors, forcing people to leave their country to find a better place to live. Therefore, among the top ten recipients of remittances, the first eight countries are also among the top fifteen countries in terms of their population size. Following is their table.

Country	Rank as	Population Size *	Population Size
Name	remittances'		Ranking*
	recipient*		
India	1	1,417,173,173	1
Mexico	2	127,504,125	10
China	3	1,412,175,000	2
Philippines	4	115,559,009	13
Pakistan	5	235,824,862	5
Egypt	6	110,990,103	14
Bangladesh	7	171,186,372	8
Nigeria	8	218,541,212	6
Guatemala	9	17,357,886	70
Ukraine	10	38,000,000	41

 Table 3.6: Top Ten Remittances Receiving Countries and their Population Size

(Source: World Bank)

Country size is also not correlated with political regime, as shown in Table 3.7, in which the list of the top ten largest countries is given with their regime type.

Country Name	Population Size	Population	Political Regime**	Political Regime***
	Ranking*	Size*		
India	1	1,417,173,173	Partly Free	Full Democracy
China	2	1,412,175,000	Not Free	Full Autocracy
United States	3	333,288,000	Free	Full Democracy
Indonesia	4	275,501,000	Partly Free	Full Democracy
Pakistan	5	235,824,862	Not Free	Less Democracy
Nigeria	6	218,541,212	Partly Free	Less Democracy
Brazil	7	215,313,000	Partly Free	Less Democracy
Bangladesh	8	218,541,212	Partly Free	Mixed Regime
Russia	9	143,556,000	Not Free	Mixed Regime
Mexico	10	127,504,000	Party Free	Less democracy

 Table 3.7: Top Ten Remittances Receiving Countries and their Political Regime Type

(Source: *World Bank, ** Freedom House, ***Polity2)

Table 3.8 shows the correlation between IVs and institutional variables, confirming that IVs are not significantly correlated with the outcome variables.

		Natural		Freedom House	Fraser
	Country Size	Disaster	Polity2	Index	Institute
Country Size	1				
Natural Disaster	0.6332	1			
Polity2	-0.1068	0.1132	1		
Freedom House	-0.1965	0.0409	0.8	1	
Fraser Institute	-0.2068	0.0122	0.4587	0.3977	1

Table 3.8: Correlation Matrix, IVs and Institutional Variables

Following is the first stage equation in our FE-2SLS estimation in which we include *Remittances*.

$$Remit_{it} = \beta_0 + \gamma_1 X_{it} + \gamma_2 Z_{it} + Y_c + \epsilon_{it}^T \dots (equation 3.2)$$

While *X* shows control variables and *Z* indicates our instrumental variables. Equation 3.3 provides the second stage equation in which we use the variables \widehat{Remit}_{it} that are estimated in the first stage equations.

$$Y_{it} = \beta_0 + \beta_1 \widehat{Remit}_{it} + \beta_2 Remit_{it}^2 + \beta_3 X_{it} + \varphi_i + \delta_t + \epsilon_{it}^F \dots (equation 3.3)$$

For robustness analysis, we also use the general to specific approach to select control variables for our estimation.⁶¹ We selected twenty-three variables⁶² based on our theoretical

 $^{^{61}}$ In the previous chapter (pages 61 – 62), we discussed what GETS is and how to perform this method for model specification.

⁶² Here is the list of explanatory variables we employed in this process. 1) Population growth. 2) Population ages 15 to 64 old (% of population). 3) Government debt (% of GDP). 4) external debt stock (% of GDP). 5) GDP growth rate. 6) GDP per capita (logged). 6) control on corruption (ICRG). 7) percentage of the population with

understanding and the existing literature (i.e. Glaeser and Steinberg, 2017; Rahman 2013; Hegre et al., 2012; Tiwari, 2012; Acemoglu et al., 2005; Barro 1999; Muller 1995) discussing the determinants of democracy and economic freedom.

We also apply Granger Causality Test to explore the causal relationship between independent and dependent variables. The underlying mechanism starts by regressing the dependent variable on its lag (Yt-1) and an independent variable lagged (Xt-1) and then testing the validity of the null hypothesis that the estimated coefficients on the lagged values of x are jointly zero. The case when the null hypothesis is rejected confirms the validity of the alternative hypothesis that the independent variable does Granger-cause dependent variable (Gujarati, 2009). However, these results do not fully confirm the causality in the real sense. They just show whether a change in variable X can predict a change in variable Y or not. Therefore, predictability is the central premise of this test (Song and Taamouti 2019). Moreover, the direction of causation whether X causes a negative or positive change in Y is also not the scope of this Test.

education at the secondary level. 8) Gross capital formation (% of GDP); 9) Government stability (ICRG). 9) Quality of bureaucracy (ICRG). 10) Control on internal conflict (ICRG). 11) Control on military in politics (ICRG). 12) control on religious tensions (ICRG). 13) Control on ethnic tensions (ICRG). 14) Control on external conflict (ICRG). 15) Rate of inflation. 16) Unemployment rate. 17) Government expenses (% of GDP). 18) Gini Coefficient. 19) Individuals using the Internet (% of the population). 20) Trade (% of GDP). 21) Urbanization (% of Population). 22) Official development assistance (ODA). 23) Ethnicity.

3.4. Results and Interpretation

The results in Table 3.9 confirm that the non-linear relationship between remittances and democracy (both electoral and liberal) exists, as we predicted in our hypothesis. If we do not include a squared term, the results only show a positive effect (models 1 and 3). This is why many studies (i.e., Islam and lee 2023; Bearce and Park 2019; Deonanan and Williams 2017; Williams 2017; Escribà-Folch et al. 2015) only find a positive association between remittances and democracy. Adding squared terms, results indicate that remittances influence democracy in a non-linear, hump-shaped way. The turning points in model 2 and model 4 are very close to each other, 13.28 and 13.63, respectively.

This indicates that the marginal return of remittances on democratization is positive initially. However, it declines as remittances increase over time until a turning point is reached where the marginal return of remittances becomes zero. When sample countries receive remittances exceeding the TP level, the marginal return of remittances on democracy turns negative, meaning that remittances start hurting the democracy. A review of our data indicates that, among our 107 sample countries, 26 countries receive more than 13.28% of their GDP remittances. It shows that almost 24 per cent of countries are in the zone where their overreliance or dependency on remittances is causing their democratic decline.

	Freedom House Index			Polity2		
VARIABLES	1 st Stage	Model 1	Model 2	1st Stage	Model 3	Model 4
RemitGDP		0.468***	0.611***		1.121***	1.527***
		(0.079)	(0.081)		(0.129)	(0.125)
RemitGDP2			-0.023***			-0.056***
			(0.003)			(0.005)
GDPGrowthR	0.049***	0.006	-0.021***	0.053***	-0.038*	-0.002
	(0.015)	(0.011)	(0.008)	(0.016)	(0.022)	(0.014)
Trade_Openess	0.035***	-0.014***	0.003	0.036***	-0.030***	-0.006

Table 3.9: Effect of Remittances on Democracy – FE-2SLS Results

	(0.004)	(0.004)	(0.002)	(0.004)	(0.007)	(0.004)
ExtDebtStock	-0.003	0.005***	-0.004***	-0.000	0.003	0.001
	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)	(0.002)
Urbanization	-0.074***	0.042***	-0.024***	-0.112***	0.111***	0.060***
	(0.016)	(0.008)	(0.007)	(0.018)	(0.017)	(0.012)
GDPPC_USD_log	0.694***	0.293**	-0.075	0.841***	0.911***	0.023
	(0.148)	(0.121)	(0.076)	(0.159)	(0.240)	(0.138)
ODAGNI	0.028	-0.010	-0.011	0.004	0.012	0.071***
	(0.018)	(0.012)	(0.009)	(0.019)	(0.023)	(0.017)
Disaster_Episodes	0.079**			0.078**		
	(0.033)			(0.034)		
Country_Size	3.022***			3.891***		
	(0.401)			(0.438)		
Constant	-48.266***	5.957***	8.108***	-63.086	4.616***	-0.688
	(5.835)	(0.699)	(0.450)	(6.552)	(1.352)	(0.791)
Observations	2,921	2,921	2,921	2,585	2,585	2,585
No. of Countries	107	107	107	96	96	96
Turning Point			13.28			13.63
F Stat	143.899			36.8305		

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Discussing control variables, we find that the GDP growth rate has an insignificant relationship with democracy except in model 3, where the growth rate is negatively correlated, although the significance level is lower. GDP per capita and urbanization, which represent income and modernization effects, respectively, indicate a significantly positive effect on democracy. We have predicted in our literature review section that both channels are strong determinants of a positive association between remittances and democracy.

Trade openness has a negative influence on democracy in our estimation (models 1 and 3). This is compatible with Li and Reuveny's (2003) findings that trade openness is not beneficial for the development of democracy. Rodrik's (2015; 2011) view is that trade globalization raises income inequality, which causes populism and discourages political development in democracies. However, an endogeneity between trade openness and political regimes also exists, and without addressing that, the results are biased (López-Córdova and Meissner 2005).

Our study does not address this endogeneity because this is not our primary variable of concern; therefore, our results regarding the coefficient sign of trade openness can be misleading.

External debt stock and Official development assistance (ODA), substitutes for remittances in terms of foreign capital inflows to developing countries, have an insignificant relationship with the dependent variable in all models except in three. In model 1, external debt stock has a significantly positive effect on democracy, as suggested by Nelson and Wallace (2017). The effect turns negative in model 2 when we add the remittances' squared term. ODA's influence on democracy is significantly positive only in model 4.

We have observed that many control variables (like external debt stock and urbanization) change their coefficients' sign or lose their significance (like trade openness) when we add the squared term of remittances. This can be because the squared term captures much of the effect and suppresses the effect of some control variables on democracy.

Our results also indicate that our instrumental variables are significant, showing the behaviour we predicted in the last section. Natural disasters and country size cause an increase in the level of remittance inflow. Moreover, F-Statistics further confirm the robustness of our instrumental variables since their values are more than the threshold 11.

	Freedor	n House	Polity2		
VARIABLES	Model 5	Model 6	Model 7	Model 8	
Democracy Lagged1	0.939***	0.936***	1.004***	1.013***	
	(0.003)	(0.004)	(0.001)	(0.000)	
RemitGDP	-0.002***	0.039***	0.039***	0.022***	
	(0.000)	(0.002)	(0.000)	(0.001)	
RemitGDP2		-0.002***		-0.001***	
		(0.000)		(0.000)	
GDPGrowthR	0.003***	0.003***	0.008***	0.008***	
	(0.000)	(0.000)	(0.000)	(0.000)	
Trade_Openess	-0.0004***	-0.001***	-0.003***	-0.001***	

Table 3.10: Effect of Remittances on Democracy – 2-Steps System GMM Results

	(0.000)	(0.000)	(0.000)	(0.000)
ExtDebtStock	0.0002***	0.0004***	0.0005***	0.0002***
	(0.000)	(0.000)	(0.000)	(0.000)
Urbanization	-0.0003	-0.0003	0.000	0.001***
	(0.000)	(0.000)	(0.0002)	(0.000)
GDPPC_USD_log	0.065***	0.065***	0.024***	0.044***
	(0.004)	(0.004)	(0.002)	(0.001)
ODAGNI	0.006***	0.006***	-0.001***	0.002***
	(0.001)	(0.001)	(0.000)	(0.000)
Constant	0.747***	0.828***	0.167***	0.191***
	(0.039)	(0.039)	(0.011)	(0.004)
Observations	2,951	2,951	2,629	2,629
Number of Countries	109	109	98	98
Turning Point		9.75		11.00
Arellano-Bond test for AR(1)	0.000	0.000	0.000	0.000
Arellano-Bond test for AR(2)	0.257	0.261	0.264	0.266
Hansen test of overid.	0.576	0.461	0.439	0.482
restrictions				

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Since democracies persist over time, we have also applied the System Generalized Method of Moments (GMM) to confirm the robustness of our results. Some papers in the existing literature on remittances – democracy nexus (e.g., Islam and Lee 2023, Lacheheb et al. 2022, Bastiaens and Tirone 2019) also use system GMM in their estimation. Results in Table 3.10 confirm the presence of a non-linear inverted U-shaped relationship between remittances and democracy. Thus, our results are robust irrespective of whether the 2SLS-FE method or system GMM is used. However, the turning points (TP) in GMM results are lower than the TPs in the previous Table 3.9. Thus, our study contradicts Lacheheb et al. (2022) and Williams (2018), who also apply the System GMM to find a non-linear relationship. Like us, the former demonstrates an inverted U-shaped relationship between remittances and democracy. However, its TP is much lower: between 1.43 and 4.20% of GDP. We show that the TPs are higher, 9.75 for liberal democracy and 11 for electoral democracy if we use System GMM. This difference can be because of our differences in sample period and size. Otherwise, using

FE-2SLS, the TPs are 13.28 and 13.68, respectively. Williams (2018) shows a U-shaped relationship, while our study finds an inverted U-shaped. Counting the number of countries whose remittance levels are more than 9.75% of GDP, we find 36, which makes up 34% of our sample.

	Fraser Institute			Investment Profile (ICRG)			
VARIABLES	1st Stage	Model 9	Model 10	1st Stage	Model 11	Model 12	
RemitGDP		0.231***	0.286***		0.761***	0.694***	
		(0.037)	(0.037)		(0.170)	(0.116)	
RemitGDP2			-0.010***			-0.024***	
			(0.001)			(0.004)	
GDPGrowthR	0.044**	0.002	0.006	0.055***	-0.037**	-0.001	
	(0.021)	(0.006)	(0.004)	(0.018)	(0.019)	(0.011)	
ExtDebtStock	0.000	0.001	0.001**	-0.006**	0.001	-0.002	
	(0.003)	(0.001)	(0.001)	(0.002)	(0.003)	(0.002)	
Urbanization	-0.032	0.043***	0.048***	0.036*	0.016	0.063***	
	(0.023)	(0.005)	(0.004)	(0.021)	(0.022)	(0.011)	
GDPPC_USD_log	0.235	0.142**	0.174***	0.288*	-0.112	-0.058	
	(0.204)	(0.057)	(0.041)	(0.174)	(0.165)	(0.110)	
ODAGNI	0.029	-0.007	-0.001	-0.017	-0.010	-0.005	
	(0.024)	(0.007)	(0.005)	(0.022)	(0.020)	(0.014)	
GCapitalF	0.033***	0.009**	0.004	0.0015	0.020**	0.029***	
	(0.013)	(0.004)	(0.003)	(0.011)	(0.010)	(0.007)	
Disaster_Episodes	0.090**			0.076**			
	(0.035)			(0.032)			
Country_Size	3.639***			2.372***			
	(0.567)			(0.551)			
Constant	-56.280***	2.193***	1.642***	-38.922***	3.209***	1.914***	
	(8.539)	(0.326)	(0.232)	(8.529)	(1.003)	(0.621)	
Observations	1,545	1,545	1,545	1,931	1,931	1,931	
No of Countries	93	93	93	73	73	73	
Turning Point			14.30			14.46	
F Stat	29.2911			29.8954			

Table 3.11: Effect of Remittances on Economic Policies - FE-2SLS Results

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

The non-linear hump-shaped relationship is also evidenced in Table 3.11, showing the diminishing marginal return of remittances on economic freedom until the turning point is achieved. After the TP, an increase in remittances causes a decline in economic freedom. For FE-2SLS results in models 10 and 12, the TPs are 14.30 and 14.46, respectively. It means the TPs of remittances for economic freedom are around one point higher than those in the remittances – democracy nexus in Table 3.9. Among the 93 countries in our sample, 25 have remittance levels higher than 14.30. These results confirm our hypothesis that remittances' effect on political and economic freedom is inverted U-shaped.

The behaviour of control variables is somewhat different in Table 3.11 compared to Table 3.9 because of the difference in the dependent variable. We observe that the GDP growth rate is only significant in model 11. Like Table 3.9, Urbanisation and GDP per capita - representing modernization and income effects, respectively - have significantly positive effects on the economic freedom index by the Fraser Institute. However, urbanization is only significantly positive in equation 12 of the investment profile, an indicator representing investment-friendly policies in the sample countries. External debt stock is only significant in model 10. ODA is not significant in any specification. Gross capital formation, representing financial development in a country, positively influences economic freedom (models 9, 11, 12), as we predicted in the previous section.

In Table 3.11, we observe that adding a squared term does not cause changes in the coefficients' sign of control variables, unlike Table 3.9. They are consistent. Like Table 3.9, our results are robust based on the significance level of IVs' and F-statistics' results.

To explore further, we have controlled the variable government size (government expenditure in percentage of GDP) to capture the substitution effect on the interactions between remittances and political and economic freedom (appendix 3.3). This treatment significantly reduces the

number of observations.⁶³ The non-linear relation is confirmed in the Polity2 and Fraser House index. However, the results of Freedom House are statistically insignificant. This shows that even when controlling the substitution effect, the effect of remittances on democracy is non-linear and inverted U-shaped. Thus, we disagree with William (2018), who finds a U-shaped relationship between remittances and democracy, suggesting it is mainly because of substitution and income effects. We control both effects and do not find such behaviour. We also disagree with Deonanan and Williams (2017) and Ahmed (2013;12); the former indicates the positive effect of remittances on democracy, and the latter shows a negative effect. They also justify their results based on the substitution effect channel. Our results do not show any significant difference in term of changing the nature of the relationship between main independent variables if we control or drop the variable, government size.

Further, in Appendix 3.4, we have controlled the variable internet access to citizens (% of the population) in the sample countries to capture the effect of digital connectivity between migrants and their dependents. Since the internet has provided more time and resources to migrants and their dependents to contact, this factor can boost the social remittances channel. Migrants can easily stay connected with their home countries' media, including conventional and social media, through the internet, which enhances their awareness of their home countries' affairs and influence there. Internet access also causes migration intentions and aspirations (Grubanov-Boskovic 2021). Levitt's (1998) work is influential in explaining how social remittances positively affect institutions. Our results in the Appendix 3.4 confirm that the relationship between remittances and political and economic freedom is non-linear hump shaped.

⁶³ For Freedom House index, from 2921 to 1344; for Polity2, from 2585 to 1183; and for Fraser Institute, from 1545 to 893.
	Fre	edom House In	dex		Polity2	
VARIABLES	1 st Stage	Model 13	Model 14	1 st Stage	Model 15	Model 16
RemitCapita (logged)		0.657***	0.797***		1.780***	2.079***
		(0.089)	(0.106)		(0.145)	(0.179)
RemitCapita (logged)2			-0.083***			-0.164***
			(0.011)			(0.018)
GDPGrowthR	0.027***	0.010	0.011	0.031***	-0.034**	-0.033**
	(0.006)	(0.008)	(0.008)	(0.006)	(0.015)	(0.015)
Trade_Openess	0.013***	-0.006***	-0.004	0.013***	-0.013***	-0.009**
	(0.001)	(0.002)	(0.002)	(0.001)	(0.004)	(0.004)
ExtDebtStock	-0.001	0.004***	0.006***	-0.001	0.004**	0.007***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)
Urbanization	-0.008	0.011	0.002	-0.017***	0.014	-0.004
	(0.006)	(0.008)	(0.008)	(0.007)	(0.014)	(0.015)
GDPPC_USD_log	0.966***	0.563***	-0.068	0.955***	1.635***	-0.706***
	(0.053)	(0.124)	(0.096)	(0.060)	(0.207)	(0.178)
ODAGNI	0.012*	-0.003	-0.010	0.008	0.006	-0.016
	(0.006)	(0.009)	(0.009)	(0.007)	(0.016)	(0.017)
Disaster_Episodes	0.023*			0.021*		
	(0.012)			(0.012)		
Country_Size	2.176***			2.503***		
	(0.146)			(0.165)		
Constant	-39.356***	3.031***	5.665***	-45.215***	12.867***	8.063***
	(2.121)	(0.850)	(0.672)	(2.473)	(1.423)	(1.227)
Observations	2,930	2,930	2,930	2,579	2,579	2,579
Number of Countries	107	107	107	96	96	96
Turning Point			121.66			565.90
F-Stat	247.445			21.574		

Table 3.12: Effect of Remittances Per Capita on Democracy – 2SLS Results

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

In the existing literature, two proxies of remittances are widely used: remittances received in % of GDP (Islam and Lee 2023; Lecheheb et al. 2022; Bastiaens and Tirone 2019; Ahmed 2012) and remittances per capita (Escriba-Folch et al. 2018; Williams 2017). Both Escriba-Folch et al. and Williams find positive effects of remittances on democracy. To explore whether remittances per capita confirm our hypothesis, we have also utilised this independent variable in our primary model. The results in Tables 3.12 and 3.13 contradict the findings of Escriba-

Folch et al. (2018) and Williams (2017) and confirm the validity of our hypothesis that a nonlinear inverted U-shaped relationship exists. Here, TPs are in the values per capita, not in the percentage of GDP. It means the marginal effect of remittances per capita is positive until it reaches 121.66 and 565 for the Freedom House index and the Polity2, respectively. The TP of the Fraser House Index is even higher, at 2164.62. After the TP, an increase in remittances per capita causes an institutional decline. Thus, remittances' diminishing marginal return property is also confirmed even if we use remittances per capita as an independent variable.

		Fraser Institute	e
VARIABLES	1 st Stage	Model 17	Model 18
RemitCapita_log		0.343***	0.384***
		(0.042)	(0.053)
RemitCapita_log2			-0.025***
			(0.005)
GDPGrowthR	0.030***	0.003	0.005
	(0.008)	(0.004)	(0.004)
ExtDebtStock	-0.003***	0.002***	0.002***
	(0.001)	(0.001)	(0.001)
Urbanization	-0.014*	0.041***	0.039***
	(0.008)	(0.004)	(0.004)
GDPPC_USD_log	0.883***	-0.116**	0.036
	(0.075)	(0.059)	(0.048)
ODAGNI	0.013	-0.006	-0.007
	(0.009)	(0.005)	(0.005)
GCapitalF	-0.007	0.000	-0.001
	(0.005)	(0.002)	(0.003)
Disaster_Episodes	0.014		
	(0.013)		
Country_Size	2.607***		
	(0.208)		
Constant	-45.225***	3.951***	3.152***
	(3.131)	(0.350)	(0.290)
Observations	1,531	1,531	1,531
Number of Countries	92	92	92
Turning Point			2164.62
F-Stat	41.342		

 Table 3.13: Effect of Remittances Per Capita on Economic Freedom – 2SLS-FE Results

We have also applied the Granger Causality test. Table 3.14 provides its results, indicating that the influence of remittances on democracy is direct: remittances Granger cause both electoral and liberal democracy. A similar direct causal relationship exists for the economic freedom index by the Fraser Institute: remittances Granger cause economic freedom in the sample countries. Regarding reverse causality from political and economic freedom to remittances, we find the chi2 of electoral and liberal democracy and economic freedom indices insignificant. It means that political and economic freedom does not Granger cause remittance inflow in our sample countries. Thus, the possibility of reverse causality is not confirmed statistically by the Granger causality test.

Equation \ Excluded	chi2						
Electoral Democracy							
Remittances	5.146*						
Remittances							
Electoral Democrac	y 1.145						
Liberal Democracy							
Remittances	9.161**						
Remittances							
Liberal Democracy	5.216						
Economic Freedom Fraser Institute							
Remittances	9.425*						
Remittances							
Economic Freedom	Fraser Institute2.231						

 Table 3.14: Do remittances Granger cause Democracy and Economic Freedom?

Robustness Tests:

We have applied some more tests to confirm the robustness of our findings. In Appendix 3.5, we use an equal number of observations of dependent variables - Polity2 and Freedom House index - considering the difference in TPs and coefficient values in Table 3.9 can be due to the difference in observations.⁶⁴ similar treatment we perform for the Fraser House Index and the investment profile by ICRG is in Appendix 3.6 as well. The differences in TPs and coefficient values still exist in Appendices 3.5 and 3.6 since each data source of political and economic freedom uses a different methodology. However, there is not much difference between their results before and after this treatment.

In Appendix 3.7, we have applied our instrumental variables separately to determine whether our results in Table 3.9 are biased due to using both IVs together. We find the non-linear relationships between our independent and dependent variables, confirming the validity of our results in Table 3.9. Our IVs are still statistically significant with the same signs as we observed before. Likewise, there is not much difference in the TPs, between Table 3.9 and Appendix 3.7. We perform a similar treatment for the proxies of market-oriented economic policies (Appendix 3.8) and observe the same level of robustness there.

We have also performed some heterogeneity tests. Tyburski (2014) explains that the positive and negative effects of remittances on institutions are possible depending on the political regime of the recipient countries. This is because citizens have more bargaining power in democratic societies, and the political cost of public demonstrations is lower there. Escribà-

⁶⁴ In Table 3.8, Freedom House and Polity2 include 107 (2,921 observations) and 96 (2,585 observations) countries, respectively. After adjusting the numbers of observations to be equal; both FH and Polity2 incorporates the same sample of 96 countries and 2,546 observations. The objective of this treatment is to determine whether their differences in TPs remains the same or vanishes?

Folch et al. (2018) find that remittances cause political protests only in autocracies but not in democracies. Therefore, we have divided our sample into democratic and non-democratic countries to find whether our hypothesis is valid in both regimes. Appendices 3.9 and 3.10 show the results for the democratic and autocratic countries, respectively, and confirm that our hypothesis is valid in both regimes. However, the TP for Freedom House is lower in democracies (by 0.86% of GDP) than in autocracies. The difference is narrow in the case of Polity2 results, just 0.155% of GDP.

Another heterogeneity test we apply is dividing our sample into two groups: citizens' political behaviour before and after availability of the internet. Grubanov-Boskovic et al. (2021) show that citizens' migration intentions increase when they are exposed to the Internet. Results in Appendix 3.11 show a non-linear inverted U-shaped relationship in both samples when we use the Polity2 index. However, in the results of the Freedom House index, both linear and non-linear coefficients are only significant in the sample of the period when people do not have internet access. We observed a high TP of 17.08 in polity2 results for the sample "after internet access", compared to 12.15 for the sample "before internet access". This means that internet access has positively influenced and promoted democracy by making the TP higher. We suggest that the main reason is the social remittances channel, which is boosted when migrants connect more with their dependents and their home country's affairs.

Finally, we apply the General to Specific approach (GETS), an alternative method to select the control variables. Its logic is that the theoretically motivated control variables can potentially raise the probability of biased results. The outcome model for democracy has a different set of control variables and sample countries than the benchmark model.⁶⁵ However, for economic

⁶⁵ For democracy, the outcome model controls population growth, control on the military in politics, income inequality (Gini coefficient) and control on corruption.

freedom, the model shares two control variables, GDP growth rate and Gross Capital Formation, with our benchmark model.⁶⁶ Moreover, the democracy and economic freedom models by GETS include a smaller sample of countries, with 23 and 12 fewer countries, respectively. Our results based on GETS given in appendices 3.12 and 3.13 also confirm the validity of our hypothesis that remittances affect democracy and economic freedom in a non-linear hump-shaped way. The TPs are, however, slightly lower in GETS results than the results based on our model specification in Tables 3.9 and 3.11.

Discussion: Our results show that the net effect of remittances on political and economic freedom is nonlinear, so that it is positive only initially when the level of remittances inflow is low. At the higher remittances levels, which in our results are more than thirteen to fourteen percent of GDP and indicate an economy's higher reliance on them, remittances discourage institutional development at both political and economic levels. It means that if countries keep their level of remittances lower than 13% of GDP, their institutions continue improving.

We believe the negative effect of remittances above the turning point is due to three main reasons. 1) The substitution and stability effects of the remittances stabilize the regime, causing the net effect of remittances to be negative. The effect also exists in the economy if remittances become a significant source of foreign capital, domestic consumption, and investment. Remittances' multiplier effect boosts economic activities, creates remittance-led economic growth, and incentivises policymakers to avert structural reforms if their political cost is high.

2) As argued, a regime lacking freedom and development requires more remittances to survive. Furthermore, if remittances inflow in a country is increasing over time, it could be because a large number of people are migrating to countries with better economic opportunities and more

⁶⁶ Three other control variables in the GETS model are the inflation rate, unemployment rate and control on the military in politics.

freedom. Some papers (e.g., Docquier et al. 2020; Berlinschi and Hartunyan 2019; Van Dalen et al. 2005) show that the people with migration intentions are more likely to be politically active, critical of government policies, modern in ideas, and liberal in values. Hence, a higher migration level shows that politically active people are hopeless and leaving the country, lowering political dissent and, ultimately, the demand for political and economic reforms. This could cause political homogeneity in the home countries and directly favour autocrats and the status quo of failed economic policies. We call it the "*dissenters' exit*" effect.

3) Resource curse of remittances: an abundance of remittances as a single valuable economic resource can crowd out significant economic activities or reduce the incentive of policies that raise productivity and efficiency. This can be through exchange rate appreciation, also called Dutch disease (Ito 2017; Lartey et al. 2012; Acosta et al. 2009; Amuedo-Dorantes and Pozo 2004), or the outflow of human capital through labor migration and brain drain (Murakami et al. 2021; Sousa and García-Suaza 2018; Hanson 2007). Through these ways, remittances can act like natural resources, oil and natural gas. We suggest that the crowding-out effect of remittances is only possible when their level is high. This is because, at such levels, remittances can act like an abundant endowment of a single valuable resource, a condition known as a resource curse, as described by Gerber (2018).

Conclusion

This paper investigates the influence of remittances on political and economic institutions in developing economies and finds a non-linear hump-shaped impact of remittances on institutions. We found that remittances are a blessing for democracy and economic freedom as long as their level stays below 13.28% and 14.30% of GDP, respectively. However, if the level exceeds these thresholds, they have negative consequences. We suggest three leading causes

of the negative effects of remittances on institutions after the threshold level. 1) Receipts of remittances discourage political and economic reforms, especially when these reforms are politically costly. 2) International migration can increase political homogeneity since dissenters are more likely to leave their home countries, thus consolidating the status quo's power. 3) Resource curse: as a single valuable economic resource, remittances can crowd out significant economic activities or reduce incentives for policies that promote productivity and efficiency.

Remittances are, on the whole, beneficial to the families of migrants in recipient countries, but not helpful for the countries themselves beyond a certain level. Policymakers should strive to identify the optimal threshold beyond which remittances' effects start becoming negative; they should act accordingly by providing appropriate incentives to people to ensure that they do not develop an over-reliance on remittances.

There are two schools of thought regarding remittances – institution nexus; one considers them as a blessing (e.g., Bearce and Park 2019; Tyburski, 2012), the other as a curse (e.g., Ansari 2016; Abdih et al. 2012; Ahmed 2012). Our research embraces both, but it depends on where with respect to the threshold the country is placed. Remittances are a blessing when their level is lower than the threshold level, and they do not create crowding out effect. Only at the higher level, remittances act as a curse for institutional development.

		Freedom H	louse Index		Polity2 Index					
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8		
	Pooled OLS	Pooled OLS	Fixed Effect	Fixed Effect	Pooled OLS	Pooled OLS	Fixed Effect	Fixed Effect		
RemitGDP	0.035***	0.191***	-0.011	0.027	0.101***	0.200***	0.061***	0.160***		
	(0.008)	(0.022)	(0.008)	(0.018)	(0.011)	(0.028)	(0.012)	(0.026)		
RemitGDP2		-0.008***		-0.002**		-0.005***		-0.005***		
		(0.001)		(0.001)		(0.001)		(0.001)		
GDPGrowthR	-0.029**	-0.030***	0.027***	0.027***	-0.011	-0.012	0.024***	0.023**		
	(0.012)	(0.012)	(0.007)	(0.007)	(0.015)	(0.015)	(0.009)	(0.009)		
Trade_Openess	0.002	0.001	0.004***	0.004***	-0.008***	-0.008***	0.010***	0.009***		
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)		
ExtDebtStock	-0.003*	-0.002*	0.001*	0.002*	-0.002	-0.002	-0.001	-0.001		
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)		
Urbanization	-0.003	-0.002	0.043***	0.041***	0.011**	0.012**	0.106***	0.101***		
	(0.003)	(0.003)	(0.005)	(0.006)	(0.005)	(0.005)	(0.008)	(0.008)		
GDPPC_USD_log	1.152***	1.144***	0.150**	0.153**	0.996***	0.991***	0.251***	0.257***		
	(0.071)	(0.071)	(0.062)	(0.062)	(0.103)	(0.103)	(0.092)	(0.092)		
ODAGNI	0.057***	0.062***	0.009	0.010	0.049***	0.053***	0.025**	0.029***		
	(0.009)	(0.009)	(0.008)	(0.008)	(0.011)	(0.011)	(0.011)	(0.011)		
Constant	-13.430***	-13.672***	-8.387***	-8.410***	-1.735***	-1.920***	-1.650***	-1.694***		
	(0.446)	(0.443)	(0.362)	(0.362)	(0.614)	(0.615)	(0.519)	(0.518)		
Observations	3,074	3,074	3,074	3,074	2,704	2,704	2,704	2,704		
R-squared	0.174	0.190	0.072	0.074	0.144	0.148	0.215	0.220		
No. of Countries	109	109	109	109	98	98	98	98		
Hausman Test			0.00	0.00			0.00	0.00		
Turning Point		11.94				20		16		

Appendix A3 Appendix 3.1: Effect of Remittances on Democracy – OLS and FE Results

Durban Wu-Hausman	0.0020	0.0000
Test		

		Fraser I	nstitute		Investment Profile (ICRG)					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8		
VARIABLES	Pooled OLS	Pooled OLS	Fixed Effect	Fixed Effect	Pooled OLS	Pooled OLS	Fixed Effect	Fixed Effect		
RemitGDP	0.058***	0.115***	0.026***	0.078***	0.034***	0.120***	0.057***	0.052**		
	(0.003)	(0.009)	(0.004)	(0.009)	(0.007)	(0.019)	(0.012)	(0.026)		
RemitGDP2		-0.003***		-0.002***		-0.005***		0.0002		
		(0.000)		(0.000)		(0.001)		(0.001)		
GDPGrowthR	0.023***	0.021***	0.011***	0.011***	0.028***	0.027***	0.006	0.006		
	(0.006)	(0.006)	(0.003)	(0.003)	(0.011)	(0.011)	(0.009)	(0.009)		
ExtDebtStock	-0.000	-0.000	-0.000	0.000	-0.005***	-0.005***	-0.007***	-0.007***		
	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)		
Urbanization	-0.010***	-0.009***	0.054***	0.053***	-0.013***	-0.010***	0.078***	0.078***		
	(0.001)	(0.001)	(0.003)	(0.003)	(0.003)	(0.003)	(0.009)	(0.009)		
GDPPC_USD_log	0.567***	0.558***	0.224***	0.214***	0.713***	0.700***	0.127	0.128		
	(0.032)	(0.031)	(0.034)	(0.033)	(0.068)	(0.068)	(0.087)	(0.087)		
ODAGNI	0.021***	0.024***	-0.003	-0.002	0.029***	0.034***	-0.026**	-0.026**		
	(0.004)	(0.004)	(0.004)	(0.004)	(0.009)	(0.009)	(0.011)	(0.011)		
GCapitalF	-0.006**	-0.004	-0.001	0.001	0.016***	0.018***	0.024***	0.024***		
	(0.002)	(0.002)	(0.002)	(0.002)	(0.005)	(0.005)	(0.006)	(0.006)		
Constant	2.184***	2.045***	1.922***	1.863***	1.805***	1.544***	1.908***	1.909***		
	(0.215)	(0.213)	(0.191)	(0.189)	(0.437)	(0.438)	(0.508)	(0.509)		
Observations	1,611	1,611	1,611	1,611	2,000	2,000	2,000	2,000		
R-squared	0.338	0.358	0.484	0.498	0.138	0.149	0.230	0.230		

Appendix 3.2: Effect of Remittances on Economic Policies – OLS and FE Results

No. of Countries	95	95	95	95	74	74	74	74
Hausman test			0.000	0.000			0.000	0.000
Turning Point		19.16		19.5		12		
Durban Wu-Hausman	0.0000				0.0000			
Test								

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

A	pl	oendix	3.	3:	Effect	of	<i>remittances</i>	on	Democracy	. C	ontrolling	Government	t Size	-1	FE	-2SLS	Re	sults
	r r					· · · · ·				, -	· · · · · · · · · · · · · · · · · · ·							

	Freedom House				Polity2			Fraser Institute		
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4	1 st Stage	Model 5	Model 6	
RemitGDP		-0.018	-0.165		0.598***	0.622***		0.214***	0.301***	
		(0.121)	(0.127)		(0.180)	(0.175)		(0.061)	(0.076)	
RemitGDP2			0.006			-0.020***			-0.010***	
			(0.004)			(0.006)			(0.002)	
Government Size	0.099***	0.030**	0.030***	0.111***	0.059**	-0.011	0.032	-0.008	0.001	
	(0.021)	(0.014)	(0.010)	(0.022)	(0.025)	(0.013)	(0.024)	(0.007)	(0.005)	
Disaster_Episodes	0.051			0.050			0.049			
	(0.036)			(0.037)			(0.037)			
Country_Size	2.090***			3.161***			3.759***			
	(0.705)			(0.808)			(0.863)			
Constant	-32.304***	5.938***	5.977***	-49.695***	3.492***	2.761***	-56.087***	1.886***	1.989***	
	(10.539)	(0.445)	(0.428)	(12.327)	(0.857)	(0.613)	(13.113)	(0.361)	(0.294)	
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Observations	1,344	1,344	1,344	1,183	1,183	1,183	893	893	893	
Number of Countries	81	81	81	72	72	72	70	70	70	
Turning Point			-			15.55			15.05	
F-Stat	94.697			41.151			29.291			

	J	Freedom Hous	e		Polity2		I	Fraser Institute		
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4	1 st Stage	Model 5	Model 6	
RemitGDP		0.380***	0.435***		0.768***	0.958***		0.125***	0.199***	
		(0.100)	(0.104)		(0.151)	(0.148)		(0.029)	(0.045)	
RemitGDP2			-0.016***			-0.031***			-0.006***	
			(0.004)			(0.005)			(0.001)	
Internet_Users		-0.000	0.007***		0.006	-0.006		-0.002	-0.004***	
		(0.004)	(0.002)		(0.006)	(0.004)		(0.001)	(0.001)	
Disaster_Episodes	0.098***			0.103***			0.090***			
	(0.036)			(0.037)			(0.033)			
Country_Size	3.411***			4.221***			4.953***			
	(0.743)			(0.838)			(0.794)			
Constant	-59.482	5.719***	9.013***	-73.638***	7.996***	2.028*	-85.377***	3.042***	2.124***	
	(11.408)	(1.171)	(0.667)	(13.145)	(1.949)	(1.076)	(12.484)	(0.426)	(0.319)	
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Observations	2,051	2,051	2,051	1,796	1,796	1,796	1,377	1,377	1,377	
No. of Countries	106	106	106	95	95	95	93	93	93	
Turning Point			13.59			15.452			16.583	
F-Stat	94.697			41.151			29.291			

<u>Appendix</u>	3.4: Effect	<u>t of remittances</u>	on Democracy,	Controlling	Internet Access

	Free	dom House I	ndex		Polity2	
VARIABLES	1st Stage	Model 1	Model 2	1st Stage	Model 3	Model 4
RemitGDP		0.431***	0.593***		1.149***	1.532***
		(0.070)	(0.077)		(0.138)	(0.127)
RemitGDP2			-0.023***			-0.056***
			(0.003)			(0.005)
GDPGrowthR	0.053***	0.007	0.023***	0.054***	-0.043*	-0.003
	(0.016)	(0.011)	(0.009)	(0.016)	(0.022)	(0.014)
Trade_Openess	0.036***	-0.011***	-0.001	0.036***	-0.032***	-0.007*
	(0.004)	(0.004)	(0.002)	(0.004)	(0.007)	(0.004)
ExtDebtStock	0.000	0.003**	0.003**	0.000	0.002	0.001
	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)	(0.002)
Urbanization	-0.107***	0.051***	0.031***	-0.107***	0.106***	0.059***
	(0.018)	(0.009)	(0.008)	(0.018)	(0.017)	(0.012)
GDPPC_USD_log	0.850***	0.383***	-0.002	0.846***	0.942***	-0.010
	(0.160)	(0.127)	(0.084)	(0.160)	(0.248)	(0.139)
ODAGNI	0.002	0.003	0.024**	0.002	0.011	0.061***
	(0.019)	(0.012)	(0.010)	(0.019)	(0.024)	(0.017)
Disaster_Episodes	0.077**			0.077**		
	(0.034)			(0.034)		
Country_Size	3.779***			3.782***		
	(0.447)			(0.447)		
Constant	-61.553***	5.994***	-8.205***	-61.576***	5.136***	-0.275
	(6.694)	(0.715)	(0.482)	(6.694)	(1.402)	(0.793)
Observations	2,546	2,546	2,546	2,546	2,546	2,546
No of Countries	96	96	96	96	96	96
Turning Point			12.89			13.68
F-Stat	40.5523			40.8418		

Appendix 3.5: Effect of Remittances on Democracy – FE-2SLS results using equal observations.

]	Fraser Institu	te	Invest	ment Profile	(ICRG)
VARIABLES	1 st stage	Model 1	Model 2	1 st stage	Model 3	Model 4
RemitGDP		0.183***	0.218***		0.439***	0.499***
		(0.040)	(0.046)		(0.110)	(0.133)
RemitGDP2			-0.007***			-0.017***
			(0.002)			(0.005)
GDPGrowthR	0.035*	0.005	0.010**	0.036*	0.012	0.023*
	(0.020)	(0.005)	(0.004)	(0.020)	(0.014)	(0.012)
ExtDebtStock	-0.005*	0.001	0.000	-0.005*	-0.001	-0.002
	(0.003)	(0.001)	(0.001)	(0.003)	(0.002)	(0.002)
Urbanization	0.044*	0.031***	0.046***	0.044*	0.003	0.038***
	(0.026)	(0.007)	(0.005)	(0.026)	(0.020)	(0.013)
GDPPC_USD_log	-0.486**	0.250***	0.142***	-0.486**	0.226	-0.022
	(0.210)	(0.053)	(0.044)	(0.210)	(0.145)	(0.126)
ODAGNI	0.016	-0.004	-0.000	0.016	-0.021	-0.013
	(0.024)	(0.006)	(0.005)	(0.024)	(0.016)	(0.014)
GCapitalF	0.005	-0.003	0.001	0.005	0.001	0.010
	(0.012)	(0.003)	(0.003)	(0.012)	(0.008)	(0.007)
Disaster_Episodes	0.068**			0.068**		
	(0.033)			(0.033)		
Country_Size	3.768***			3.766***		
	(0.675)			(0.675)		
Constant	-56.795***	1.952***	2.186***	-56.770***	3.288***	3.837***
	(10.452)	(0.303)	(0.244)	(10.445)	(0.825)	(0.704)
Observations	1,260	1,260	1,260	1,260	1,260	1,260
Number of Countries	73	73	73	73	73	73
Turning Point			15.571			14.674
F-Stat	35.835			12.542		

Appendix 3.6: Effect of Remittances on Economic Policies – FE-2SLS results using equal observations.

	F	reedom Hous	se		Polity2		F	reedom Hous	se		Polity2	
VARIABLES	1st Stage	Model 1	Model 2	1st Stage	Model 3	Model 4	1 st Stage	Model 5	Model 6	1 st Stage	Model 7	Model 8
RemitGDP		0.488**	0.954***		1.333***	2.575***		0.410***	0.551***		1.088***	1.498***
		(0.192)	(0.331)		(0.387)	(0.654)		(0.072)	(0.078)		(0.123)	(0.121)
RemitGDP2			-0.036***			-0.096***			-0.021***			-0.056***
			(0.012)			(0.025)			(0.003)			(0.005)
GDPGrowthR	0.054***	0.005	0.014	0.061***	-0.051	-0.024	0.049***	0.005	0.018**	0.051***	-0.037*	-0.001
	(0.015)	(0.015)	(0.011)	(0.016)	(0.033)	(0.024)	(0.015)	(0.010)	(0.008)	(0.016)	(0.020)	(0.013)
Trade_Openess	0.037***	-0.014*	-0.008	0.038***	-0.038**	-0.019**	0.033***	-0.010***	-0.002	0.034***	-0.027***	-0.006*
	(0.004)	(0.008)	(0.005)	(0.004)	(0.016)	(0.009)	(0.004)	(0.003)	(0.002)	(0.004)	(0.006)	(0.004)
ExtDebtStock	-0.006***	0.005***	0.005***	-0.003	0.003	0.003	-0.002	0.003**	0.003**	0.001	0.001	-0.000
	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.003)	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)	(0.002)
Urbanization	-0.002	0.042***	0.014	-0.011	0.113***	0.029	-0.061***	0.036***	0.022***	-0.100***	0.099***	0.056***
	(0.013)	(0.009)	(0.013)	(0.014)	(0.019)	(0.026)	(0.015)	(0.008)	(0.007)	(0.017)	(0.016)	(0.012)
GDPPC_USD_log	0.904***	-0.312	0.022	1.028***	1.139**	-0.147	0.657***	0.213**	0.095	0.839***	-0.792***	0.059
	(0.147)	(0.206)	(0.102)	(0.160)	(0.474)	(0.223)	(0.142)	(0.106)	(0.071)	(0.152)	(0.221)	(0.131)
ODAGNI	0.024	-0.011	0.015	0.002	0.010	0.107***	0.033*	-0.003	0.016*	0.011	0.017	0.075***
	(0.018)	(0.013)	(0.011)	(0.019)	(0.027)	(0.033)	(0.017)	(0.011)	(0.009)	(0.018)	(0.022)	(0.016)
Disaster_Episodes	0.113***			0.123***								
	(0.033)			(0.034)								
Country_Size							3.108***			3.956***		
							(0.366)			(0.404)		
Constant	-4.803***	5.853***	7.906***	-5.413***	5.837**	0.017	-49.883***	6.240***	8.117***	-64.581***	4.327***	-0.652
	(0.880)	(1.141)	(0.566)	(0.925)	(2.588)	(1.218)	(5.338)	(0.622)	(0.414)	(6.067)	(1.256)	(0.738)
Observations	2,921	2,921	2,921	2,585	2,585	2,585	3,074	3,074	3,074	2,704	2,704	2,704
No of Observation	107	107	107	96	96	96	109	109	109	98	98	98
Turning Point			13.25			13.41			13.12			13.38
F Stat	17.1882			14.6434			195.618			75.9685		

Appendix 3.7: Effect of Remittances on Democracy – FE-2SLS results with Separate IVs.

	Fraser Institute					Investment Profile (ICRG)						
VARIABLES	1st Stage	Model 1	Model 2	1st Stage	Model 3	Model 4	1st Stage	Model 5	Model 6	1st Stage	Model 7	Model 8
RemitGDP		0.287*** (0.094)	0.845** (0.360)		0.214*** (0.036)	0.273*** (0.035)		0.894*** (0.345)	1.936** (0.783)		0.774*** (0.170)	0.778*** (0.119)
RemitGDP2		. ,	-0.029** (0.013)			-0.009*** (0.001)		. ,	-0.071** (0.030)			-0.027*** (0.005)
GDPGrowthR	0.046** (0.021)	-0.001 (0.008)	-0.005 (0.011)	0.040* (0.020)	0.003 (0.005)	0.007* (0.004)	0.058*** (0.018)	-0.044* (0.027)	-0.014 (0.020)	0.059*** (0.017)	-0.040** (0.019)	-0.004 (0.011)
ExtDebtStock	-0.004 (0.003)	0.001 (0.001)	0.004* (0.002)	0.000 (0.003)	0.001 (0.001)	0.001* (0.001)	-0.010*** (0.002)	0.003 (0.004)	0.004 (0.005)	-0.005* (0.002)	-0.000 (0.003)	-0.004** (0.001)
Urbanization	0.053*** 0.019	0.039*** (0.008)	0.033*** (0.012)	-0.031 (0.022)	0.042*** (0.005)	0.047*** (0.004)	0.092*** (0.017)	0.003 (0.037)	0.022 (0.031)	0.040** (0.020)	0.004 (0.023)	0.051*** (0.011)
GDPPC_USD_log	0.452** (0.204)	0.116 (0.077)	0.037 (0.120)	0.246 (0.198)	0.144*** (0.053)	0.169***	0.347**	-0.161 (0.214)	-0.457 (0.306)	0.108 (0.167)	0.021 (0.151)	-0.013 (0.106)
ODAGNI	0.018 (0.025)	-0.008 (0.008)	0.001 (0.010)	0.037 (0.024)	-0.007 (0.006)	-0.001 (0.005)	-0.022 (0.022)	-0.007 (0.023)	0.034 (0.033)	-0.026 (0.021)	-0.001 (0.020)	0.004 (0.014)
GCapitalF	0.040*** (0.013)	0.011** (0.005)	0.012 (0.008)	0.036*** (0.012)	0.009** (0.003)	0.004 (0.002)	0.007 (0.011)	0.020*	0.038*** (0.013)	0.0004 (0.011)	0.020** (0.010)	0.028*** (0.007)
Disaster_Episodes	0.118*** (0.036)	. ,					0.092*** (0.032)	. ,				
Country_Size				3.746*** (0.524)						2.708*** (0.517)		
Constant	-2.022* (1.191)	2.301*** (0.414)	1.378*** (0.503)	-58.159*** (7.945)	2.291*** (0.295)	1.775*** (0.216)	-2.496** (1.03)	3.546*** (1.343)	2.874** (1.195)	-43.402*** (8.080)	2.875*** (0.895)	2.021*** (0.603)
Observations	1,545	1,545	1,545	1,611	1,611	1,611	1,931	1,931	1,931	2,000	2,000	2,000
Number of Countries	93	93	93	95	95	95	73	73	73	74	74	74
Turning Point F Stat	12 659		14.57	50.812		15.17	14 386		13.63	55 604		14.41
1 Stat	12.039			30.012			14.300			55.004		

Appendix 3.8: Effect of Remittances on Economic Policies – FE-2SLS results with Separate IVs.

	Freed	dom House l	Index		Polity2	
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4
RemitGDP		0.856***	1.054***		1.355***	1.785***
		(0.206)	(0.158)		(0.227)	(0.189)
RemitGDP2			-0.041***			-0.066***
			(0.006)			(0.007)
Disaster_Episodes	0.084**			0.069		
	(0.042)			(0.044)		
Country_Size	2.237***			3.581***		
	(0.557)			(0.612)		
Constant	-36.522***	3.182*	7.686***	-58.361***	7.719***	0.783
	(7.868)	(1.679)	(0.774)	(9.019)	(2.385)	(1.188)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,593	1,593	1,593	1,393	1,393	1,393
Number of	57	57	57	51	51	51
Countries						
Turning Point			12.854			13.723
F-Stat	75.443			50.1631		

Appendix 3.9: Effect of remittances on Democracy – FE-2SLS results using Democratic Countries' Sample

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Appendix 3.10: Effect of remittances on Democracy – FE-2SLS results using non-Democratic Countries' Sample

	Free	dom House I	ndex		Polity2 Index			
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4		
RemitGDP		0.451***	0.576***		1.924***	2.198***		
		(0.131)	(0.132)		(0.526)	(0.353)		
RemitGDP2			-0.021***			-0.081***		
			(0.005)			(0.013)		
Disaster_Episodes	0.088*			0.104**				
	(0.051)			(0.053)				
Country_Size	2.614***			2.078***				
	(0.639)			(0.697)				
Constant	-44.117***	5.984***	7.769***	-37.245***	9.686**	0.322		
	(9.561)	(1.044)	(0.616)	(10.524)	(4.172)	(1.512)		
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes		
Observations	1,328	1,328	1,328	1,192	1,192	1,192		
Number of	50	50	50	45	45	45		
Countries								
Turning Point			13.714			13.568		
F-Stat	18.278			12.597				

	Before People's Access to the Internet						After People's access to the Internet						
	Freed	dom House	Index		Polity2 Index		Free	Freedom House Index			Polity2 Index		
VARIABLES	1st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4	1st Stage	Model 5	Model 6	1 st Stage	Model 7	Model 8	
RemitGDP		1.349***	1.548***		3.644***	4.738***		-0.053	0.048		0.772***	1.059***	
		(0.499)	(0.464)		(1.181)	(1.133)		(0.142)	(0.130)		(0.277)	(0.233)	
RemitGDP2			-0.057***			-0.195***			-0.001			-0.031***	
			(0.017)			(0.047)			(0.004)			(0.007)	
Disaster_Episodes	0.032			0.035			0.069*			0.083**			
	(0.032)			(0.030)			(0.037)			(0.038)			
Country_Size	1.370***			1.304***			1.491*			2.381**			
	(0.499)			(0.479)			(0.899)			(1.099)			
Constant	-13.990*	-16.996***	-12.105***	-15.605**	-18.560***	-10.344***	-24.681*	5.596***	5.713***	-39.189**	6.624***	3.504***	
	(7.357)	(3.420)	(1.673)	(7.164)	(5.932)	(3.308)	(13.246)	(0.579)	(0.485)	(16.678)	(1.399)	(0.921)	
Observations	1,286	1,286	1,286	1,219	1,219	1,219	1,634	1,634	1,634	1,364	1,364	1,364	
Number of	86	86	86	77	77	77	105	105	105	94	94	94	
Countries													
Turning Point			13.579			12.149			-			17.081	
F-Stat	93.482			16.427			29.677			30.162			

Appendix 3.11: Effect of Remittances on Democracy – FE-2SLS results using the samples before and after people's access to internet.

	F	reedom Hous	se		Polity2	
VARIABLES	1 st stage	Model 1	Model 2	1 st stage	Model 3	Model 4
RemitGDP		0.700***	1.092***		1.458***	2.382***
		(0.096)	(0.118)		(0.172)	(0.210)
RemitGDP2			-0.043***			-0.093***
			(0.005)			(0.008)
ODAGNI	-0.057***	0.063***	0.067***	-0.056***	0.120***	0.139***
	(0.018)	(0.017)	(0.014)	(0.019)	(0.033)	(0.025)
PopulationG	-0.791***	0.902***	0.398***	-0.865***	1.488***	0.348**
	(0.114)	(0.137)	(0.077)	(0.116)	(0.259)	(0.137)
miltary_politics	-0.102	0.438***	0.419***	-0.151**	0.707***	0.633***
	(0.064)	(0.054)	(0.042)	(0.067)	(0.103)	(0.076)
gini_wiid	-0.100***	0.098***	0.067***	-0.103***	0.117***	0.051**
	(0.019)	(0.021)	(0.014)	(0.020)	(0.039)	(0.025)
Corruption_ICRG	0.338***	-0.178**	-0.010	0.360***	-0.288**	0.091
	(0.086)	(0.073)	(0.056)	(0.088)	(0.136)	(0.098)
Disaster_Episodes	0.087***			0.091***		
	(0.031)			(0.031)		
Country_Size	2.764***			2.955***		
	(0.362)			(0.378)		
Constant	-35.721***	-15.328***	12.917***	-38.453***	-9.836***	-4.824***
	(6.457)	(1.512)	(0.974)	(6.689)	(2.792)	(1.709)
Observations	2,159	2,159	2,159	2,101	2,101	2,101
No of Countries	84	84	84	84	84	84
Turning Point			12.70			12.81
F Stat	94.6973			41.151		

Appendix 3.12: Effect of Remittances on Democracy – FE-2SLS results using General to Specific Approach.

	F	raser Institu	te	Investment Profile (ICRG)				
VARIABLES	1 st Stage	Model 1	Model 2	1 st Stage	Model 3	Model 4		
RemitGDP		0.084***	0.110***		0.527***	0.682***		
		(0.026)	(0.031)		(0.089)	(0.107)		
RemitGDP2			-0.004***			-0.023***		
			(0.001)			(0.004)		
GDPGrowthR	0.023	-0.010***	-0.008***	0.002	-0.010	-0.003		
	(0.019)	(0.003)	(0.003)	(0.019)	(0.013)	(0.011)		
Inflation	0.026***	-0.017***	-0.015***	-0.012	-0.012**	-0.015***		
	(0.010)	(0.002)	(0.001)	(0.008)	(0.006)	(0.005)		
Unemployment	0.099***	-0.017***	-0.012***	0.035	-0.117***	-0.102***		
	(0.033)	(0.006)	(0.005)	(0.037)	(0.026)	(0.022)		
Urbanization	-0.011	0.027***	0.028***	0.010	0.006	0.029**		
	(0.027)	(0.004)	(0.003)	(0.023)	(0.017)	(0.012)		
miltary_politics	-0.325***	0.080***	0.059***	-0.022	0.373***	0.342***		
	(0.109)	(0.019)	(0.015)	(0.091)	(0.065)	(0.054)		
GCapitalF	-0.002	0.005***	0.006***	-0.006	0.015*	0.019***		
	(0.012)	(0.002)	(0.002)	(0.011)	(0.008)	(0.007)		
Disaster_Episodes	0.036			0.053				
	(0.031)			(0.033)				
Country_Size	4.449***			4.943***				
	(0.774)			(0.650)				
Constant	-68.530***	4.559***	4.541***	-77.750***	4.104***	3.354***		
	(11.940)	(0.180)	(0.162)	(9.931)	(0.688)	(0.550)		
Observations	1,147	1,147	1,147	1,541	1,541	1,541		
Number of Countries	81	81	81	80	80	80		
Turning Point			13.75			14.83		
F-Stat	29.2911			29.8954				

Appendix 3.13: Effect of Remittances on Economic Policies – FE-2SLS results using General to Specific Approach.

Chapter 4 : Political Parties' Ideological Bias and Convergence in Economic Outcome

Abstract

In democracies, policies are jointly shaped by voters' preferences and politicians' (or parties') ideological biases. We explore the relative importance of the latter on some key economic outcomes – growth rate, inflation and inequality - in a broad sample of 71 democratic countries from 1995 to 2019. To deal with the likely endogeneity of electoral policies and outcomes, we instrument government ideology with the closeness of the previous election and with the government's tenure in office. We find evidence that economic policies in consolidated democracies tend to converge regardless of ideological differences. Both left-wing and right-wing governments deliver convergent outcomes in economic growth and inflation. However, we find divergence only in the hybrid regime; inequality and economic freedom are reduced in a leftist government, and economic freedom is enhanced in a rightist government.

Keywords: political parties; ideology; economic growth; inflation; inequality.

4.1. Introduction

Democracy is a political system in which economic outcomes result from an interaction between the citizens' preferences and political parties' or leaders' ideological biases (Schattschneider 1960). In such a system, citizens select their political representatives by means of partisan competition, and the representatives, in turn, implement economic policies. Schattschneider (1942) considers democracy "unthinkable" in the absence of political parties. According to Lijphart (1984) and Parsons (1956), politics is a competitive market in which citizens demand policies and political parties supply them accordingly to win public support, and this interaction between the two has implications for growth and inflationary outcomes. Political competition among parties is also influenced by their ideological biases. The political Left is generally different from the political Right with respect to their ideological narratives and policy positions. This paper aims to investigate whether these differences in ideology between the political Left and Right matter for major macroeconomic outcomes - economic growth, inflation, and inequality – and economic freedom as a measure of economic policies.

The economics literature largely ignores the role of parties' ideological bias in shaping economic policies and performance. One might think that if (indirect) democracy is impossible without political parties, then ignoring political ideologies is not helpful for comprehending public policy in democratic countries. Moreover, the existing research on the impact of political ideologies on macroeconomic outcomes has shortcomings. In particular, it yields mixed findings (e.g., Potrafke 2012; Ferris and Voia 2010; Sakamoto 2008) both in empirical results and in explaining the interaction between ideology and macroeconomic performance (economic growth and inflation). For instance, Ferris and Voia (2010) find that the growth rate is higher in countries ruled by Leftist governments during the period from 1870 to 2005 in Canada. Sakamoto (2008) shows that the positive relationship between leftist government and growth rate in 18 OECD economies is conditional upon the central bank not being independent.

Potrafke (2012) suggests no permanent effect of government ideology on the growth rate in 22 OECD member countries from 1951 to 2006.

Franzese (2002), Tufte (1978) and Hibbs (1977) argue that leftist parties prefer expansionary policies (higher growth at the cost of inflation) to attract their voters. However, Alesina et al. (1997) suggest that it depends on the electoral cycle, and there is no difference between Leftists and Rightists in this regard. Both ideologies prefer lower inflation to win the elections. However, these papers are largely theoretical in nature. On the empirical side, research (e.g., Suzuki 1993) is limited and also lacks robust estimation (i.e., addressing endogeneity). Furthermore, the influence of partisan bias on economic inequality has not yet been explored empirically.

The literature also largely focuses on OECD countries (e.g., Potrafke 2012; Ferris and Voia 2010; Sakamoto 2008; Suzuki 1993; Hibbs 1977), which are largely consolidated democracies. The research on non-OECD countries does not exist, especially for those countries which have a hybrid regime⁶⁷ or where democracy has a short history.

An additional issue of concern is endogeneity, which is not mainly addressed in the literature thus far. It arises because of two main factors. One is omitted variable bias, which may occur due to unmeasured voters' preferences (such as partisan loyalty and some personal biases – like meritocracy, environmentalism, and demographic factors - supporting a political party). The second is reverse causality: developmental outcomes (like growth, inflation, and inequality) and policies (economic freedom) also influence voting behaviour and election outcomes (e.g., Lewis-Beck and Stegmaier 2019; Tufte 1978).

⁶⁷ These are regimes which have both democratic and autocratic features.

Our paper fills these gaps in the existing literature. To deal with the endogeneity, we use two instrumental variables. 1) *Closeness of election* is considered exogenous in the literature (Eggers et al. 2015; Lee and Lemieux 2010; Lee 2008). When elections are close, the outcome is, in essence, randomly assigned to one political party or other and has no link with developmental outcomes. We use "*narrow margin of victory*"⁶⁸ as an instrumental variable, as suggested by Lee (2008). 2) The *cost of ruling*, measured as the *current executive's (CE) years in office*, is motivated by the fact that a government's vote share tends to fall with the time in office (Thesen et al. 2020; Wlezien 2017).

Our data comprises 71 democratic countries over the period from 1995 to 2019. Using the Fixed Effect Two-Stage least squares (FE-2SLS) method, we find little effect of government ideology on growth, inflation and inequality. Specifically, when considering the sample of the *hybrid regime*, inequality is reduced under leftist governments with the year lag 2. However, this effect disappears in *consolidated democracies*, where leftist and rightist governments are no different at reducing inequality⁶⁹. Furthermore, when the sample is composed of non-Western democracies where a majority (63.75% observations) has a hybrid regime⁷⁰, inflation reduces when rightist governments are in power. The effect becomes insignificant in Western countries where a majority (91.54% observations) are consolidated democracies. Moreover, we use the Fraser Institute's economic freedom index to investigate the effect of ideologies on economic policies and find that only non-Western democracies and hybrid regimes show partisan effects. Economic freedom is reduced in leftist governments and enhanced in rightist governments.

 $^{^{68}}$ When the margin of victory is less than or equal to 5% .

⁶⁹ Polity score +9 and +10.

⁷⁰ Polity score +6 to +8.

This paper contributes to the political economy literature, comprehending how political parties work in democratic countries to shape economic outcomes. This indicates no evidence of a partisan policy divergence in *consolidated democracies* and in growth and inflation regressions in all democracies sample. However, divergence exists in inequality and economic freedom outcomes in hybrid regimes. As countries develop democratically, their economic policies converge, and the differences between the political left and right on economic policymaking vanish. This shows continuity in economic policies in consolidated democracies, and changing government from one political party to another does not cause a significant shift in economic policy outcomes.

The paper also contributes to the existing literature (e.g., Mukand and Rodrik 2020; Bogaards 2009; Epstein et al. 2006; Levitsky and Way 2002) explaining how consolidated democracies differ from hybrid regimes. It shows that political parties are stronger in hybrid regimes in terms of their manoeuvrability to shape economic policies based on their ideology. In consolidated democracies, the ideological stance per se of the government does not matter. On the other hand, in a hybrid regime, a government can utilise its ideology-driven policies (like welfare spending and pro-market policies) to mobilize its voters. Moreover, in hybrid regimes, governments may be shielded from political repercussions by voters even after implementing sub-optimal partian policies due to factors such as limited political competition, the illiberal nature of the political system, and weaker institutions.

The following section presents a literature review. Then, we explain our research methodology. After that, the results are reported and discussed. Finally, we conclude.

4.2. Literature Review

In this section, we present six channels through which political parties' ideological bias and economic policy outcomes can interact.

Economic Voting

In economics, voters are thought to act rationally and to be largely concerned with the prevailing economic situation (Wong, 2017; Duch and Stevenson, 2010). Correspondingly, they vote in a way that maximizes their utility (Downs, 1957). Therefore, Tufte (1978) says, "when you think elections, think economics". There exists a lot of literature explaining the relationship between election outcomes and the economy (for instance, Lewis-Beck and Stegmaier 2019; Tufte 1978).

The *Responsibility hypothesis* states that the citizens consider the government responsible for the economic situation in their country. They reward it by providing political support if they perceive that the government has performed well and punish it by supporting the opposition if the economic record is seen as poor (Lewis-Beck and Stegmaier, 2019). The literature on political business cycles, in turn, explains that prior to elections, governments can adopt expansionary policies (like raising spending, or exchange rate manipulation) which temporarily raise economic growth and employment and reduce inflation (Hossain, 2009; Bernhard and Leblang, 1999). Rogoff (1990) suggests that there is no difference among political parties adopting such expansionary policies before elections. Therefore, Potrafke (2012) implies that in such a situation, the ideology of the ruling parties does not matter, and economic policies converge.

Voters' Preferences and Self-Interest of Political Parties:

Lewis-Beck et al. (2013), Stubager et al. (2013), Goren (2012), Nadeau et al. (2010) and others state that voters' preferences for policies and political parties depend on their norms and values; personal beliefs like religion, atheism; group identity; merit assumption; ideology like environmentalism, socialism, liberalism; and income status. For instance, Bjørnskov (2005)

argues that people who believe in meritocracy tend to support right-wing political parties which ensure property rights protection, lower taxes, and lesser income redistribution. They do not consider income inequality harmful if equality of opportunities exists. On the other hand, leftwing voters believe in equity and, therefore, they prefer income distribution policies. Scholars (Lewis-Beck et al. 2013; Stubager et al. 2013; Nadeau et al. 2010) show the positive association between asset-holding of a voter and her votes for a right-wing political party. Hibbs (1977) explains that lower-income people prefer higher employment, and higher-income voters prefer lower inflation, in line with their economic interests.

This difference in voters' preferences can translate into differences in the economic policies of political parties. For example, right-wing parties tend to attract higher-income people and pursue low inflation policies, while left-wing parties appeal to low-income voters and promote higher employment policies (Potrafke 2012).

Median Voter Hypothesis:

Political parties tend to converge towards the central position of median voters' policy preferences (Hotelling, 1990). This is suggested by the median voter theorem, considered as a central model of political economy in democracies (Gerber and Lewis 2004). Accordingly, political parties propose policies that are close to the preferences of the median voter, as the party that *captures* the median voters wins in majoritarian elections. This leads to policy convergence among the major political parties.⁷¹ However, the empirical evidence investigating whether the median voter plays a decisive role in public policies or not has mixed findings.⁷² Specifically, the evidence indicates that left-wing parties have changed their

⁷¹ For a succinct review of the model and how it leads to convergence, see Congleton (2004).

⁷² For instance, Brunner and Ross (2010); Gerber and Lewis (2004); Barnes (2013); Scervini (2012).

narrative and policy preferences since the 1990s (Potrafke 2010; Mair 2008) and have moved towards right-wing party positions (Ross 2000; Blyth and Katz 2005). However, this convergence is observed only in some policy areas such as the welfare state. Other scholars (e.g. Alesina et al. 2020; Abramowitz and Saunders 2008;) explain that instead of convergence, political polarization has increased. Alesina et al. (2020) observe not only divergence in US politics, but also a difference among people in their perception of the same reality. They call it "polarization of reality". Some scholars (for example, Bullock et al. 2015; Jerit and Barabas 2012) also explain that people's preferences are subjective, selective and biased to their party affiliation.

Role of Political Parties:

Parties solve the commitment problem of political leaders. If the leaders would run independently, their credibility could be low since voters can expect that after winning the elections, they will not fulfil their promises (Besley and Coate 1997; Osborne and Slivinski 1996). Politicians join and leave politics, but parties and their legacies persist. Parties provide emotional connection and identity to the partisans. This creates *partisan bias* and can lead to biased opinions (i.e., Bullock et al. 2015; Druckman et al., 2013; Iyengar et al. 2012). However, winning the elections just based on the loyal partisans' support is not possible since *swing or switching voters*⁷³ play a decisive role (Hill 2017; Shively 1992). Hill explains that the influence of swing voters on the electoral outcome is growing in the United States as the political divergence between the left and right is increasing.

⁷³ Voters who vote for either of the political parties without any partisan bias.

Information Asymmetry in Voters' Electoral Decisions:

Information asymmetry (especially about a political leader's competence, classified information and effectiveness of different policies) is a main issue a voter faces in her electoral decisions. It helps political leaders who have an information advantage (Potrafke 2012) to manipulate the information in order to create partisan bias and pursue their self-interests (Harrington 1993; Rogoff, 1990).

To cope with information asymmetry, voters use two main tools: 1) past performance of the political leader or party (Rogoff and Sibert 1988); 2) political ideology and future promises of the parties (Lupia et al. 1998; Downs 1957). Downs explains that no political party and ideology exist in the world of perfect information since voters can make perfect decisions with optimum outcomes. Political ideologies help conceptualise the term "good society" and mobilize voters to achieve it by their decisions.

Limited Manoeuvrability of Ruling Parties:

Political parties cannot often implement their preferred policies since they face various constraints. Schmidt (1996) calls it "limited manoeuvrability of the governments".

Economic Constraints: Parties face economic constraints, such as changing the structure of the economy from industrial to service-based, pressure on social support due to an ageing population and most importantly globalization (Jäger 2017; Rodrik 2011; Tepe and Vanhuysse 2009). Ward et al. (2011) argue that globalization has forced leftist and rightist parties to converge on their policy stances. According to them, if a government does not implement business-friendly policies, there is capital flight from that country, resulting in a currency crisis and economic decline.

Institutional Constraints: Democratic governments are constrained by the political and economic institutions and policy inheritance to make policy choices. Schmidt (1996) explains that a partisan effect exists in majoritarian democracies since the legislature and executive are comparatively powerful there. However, in consensus democracies, it hardly exists because opposition parties are strong there and without their consensus, policies are hard to implement. Another factor that restricts the partisan effect on economic policies is the independence of the central bank which protects monetary policy from the government's ideological policy intervention (Bernhard and Leblang 2002). Less control on corruption especially in developing countries is also an institutional factor which limits the capacity of political parties to implement policies to achieve desired outcomes.

Coalition Government: In a country where a two-party system exists, voters have a clear choice to reward or punish a government based on its performance. However, in a coalition government, it is hard to blame who is responsible for good or bad outcomes. Therefore, a coalition government has a weaker incentive to implement sound economic policies (Potrafke 2012). For instance, the literature (Volkerink and De Haan 2001; De Haan et al. 1999) shows that the coalition governments spend more than single-party governments and raise the level of fiscal deficit. It can be because the coalition members seek policies that benefit their supporters. If a coalition is composed of more parties, there are more groups that expect to receive such benefits. However, coalition governments may be 'disciplined' by coalition partners if the latter can provide credible threats to leave the government if the dominant party (which is part of the coalition) pursues extravagant and reckless policies.

Empirical Evidence:

Leftist and rightist parties have different narratives about the role of government in the market, which can also affect their policies. Leftists generally advocate strict regulation and state intervention in the market, and income redistribution. Rightists support market-oriented reforms and free trade (Jager 2017; Potrafke, 2010a; 2010b). Many papers (Potrafke, 2010a; Bortolotti et al. 2003) show that rightist governments are responsible for privatization in different countries.

There exists mixed empirical evidence showing the partisan effect on welfare spending. One set of empirical studies (Pontusson and Rueda 2010; Pettersson-Lidbom 2008; Tufte 1978) shows that leftist governments tend to spend more than rightists. Reed (2006) analyses the partisan effect on tax burden in the United States and finds that taxes and government size were higher in the governments of Democrats than the Republicans from 1960 to 2000. The second set of research (e.g., Kwon and Pontusson 2010; Huber et al. 2001) shows that partisan effect does not exist in welfare spending. According to Jäger (2017), it is mainly due to the higher level of public support to the welfare state model that every government is forced to adopt.

Hibbs (1977) was the first prominent economist who discussed the partisan effect on unemployment and inflation. According to him, leftist governments favour low unemployment over low inflation while rightist governments prefer price stability over low unemployment. Higher employment favours lower income people who are largely the voters of leftist parties, and lower inflation is compatible with the preferences of higher income groups which mainly support rightist parties. Some other studies (such as Franzese 2002; Tufte 1978) also explain that left-wing ruling parties choose expansionary policies in order to achieve their ideological objectives. Alesina et al. (1997) show that policy stances may change depending on a party's time in government: leftist parties pursue low unemployment policies at the expense of higher inflation in the first half of their government, while in the second half, they follow those policies which reduce inflation since they aim to win the next election. In contrast, rightist parties follow contractionary policies to reduce inflation during the first half of their tenure, while in the second half, they target both a higher growth rate and low inflation. However, the expected

effect of ideology on expansionary policies or on inflation in the available literature (Hibbs 1977; Franzese 2002; Tufte 1978; Alesina et al. 1997) is largely theoretical in nature, predicting the outcome based on parties' ideological narrative and their voters' policy preferences.

The partisan effect also exists in economic performance in some models (e.g., Franzese 2002; Alesina and Rosenthal 1995). Franzese (2002) also reviews the literature and finds that partisan effect on economic performance is stronger than the electoral cycle. However, the empirical results (e.g., Potrafke 2012; Sakamoto 2008) are mixed explaining which political ideology has better economic performance than others. For instance, Ferris and Voia (2010) analyse the economic growth rate in Canada from 1870 to 2005 and find that it was higher during the leftist parties' governments. Sakamoto (2008) finds a positive influence of leftist government on growth in eighteen OECD countries, but it is conditional on the absence of central bank independence. In the presence of an independent central bank, leftist governments perform poorly, while in its absence, leftist governments achieve higher growth rates.

Potrafke (2012) finds no permanent impact of government ideology on the growth rate in twenty-one OECD economies from 1951 to 2006. Potrafke discovers a higher growth rate during the first two years of leftist governments in those countries where the two-party system dominates. Moreover, in the author's findings, the positive relationship between rightist government and economic performance exists only in the 1950s. For leftist governments, their positive association with growth is also found only in the period between 1991 to 2006.

We could not find any empirical paper investigating the relationship between partisans' ideological bias and inequality.

Conceptual Framework and Hypotheses:

Economic voting motivates political parties to improve strongly on the economic front to win elections in democracies. This can lead to policy convergence among parties since they can

adopt growth-enhancing economic policies without considering their ideological differences. The effect of economic voting is dominant on both macroeconomic outcomes, economic growth and inflation, since both are related to macroeconomic performance variables which voters deeply care about in elections (Gupta and Panagariya 2014; Palmer and Whitten 1999; Alesina and Rosenthal 1989; Fair 1978). They reduce information asymmetry as well since it is easier for voters to realize whether their income is increasing or not, given the fact that higher growth and lower inflation enhances purchasing power of consumers. This enables the citizens to evaluate the governments' economic performance and punish or reward them accordingly. Thus, we present the following hypotheses:

H1: There exists a convergence among political left and right on economic growth and inflation.

Political parties also maintain their distinctive position based on their ideology in some other policy variables like welfare spending and economic freedom which are not directly linked to economic voting. Economic growth and inflation affect a majority of citizens. Therefore, both left and right governments aim to get higher growth and lower inflation. However, there are some policy areas like welfare spending, taxation, and economic freedom which particularly affect some income groups. For example, government spending on welfare directly benefits lower-income groups, while lower taxation and increased economic freedom particularly benefit higher-income citizens. This gives an advantage to political parties to target those economic policies which directly benefit their core constituencies to create partisan loyalty.

The political Left mainly supports income redistribution and state intervention in the market, while the political Right supports meritocracy and market-oriented policies and opposes higher taxation and redistribution. This difference in policy choices is mainly due to their differences in ideology and their voters' preferences. The political left appeals to lower-income people and the working class; therefore, their focus on income distribution and market intervention makes their voters loyal to them. The political rights voters are largely from higher-income and capital-owning classes. To please them, rightist governments prefer lower taxation, limited distribution and minimal interference in the market. This eventually creates divergence among political left and rights. Thus, we suggest the following hypotheses:

H2: Inequality is reduced under leftist governments and/or increased under rightist governments.

H3: Economic Freedom is enhanced under rightist governments and/or lowered under leftist governments.

However, we expect this divergence in economic policies regarding welfare spending and economic freedom only exists when political parties are strong enough to change policies based on their ideological preferences. This can exist in non-consolidated democracies where institutional constraints are limited, and political parties can use distinctive measures to mobilise their voters. In hybrid regimes, institutions are not well-developed, and political parties (or leaders) can be strong enough to manoeuvre policies. Moreover, political legacies are also weaker because of the short and unstable history of democratic politics in hybrid regimes. Hence, they tend to follow divergent policies to achieve their economic objectives and mobilise voters to gain support. Furthermore, information asymmetry between government and citizens is also higher in hybrid regimes because of their lower social freedom levels, such as media freedom, freedom of information and speech. Voters' exposure to democratic politics (norms and values) is also weaker in hybrid regime because democratically unconsolidated countries often have a short history of democratic politics. This further makes it easier for political parties to follow divergent policies without needing a broad consensus of different stakeholders (especially civil society) in their polity.

The consolidated democracies have two unique characteristics which make economic policy convergence possible there. 1) Governments in consolidated democracies have limited manoeuvrability mainly because of institutional constraints such as central banks' independence, and major policy shifts are more difficult there since they require broader consensus in legislatures. They may follow a status quo of policies (Higley and Burton 2006) which is largely based on economic constraints such as the structure of the economy, the ageing population, and globalization (Jäger 2017; Rodrik 2011; Tepe and Vanhuysse 2009). Therefore, democracies provide stability to the politico-economic system in which policies have continuity, and a government change does not mean a significant level of policy changes. This is a unique feature of democracy. 2) Consolidated democracies have a stronger element of social freedom which reduces citizens' information asymmetry and helps them to make informed decisions. This liberal nature of consolidated democracies, in which policies are fairly discussed in the legislature, media and civil society, leads to a better policy choice without involving significant partisan bias. Thus, we present the following hypothesis:

H4: There exists a convergence in economic outcomes in consolidated democracies, but not necessarily in hybrid regimes.

Our hypotheses are well aligned with the median voter theorem, considered a central model of politics in democracies, which suggests that policies tend to converge towards median voters' position since political parties find it necessary to win the election. However, we suggest that this convergence is only found in consolidated democracies because their policy preferences are majorly shaped by median voters due to the factors given above. In hybrid regimes, politics is jointly shaped by democratic and non-democratic norms and values. These are, among many others, electoral manipulation, involvement of non-democratic actors like the military in politics and the complexity of the regime (Schmotz 2019). Moreover, a lack of liberal elements

in electoral autocracies⁷⁴ makes their policies less representative of median voters. Therefore, voters' power in a hybrid regime is comparatively weaker, which causes divergence in some policies and their outcomes.

4.3. Data Specification and Method:

This paper only considers democratic countries since political competition between the political left and political right is only meaningful there. Our data sample covers 71 democratic countries whose polity score is between +6 to +10 from 1995 to 2019 (depending on data availability).⁷⁵ We also classify a government based on its democratic development level. A hybrid regime is a political system that has a mix of both democratic and autocratic features. It is also called an unconsolidated democracy or a mixed regime. However, consolidated democracies have a political system which is well established and based on democratic principles. These countries are less likely to revert to autocratic regimes, whereas hybrid regimes are more likely to return to authoritarian political systems. In our data, countries with polity scores between 6 to 8 are classified as hybrid regimes, while those with scores of 9 to 10 are classified as consolidated democracies (Mukand and Rodrik 2020). Moreover, 11.28%, 10.17%, 15.55%, and 46% observations have polity score 6, 7, 8, 9, and 10, respectively. It means that 38.45% data observations cover hybrid regime, and remaining 61.55% are consolidated democracies.

Following is the linear regression equation estimated:

⁷⁴ Bogaards (2009) refers to hybrid regimes as electoral autocracies.

⁷⁵ During our sample period, we excluded countries with polity scores lower than six if the majority of their observations were less than 6; otherwise, if they maintained maximum observations of more than 6, we included them.
$$Y_{it} = \beta_0 + \beta_1 Leftist_{it} + \beta_2 Rightist_{it} + \beta_3 X_{it} + \varepsilon_{it} \dots (Equation 4.1)$$

Here, Y is the outcome variable which is represented by three macroeconomic outcome variables – growth rate, inflation and inequality – and one policy variable – economic freedom. Our main independent variables, *Leftist* and *Rightist* capture whether the government has leftist or rightist narratives, respectively, with centrist governments being the omitted category. X indicates all control variables. ε is the error term, i denotes sample countries and t is time.

Variables Description:

The growth rate and inflation data are taken from the World Bank's World Development Indicator (WDI). Figure 4.1 shows the trend in GDP growth rate in the sample countries from 1995 to 2019. In democratic countries, the business cycle is moving around 3.3 percent average growth rate. Table 4.1 indicates the descriptive statistics for the five years duration. It shows there is not a major difference in the mean values for these durations.



Figure 4.1: GDP Growth Rate in the Democratic Countries

Source: World Bank)

Table 4.1: Descriptive Statistics of GDP Growth Rate for the 5 Years Duration

Growth Rate	1995-2000	2001-2005	2006-2010	2011-2015	2016-2019

Max	16.729	18.287	15.171	25.163	8.223
Min	-14.267	-12.674	-14.814	-20.599	-6.296
Std. Dev.	3.380	3.291	4.351	3.400	2.147
Mean	3.651	3.629	3.148	2.958	3.147
Observations	496	443	457	463	283

(Source: World Bank)

Figure 4.2 indicates that the rate of inflation declined from 1995 to 2019, which is mainly because of sound monetary policies and independence of central banks in democratic countries. This decline is higher from 1995 to 2003. It gets stable from 2003 to 2007 and then increases in 2008 during the financial crisis and then declines again. This is further confirmed by Table 4.2.





(Source:	World	Bank)

Table 4.2: Descriptive Statistic	cs oj	f Inflation	Rate for	• the 5	Years	Duration
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Inflation Rate	1995-2000	2001-2005	2006-2010	2011-2015	2016-2019
Observations	456	418	433	440	356
Mean	9.323	5.132	5.127	3.493	3.166
Std. Dev.	14.400	6.370	4.233	3.655	4.568
Min	-2.904	-3.100	-4.478	-4.295	-3.233
Max	96.094	54.400	27.956	27.283	53.548
		/C 11/1			

(Source: World Bank)

For the inequality data, we rely on the WIID – World Income Inequality Database⁷⁶ since it has fewer missing observations than WDI. For income inequality, we use two indicators: the Gini Coefficient⁷⁷ and the Palma ratio⁷⁸. Figure 4.3 shows that income equality, using the indicator, Gini Coefficient, slightly increases from 1995 to 2007 and then it declines afterwards. However, Figure 4.4 shows that income inequality (Palma Ratio) has declined from 1995 to 2019. This is further indicated in the table 4.3.

Figure 4.3: Trend in Gini Coefficient in the Democratic Countries



(Source: World Income Inequality Database)

⁷⁶ To access, <u>https://www.wider.unu.edu/project/wiid-%E2%80%93-world-income-inequality-database</u>.

⁷⁷ It is also called Gini index, commonly used to calculate inequality in wealth distribution. It ranges from 0 to

^{100. 0} shows perfect equality and 100 shows perfect inequality.

⁷⁸ It is another indicator of inequality. Its higher value indicates higher inequality and vice versa. It is calculated by dividing the share of income received by richest 10 percent of the society by the share of income received by poorest 40 percent.



Figure 4.4: Trend in Palma Ratio in the Democratic Countries

(Source: World Income Inequality Database)

Table 4.3: Descriptive Statistics of Inequality (Gini & Palma) for the 5 Years Duration

Palma Ratio	1995-2000	2001-2005	2006-2010	2011-2015	2016-2019
Observation	504	448	462	468	381
Mean	2.869	2.787	2.762	2.565	2.553
Std Dev	2 517	2 140	2 125	1 865	1 856
Min	0.790	0.912	0.902	0.972	0.745
	0.780	0.815	0.802	0.075	0.745
Max	15.834	15.411	15.137	12.236	10.260
Gini Coefficient	1995-2000	2001-2005	2006-2010	2011-2015	2016-2019
Observation	504	448	462	468	381
Mean	42.515	42.794	42.790	41.866	41.715
Std. Dev.	11.916	11.326	11.131	10.538	10.708
Min	23.182	24.147	23.770	25.438	23.211
Max	71.979	74.227	72.877	69.764	67.096

(Source: World Income Inequality Database)

The political ideology –Left, Centrist and Right - data are taken from the Database of Political Institutions (DPI)⁷⁹. DPI classifies party ideology based on their economic policy narratives. Rightist is applied to the political parties classified as conservative, Christian democratic or right-wing. Leftist is for political parties classified as socialist, communist, social democrats,

⁷⁹ To access, <u>https://publications.iadb.org/en/database-political-institutions-2020-dpi2020</u>.

or left-wing. Centrist is reserved for the political parties whose ideological position fits in the centre.⁸⁰

Our variables—Leftist and Rightist—are dummy variables (with Centrist left out as the omitted category).⁸¹ In our data, 14.84% of observations are attributed to Centrist parties, 40.47% to Leftist parties, and 44.7% to Rightist parties. Figures 4.5 and 4.6 shows the trends in the ideologies of ruling parties in the democratic countries. It indicates both leftists and rightist parties have been in power majorly. From 1995 to 2014, the gap between left and right is narrow but afterwards, the number of rightist parties in government gets higher and the gap between centrist and leftist parties gets narrow. We also observe broad trends, with specific ideologies gaining ground during some periods, only to decline later. For example, centrist governments became more numerous in the mid-2000s but declined in the late 2000s when both left and right-wing parties dominated (suggesting increasing polarization). In the late 2010s, right-wing governments gained ground while the left declined.

⁸⁰ To access methodology: <u>https://publications.iadb.org/en/database-political-institutions-2020-dpi2020</u>

⁸¹ For the variable Leftist, the value one (1) shows that the ruling party belongs to the leftist political ideology, and 0 (zero) shows that the ruling party is either rightist or centrist in its ideological position. Likewise, for the variable Rightist, 1 means a government belongs to a rightist political party, and 0 means leftists and centrists.



Figure 4.5: Trend in Government Ideology (Percent) in Democratic Countries

(Source: The Database of Political Institutions)





(Source: The Database of Political Institutions)

Endogeneity can arise in our estimation because of two factors. One is the omitted variable bias. We cannot control all variables that potentially affect the interaction between our main independent and dependent variables. Moreover, voters' preferences for a political party are also unmeasurable and cannot be controlled. Another issue is that our dummy variables do not capture the level at which a political party is close to its labelled ideology. For instance, some parties are more rightist (or far-rightists) or leftist (or on the far left) than others. The second is reverse causality, caused by economic voting, meaning that our dependent variables also influence citizens' voting behaviour and election outcomes. Our endogeneity concern is also confirmed by the Durbin and Wu-Hausman test (p-value= 0.000).

To address endogeneity, we use two instrumental variables, *closeness of election* and *cost of ruling*. Closeness of election is represented by the difference of seats between rightist and leftist parties in the parliament:

$$DoS = \frac{(R-L)}{N}$$

Where DoS is the difference of seats, *R* is right-wing seats, *L* is left-wing seats, and *N* is the size of the parliament.⁸²

Many papers (for example, Beg 2019; Bhavnani and Jensenius 2019) argue that the instrument "closeness of election" is exogenous: when elections are very close, the victory is essentially randomly assigned to one political party or the other (Lee and Lemieuxa 2010; Lee 2008). Therefore, the government's political orientation should not be driven by economic outcomes. However, some studies (Caughey and Sekhon 2011; Grimmer et al., 2011) debate the use of closeness of election as an instrumental variable for the development outcomes in the USA. Eggers et al. (2015) and Uppal (2009) suggest that a smaller margin of victory is more randomized and exogenous than a larger margin of victory. For that reason, Lee (2008) suggests a 5 percent margin of victory. Therefore, we use "*narrow margin of victory*" when the margin of victory is equal to or less than 5% as an instrumental variable.

⁸² Because total votes per political party (representing ideology) data for all sample countries are unavailable, we cannot use differences of votes as a proxy for the closeness of the election. Therefore, we have used differences of seats since differences of seats are also closely related to differences of votes.

The cost of the ruling is represented by the CE's (*Current Executive*) years in office. The cost of the ruling argument states that the governments' vote share falls with their time in office (Thesen et al. 2020; Wlezien 2017; Stevenson 2002). Thesen et al. suggest that it is because bad news accumulates over time, negatively affecting the ruling party's popularity. Wlezien elaborates that political parties win elections with high public expectations. As time passes, voters start realising that the reality is different from their expectations, which makes them disappointed, and their support for the ruling party declines. Cost of ruling negatively affects the election outcomes. Incumbent government is more likely to receive less votes in upcoming elections if it has held office for a long time. The data for DoS and *CE years in office* is taken from the Database of Political Institutions.

We also employ two categories of control variables. One group comprises major determinants of our dependent variables. For the growth rate, we control for gross capital formation, population growth, secondary education, and government size.⁸³ For inflation, we control for broad money (% of GDP) and Government size⁸⁴.⁸⁵ For inequality, we control for economic freedom.⁸⁶ For economic freedom, we control for population growth, secondary education and government size.⁸⁷

The second category of variables are those which, according to the existing literature, may have the potential to influence the interaction between our independent and dependent variables. Economic freedom and trade openness⁸⁸ represent economic constraints that limit political

⁸³ Barro (1996) and Solow (1956).

⁸⁴ Total government spending as % of GDP

⁸⁵ Lim and Sek (2015).

⁸⁶ Graafland and Lous (2018).

⁸⁷ Bergh and Karlsson, 2010

⁸⁸ The sum of exports and imports as % of GDP.

parties' ability to make decisions based on their ideological preferences. The governments of countries which are well-integrated with the global economy face more constraints to implement economic policies (e.g., tax hikes) which raise market risk and discourage investors (Ward et al. 2011). Moreover, a positive association exists between economic freedom and desirable macroeconomic outcomes (Hall and Lawson 2014). This can also push governments to embrace pro-market policies even though their narrative is leftist in nature. Otherwise, voters are likely to punish them through the *economic voting* channel.

Central bank independence, control on corruption and parliamentary system show institutional constraints which limit the manoeuvrability of the government. In the case of central bank independence, a government cannot manipulate monetary policy in order to achieve its desired objectives, like high economic growth before and after an election. The parliamentary system is largely based on consensus democracy in which opposition parties are strong, limiting the power of the ruling party to make and implement policies (Schmidt 1996). If a country has a weaker bureaucratic structure in terms of low control on corruption, implementation of policies is not easier. We have also controlled for Polity2 and GDP per capita (lagged & logged) since sample countries are at their different levels of political and economic development.

Estimation Strategy:

We use the instrumental variables approach by applying the Fixed Effects Two-Stage least squares (FE - 2SLS) method. In addition, pooled OLS and panel data methods are also used. The main concept behind using FE-2SLS is that we aim to capture the influence of the instrumental variables on the endogenous variables and political ideology so that the bias due to endogeneity does not exist. Therefore, at the initial stage, we construct an ideology *Leftist* and ideology *Rightist* by executing the following first-stage equations.

$$Leftist_{it} = \beta_0 + \gamma_1 X'_{it} + \gamma_2 Z_{it} + Y_c + \epsilon_{it} \dots (equation 4.2)$$

$$Rightist_{it} = \beta_0 + \gamma_1 X_{it} + \gamma_2 Z_{it} + Y_c + \epsilon_{it} \dots (equation 4.3)$$

Here, X represents all control variables and Z shows the instrumental variables employed. At the second stage, we replace *Leftist* and *Rightist* from the original equation 4.1 with the $Leftist_{it}$ and $Rightist_{it}$ estimated in equations 4.2 and 4.3 respectively, and then find the second stage regression results.

$$Y_{it} = \beta_0 + \beta_1 Leftist_{it} + \beta_2 Rightist_{it} + \beta_3 X_{it} + Y_c + \epsilon_{it} \dots (equation 4.4)$$

The F-statistics is considered as a robust measure to find whether an instrument is strong or weak. Our IVs meet this condition.

Table 4.4 presents the summary statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max	Source
GDP growth rate	2,142	3.32	3.48	-20.60	25.16	WB
Inflation	2,103	5.36	8.24	-4.48	96.09	WB
Gini Coefficient	2,263	42.36	11.16	23.18	74.23	WIID
Palma Ratio	2,263	2.71	2.13	0.75	15.83	WIID
Broad Money (% of GDP)	1,749	58.96	37.64	10.73	260.62	WB
Gross Capital Formation	2,006	23.24	6.11	1.17	58.15	WB
Population Growth	2,120	1.02	1.08	-9.08	6.57	WB
Secondary Education	1,712	84.80	20.44	10.73	102.22	WB
Government Size	1,664	28.65	10.41	7.72	63.58	WB
Rightist Government	2,833	0.45	0.50	0	1	DPI*
Leftist Government	2,833	0.41	0.49	0	1	DPI
Central Bank						DPI
Independence	2,540	0.52	0.21	0.11	0.90	
Control on Corruption	2,184	3.49	1.38	0	6	ICRG**
Parliamentary System	2,263	0.58	0.49	0	1	DPI
(1=yes; 0 = Presidential)						
Political Freedom	2,939	8.73	1.47	6	10	Polity2
	1,268	2.93	3.52	0	8.79	Fraser
Economic Freedom						Institute
Trade Openness	2,070	85.23	42.95	15.64	408.36	WB
GDP Per Capita (Logged						WB
& Lagged)	1,810	8.93	0.99	6.21	11.15	
Closeness of Elections	2,635	0.06	0.24	0	1	DPI
CE years in office (right)	2,401	1.70	2.80	0	22	DPI
CE years in office (Left)	2400	1.65	3.01	0	30	DPI

Table 4.4: Summary Statistics

Note: * The Database of Political Institutions (DPI); ** The International Country Risk Guide.

4.4. Results and Interpretation

The OLS results in Table 4.5 show that the economic growth rate is lower when rightist parties are in the governments (columns m1 to m4). This also happens in the case of leftist government when the sample is only comprised of *consolidated democracies* (m3 and m4). Only OLS results for *all democracies* (m1) show higher inflation in both leftist and rightist governments (Table 4.6). Otherwise, no significant relationship exists in other regression equations (m2 to m4). Table 4.7 presents contrasting results. OLS results (m1, m5) for *all democracies* show an increase in inequality when leftist governments are in office, and FE results (m2 and m6) show lower inequality in leftist governments. It shows an insignificant effect for the rightist governments. For *consolidated democracies*, both governments seem ineffective to influence the level of inequality when they are in power.

	Polity Sco	re 06 to 10	Polity Score 09	to 10
Economic Growth is the	OLS	FE	OLS	FE
Dependent Variable	m1	m2	m3	m4
	b/se	b/se	b/se	b/se
Rightist Government	-0.896**	-1.212**	-1.232**	-1.226*
	(0.33)	(0.43)	(0.40)	(0.50)
Leftist Government	-0.431	-0.838	-1.072**	-1.372**
	(0.33)	(0.45)	(0.40)	(0.51)
Gross Capital Formation	0.196**	0.278**	0.215**	0.388**
	(0.02)	(0.03)	(0.03)	(0.04)
Population Growth	0.427**	-0.071	0.131	-0.501
	(0.14)	(0.31)	(0.22)	(0.36)
Secondary Education (% of				
Population)	0.037**	0.085**	0.034	0.084**
	(0.01)	(0.02)	(0.02)	(0.02)
Government Size	0.004	-0.051	-0.002	-0.013
	(0.01)	(0.03)	(0.02)	-0.03
Central Bank				
Independence	-0.616	2.243*	-0.69	1.241
	(0.56)	(1.13)	(0.60)	(1.15)
Parliamentary System	-0.28	-0.4	-0.926*	0.01
	(0.31)	(1.58)	(0.38)	(1.98)
Polity	-0.317**	-0.355	-0.009	-0.399
	(0.12)	(0.26)	(0.42)	(0.81)
GDP Per Capita (Lagged &				
Logged)	-1.214**	-2.786**	-1.227**	-2.619**
	(0.18)	(0.33)	(0.25)	(0.36)
Economic Freedom	1.045**	1.438**	1.356**	2.236**
	(0.21)	(0.29)	(0.27)	(0.36)
_cons	2.311	8.694**	-1.688	-0.774
	(1.50)	(3.19)	(3.68)	(7.88)
R2	0.2622	0.2703	0.2707	0.2458
No. of Observations	1402	1402	1021	1021
No. of Countries	71	71	56	56
Hausman Test		0.000		0.000

Table 4.5: Impact of Political Ideology on Economic Growth – OLS and Fixed Effect results

	Polity score 6 to 10		Polity Scor	e 09 to 10
Inflation is the Dependent	OLS	FE	OLS	FE
Variable	m1	m2	m3	m4
	b/se	b/se	b/se	b/se
Rightist Government	4.494**	1.163	2.732	-0.498
	(1.12)	(1.10)	(1.76)	(1.38)
Leftist Government	3.012**	0.249	2.325	-1.354
	(1.13)	(1.09)	(1.69)	(1.34)
Broad Money (% of GDP)	-0.023*	0.039	-0.023	0.015
	(0.01)	(0.02)	(0.01)	(0.02)
Government Size	-0.149**	-0.205*	-0.06	-0.260**
	(0.05)	(0.09)	(0.06)	(0.10)
Control on Corruption	0.863*	0.287	0.138	0.726
	(0.34)	(0.43)	(0.37)	(0.51)
Parliamentary System (01=Yes)	-0.410	4.112	-1.800	0.851
	(0.91)	(3.06)	(1.08)	(1.25)
Polity	0.875**	-0.712	1.939	-6.362**
	(0.33)	(0.73)	(1.10)	(1.57)
Central Bank Independence	1.199	-10.219**	-3.322	-8.345*
	(1.95)	(3.68)	(2.30)	(3.59)
GDP Per Capita (Lagged &				
Logged)	-0.251	-0.174	-0.671	0.307
	(0.47)	(0.81)	(0.59)	(0.84)
Economic Freedom	-6.477**	-7.797**	-4.775**	-7.665**
	(0.70)	(0.86)	(0.85)	(0.94)
_cons	46.526**	75.604**	31.955**	130.609**
	(3.66)	(7.88)	(9.43)	(16.23)
R2	0.3057	0.3123	0.2563	0.1892
No. of Observations	931	931	592	592
No. of Countries	52	52	40	40
Hausman Test		0.000		0.000

Table 4.6: Impact of Political Ideology on Inflation – OLS and Fixed Effect result

	Gini Coefficient					Palm	a Ratio	
	Polity sco	ore 6 to 10	Polity Scor	re 09 to 10	Polity score	e 6 to 10	Polity Score	e 09 to 10
Inequality is the	OLS	FE	OLS	FE	OLS	FE	OLS	FE
Dependent Variable	m1	m2	m3	m4	m5	m6	m7	m8
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Rightist	<u>-</u>							
Government	2.208	-0.885	-1.275	-0.917	0.424	-0.280	-0.653	-0.355
	(1.31)	(0.48)	(2.67)	(0.62)	(0.35)	(0.15)	(0.77)	(0.23)
Leftist Government	4.233**	-1.458**	0.828	-1.026	0.817*	-0.426**	-0.181	-0.410
	(1.30)	(0.47)	(2.57)	(0.60)	(0.35)	(0.15)	(0.75)	(0.22)
Trade Openness	-0.070**	0.006	-0.118**	0.026*	-0.009**	-0.001	-0.026**	-0.001
	(0.01)	(0.01)	(0.02)	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)
Central Bank								
Independence	-8.285**	3.101	-4.044	-3.506	-2.630**	1.200*	-1.389*	-0.508
	(1.88)	(1.86)	(2.43)	(3.07)	(0.51)	(0.60)	(0.70)	(1.15)
GDP Per Capita								
(Logged & Lagged)	-6.242**	-3.856**	-4.711**	-0.686	-0.756**	-0.947**	0.959*	-0.128
	(0.62)	(0.50)	(1.37)	(0.59)	(0.17)	(0.16)	(0.40)	(0.22)
Control on								
Corruption	-2.061**	0.054	-2.225**	-0.565**	-0.222	0.037	-0.244	-0.145
	(0.42)	(0.18)	(0.64)	(0.21)	(0.11)	(0.06)	(0.19)	(0.08)
Polity	-1.597**	0.244	-7.548**	-2.580**	-0.267*	0.128	-3.143**	-0.520
	(0.41)	(0.23)	(1.81)	(0.80)	(0.11)	(0.07)	(0.52)	(0.30)
Economic Freedom	2.852**	0.902*	3.498*	0.534	0.24	0.081	-0.738	0.133
	(0.77)	(0.40)	(1.35)	(0.56)	(0.21)	(0.13)	(0.39)	(0.21)
_cons	109.871**	71.369**	152.355**	71.751**	13.158**	9.936**	33.463**	9.263**
	(4.51)	(4.62)	(13.57)	(8.57)	(1.22)	(1.50)	(3.94)	(3.22)
R2	0.5428	0.3109	0.5982	0.4098	0.2622	0.1279	0.2743	0.1584
No. of Observations	947	947	465	465	947	947	465	465
No. of Countries	56	56	32	32	56	56	32	32
Hausman Test		0.000		0.000		0.000		0.000

Table 4.7: Impact of Political Ideology on Inequality – OLS and Fixed Effect results

Note: **, * show significance levels of 1% and 5%, respectively.

Table 4.8 presents the results for growth using the instrumental variable approach. It shows no significant relationship between rightist and leftist governments and economic growth rates for both sub-samples. We observe a similar pattern in the results of Table 4.9, showing no significant impact of political ideology on inflation. It means parties' ideological effect on growth and inflation does not exist, so that the significant effects observed with OLS can be ascribed to endogeneity. We show results of each sub-sample in three equations, first, both

political and economic freedom are controlled (m3, m6). Then, economic freedom and political freedom are dropped in turn: (m4, m7) and (m5, m8), respectively. The idea is to check whether this insignificant impact is due to the presence of either of these two freedoms or not since both can have a strong effect on growth and inflation. Economic freedom is highly significant in our results, but even if we drop it, the coefficients of both ideologies – Rightist and Leftist – remain insignificant.

		Polity	score 6 to 10			Polity Score 0	9 to 10	
Economic Growth is the Dependent Variable	1 st stage (Rightist Ideology)	1 st stage (Leftist Ideology)	2 nd stage (m3)	2 nd stage (m4)	2 nd stage (m5)	2 nd stage (m6)	2 nd stage (m7)	2 nd stage (m8)
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Rightist Government	· · · · · · · · · · · · · · · · · · ·		-0.653	-0.542	-0.455	-0.825	-0.222	-0.524
			(0.71)	(0.54)	(0.64)	(0.73)	(0.57)	(0.64)
Leftist Government			-0.229	0.038	-0.01	-0.89	0.208	-0.57
			(0.70)	(0.54)	(0.65)	(0.73)	(0.57)	(0.66)
Gross Capital Formation	-0.004	0.002	0.337**	0.255**	0.352**	0.454**	0.287**	0.451**
	(0.002)	(0.002)	(0.04)	(0.03)	(0.04)	(0.05)	(0.04)	(0.04)
Population Growth	-0.003	-0.008	-0.107	-0.481	-0.001	-0.720*	-0.518	-0.51
	(0.02)	(0.02)	(0.31)	(0.25)	(0.31)	(0.37)	(0.29)	(0.36)
Secondary Education (% of								
Population)	0.002	0.001	0.080**	0.053**	0.083**	0.071**	0.039*	0.080**
	(0.001)	(0.001)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Government Size	0.0002	-0.002	-0.058*	-0.103**	-0.070**	-0.02	-0.082**	-0.048
	(0.002)	(0.002)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Central Bank Independence	-0.011	-0.103	1.458	1.154	1.615	1.097	0.45	1.232
	(0.08)	(0.07)	(1.18)	(0.79)	(1.12)	(1.16)	(0.77)	(1.12)
Parliamentary System	-0.069	0.024	-0.325	-0.139	-0.397	-0.359	0.215	-0.416
	(0.10)	(0.09)	(1.54)	(1.48)	(1.54)	(2.08)	(2.06)	(2.04)
Polity	-0.009	0.000	-0.094	0.142		-0.132	0.048	
	(0.02)	(0.02)	(0.28)	(0.20)		(0.84)	(0.59)	
GDP Per Capita (Lagged &					-			
Logged)	0.030	0.015	-2.961**	-1.150**	2.925**	-2.775**	-0.731**	-2.678**
		(0.02)	(0.35)	(0.26)	(0.34)	(0.37)	(0.27)	(0.36)
Economic Freedom	-0.050*	0.004	1.419**		1.271**	2.277**		1.772**
	(0.02)	(0.02)	(0.31)		(0.28)	(0.40)		(0.35)
Closeness of Election	0.079*	0.033**						
	(0.03)	(0.002)						
CE years in office	-0.576**	-0.956**						
	(0.04)	(0.04)						
_cons	0.266	-0.088	7.558*	5.016	6.942*	-2.3	1.698	-0.959
	(0.24)	(0.21)	(3.60)	(2.83)	(3.13)	(8.48)	(6.18)	(3.48)
No. of observations	601	601	601	1014	650	543	902	592
No. of Countries	61	61	61	62	65	56	57	60
F-Statistics			699.124			615.506		

Table 4.8: Impact of Political Ideology on Economic Growth Rate – FE-2SLS Results

		P	olity score 6 to	10		Polity Score 0	9 to 10	
	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS
Inflation is the Dependent Variable	1 st stage (Rightist Ideology)	1 st stage (Leftist Ideology)	2 nd stage (m3)	2 nd stage (m4)	2 nd stage (m5)	2 nd stage (m6)	2 nd stage (m7)	2 nd stage (m8)
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Rightist Government			3.094	-1.22	0.986	1.017	-2.78	-0.37
			(1.66)	(2.18)	(1.35)	(1.49)	(2.81)	(1.10)
Leftist Government			2.143	-0.355	0.261	0.164	-3.193	-1.141
			(1.52)	(2.07)	(1.29)	(1.40)	(2.73)	(1.09)
Broad Money (% of GDP)	0.001	0.000	0.002	0.109**	0.002	-0.014	0.100**	-0.018
	(0.001)	(0.001)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Government Size	0.003	-0.002	-0.119	-0.086	-0.126	-0.124	-0.364**	-0.123
	(0.003)	(0.002)	(0.09)	(0.11)	(0.08)	(0.08)	(0.11)	(0.07)
Control on Corruption	0.020	-0.002	0.612	-0.207	0.453	1.026*	0.172	0.675*
	(0.02)	(0.012)	(0.41)	(0.48)	(0.37)	(0.40)	(0.53)	(0.34)
Parliamentary System (01=Yes)	-0.045	-0.032	2.402	-2.243	2.444	4.91	0.187	4.52
	(0.11)	(0.08)	(2.83)	(3.10)	(2.74)	(4.85)	(3.98)	(4.25)
Polity	0.000	0.011	-0.14	-3.412**		-0.132	-3.110	
	(0.03)	(0.02)	(0.71)	(0.74)		(1.29)	(1.74)	
Central Bank Independence	0.003	0.144	0.059	-23.457**	-0.302	2.108	-17.764**	1.488
	(0.14)	(0.10)	(3.55)	(3.55)	(3.06)	(2.87)	(3.38)	(2.46)
GDP Per Capita (Lagged &								
Logged)	-0.024	0.002	-0.269	-6.179**	-0.298	-0.198	-5.848**	-0.096
	(0.03)	(0.02)	(0.79)	(0.91)	(0.73)	(0.67)	(0.89)	(0.61)
Economic Freedom	-0.001	0.000	-7.046**		-7.573**	-5.763**		-6.775**
	(0.03)	(0.02)	(0.82)		(0.72)	(0.75)		(0.64)
Closeness of Election	0.151**	0.028**						
	(0.04)	(0.01)						
CE years in office	-0.435**	-0.980						
	(0.04)	(0.03)						
_cons	0.203	-0.056	58.602**	104.274**	64.079**	50.574**	105.868**	58.992**
	(0.31)	(0.23)	(8.19)	(9.12)	(6.56)	(14.15)	(19.32)	(6.19)
No. of observations	553	553	553	553	557	473	504	473
No. of Countries	46	46	46	46	48	38	38	40
F-Statistics			689.99			619.058		

Table 4.9: Impact of Political Ideology on Inflation – FE-2SLS Results

Note: **, * show significance levels of 1% and 5%, respectively.

In contrast to there being no effect of political ideology on economic growth rate and inflation, we find significant influence of political ideology on reducing income inequality in the sample of *all democracies* (Tables 4.10 and 4.11). Inequality reduces with both leftist and rightist

governments (thus it is highest under centrist governments); however, the magnitudes and significance levels of coefficients are higher for leftist governments than rightist governments, implying that the former are more effective in redressing the inequality issue. We find no significant relationship between ruling parties' ideologies and inequality for the sample of consolidated democracies. It seems the channels which cause economic convergence are strong in consolidated democracies. Otherwise, economic policy divergence is possible in non-consolidated democracies especially when political parties are stronger than institutions and political leaders have power to manoeuvre some economic policies (like, income distribution). We find similar results for both indicators of economic inequality – Gini Coefficients and Palma Ratio, confirming the robustness of our results.

		Po	olity score 6 to	10		Polity Score 0	9 to 10	
	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS
Inequality (Gini) is the Dependent Variable	1 st stage (Rightist Ideology)	1 st stage (Leftist Ideology)	2 nd stage (m3)	2 nd stage (m4)	2 nd stage (m5)	2 nd stage (m6)	2 nd stage (m7)	2 nd stage (m8)
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Rightist Government			-1.760*	-1.122	-1.318*	-1.319	-0.343	-0.682
			(0.82)	(0.59)	(0.67)	(0.89)	(0.79)	(0.67)
Leftist Government			-2.065**	-1.733**	-1.690**	-1.442	-0.616	-0.818
			(0.75)	(0.57)	(0.63)	(0.83)	(0.77)	(0.66)
Trade Openness	0.001*	0.000	0.004	0.007	0.003	0.026*	0.022*	0.023*
	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Central Bank								
Independence	-0.029	0.030	2.557	2.683**	2.609	-3.459	2.647**	-2.69
	(0.11)	(0.08)	(1.70)	(0.81)	(1.66)	(3.09)	(0.94)	(3.05)
GDP Per Capita (Logged &								
Lagged)	-0.023	-0.006	-3.329**	-1.641**	-3.275**	-0.982	-0.368	-1.418*
	(0.04)	(0.03)	(0.53)	(0.36)	(0.51)	(0.61)	(0.44)	(0.58)
Control on Corruption	0.011	-0.010	-0.281	-0.302*	-0.272	-0.736**	-0.567**	-0.893**
	(0.01)	(0.01)	(0.17)	(0.12)	(0.17)	(0.22)	(0.15)	(0.21)
Polity	0.005	-0.006	-0.079	-0.244		-2.400**	-1.736**	
	(0.02)	(0.01)	(0.23)	(0.15)		(0.81)	(0.62)	
Economic Freedom	-0.022	-0.022	0.099		0.081	0.137		0.042
	(0.03)	(0.02)	(0.43)		(0.41)	(0.57)		(0.57)
Closeness of Election	0.037	0.030						
	(0.02)	(0.02)						
CE years in office	-0.955**	-0.980**						
	(0.04)	(0.02)						
_cons	0.440	0.353	77.411**	62.942**	76.313**	76.495**	59.873**	58.584**
	(0.32)	(0.23)	(5.05)	(3.24)	(4.70)	(8.87)	(7.13)	(6.25)
No. of observations	513	513	513	748	529	403	575	419
No. of Countries	44	44	44	48	45	35	39	36
F-Statistics			738.584			655.294		

Table 4.10: Impact of Political Ideology on Inequality (Gini Coefficient) – FE-2SLS Result

	F	olity Score 06 to 1	0	Ро	lity Score 09 to	10
Incauality (Palma) is the	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS
Dependent Variable	2 nd stage (m1)	2 nd stage (m2)	2 nd stage (m3)	2 nd stage (m4)	2 nd stage (m5)	2 nd stage (m6)
	b/se	b/se	b/se	b/se	b/se	b/se
Rightist Government	-0.600*	-0.276	-0.463*	-0.387	-0.223	-0.234
	(0.27)	(0.19)	(0.22)	(0.34)	(0.27)	(0.25)
Leftist Government	-0.679**	-0.428*	-0.563**	-0.46	-0.311	-0.318
	(0.25)	(0.18)	(0.21)	(0.32)	(0.26)	(0.25)
Trade Openness	-0.002	-0.001	-0.002	-0.001	-0.001	-0.001
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Central Bank						
Independence	1.022	0.782**	1.013	-0.517	0.353	-0.376
	(0.57)	(0.26)	(0.56)	(1.19)	(0.31)	(1.15)
GDP Per Capita (Logged &						
Lagged)	-0.945**	-0.500**	-0.922**	-0.195	-0.093	-0.286
	(0.18)	(0.12)	(0.17)	(0.24)	(0.15)	(0.22)
Control on Corruption	-0.074	-0.062	-0.073	-0.192*	-0.159**	-0.223**
	(0.06)	(0.04)	(0.06)	(0.08)	(0.05)	(0.08)
Polity	0.018	0.041		-0.465	-0.295	
	(0.08)	(0.05)		(0.31)	(0.21)	
Economic Freedom	0.012		0.025	0.063		0.043
	(0.14)		(0.14)	(0.22)		(0.21)
_cons	12.231**	7.748**	12.036**	10.123**	7.069**	6.619**
	(1.69)	(1.05)	(1.57)	(3.41)	(2.39)	(2.36)
No. of observations	513	748	529	403	575	419
No. of Countries	44	48	45	35	39	36

Table 4.11: Impact of Political Ideology on Inequality (Palma Ratio) – FE-2SLS Results

Note: **, * show significance levels of 1% and 5%, respectively.

To further investigate, we also divide our sample into Western⁸⁹ and non-Western democracies. We find no influence of our main independent variables on economic growth (Table 4.12). For inflation, we find significantly positive coefficient for the rightist governments in the sample of non-Western democracies (Table 4.13) where a majority of democracies have a hybrid regime: 63.75% observations report a Polity score from 6 to 8.⁹⁰ However, this effect

⁸⁹ These countries are UK, EU member countries, USA, Canada, Australia, and New Zealand.

⁹⁰ Polity scores 6, 7, and 8 have 20.41%, 18.06%, 25.28% observations, respectively.

disappears when we drop economic freedom as the control variable, which is highly significant in both equations m4 and m6. The effect also weakens when we drop Polity. Table 4.14 shows that the association between ideology and income inequality only exists in the sample of non-Western democracies. However, in the Western democracies which are largely consolidated in nature, political ideologies seem ineffective. 91.54% observations in our Western countries' sample belong to consolidated democracies.

		Western			Non-Western	
	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS
Economic Growth is the	2 nd stage	and stage (m2)	2 nd stage	2 nd stage	2 nd stage	2 nd stage
bependent variable	(m1)	Z ^{me} stage (mz)	(m3)	(m4)	(m5)	(m6)
	b/se	b/se	b/se	b/se	b/se	b/se
Rightist Government	-1.162	-0.543	-1.045	-0.209	-0.715	-0.559
	(0.85)	(0.57)	(0.81)	(1.34)	(1.34)	(1.08)
Leftist Government	-1.435	0.061	-1.341	1.813	0.443	1.556
	(0.87)	(0.58)	(0.85)	(1.20)	(1.26)	(1.04)
Gross Capital Formation	0.379**	0.268**	0.399**	0.238**	0.266**	0.259**
	(0.06)	(0.04)	(0.06)	(0.06)	(0.05)	(0.05)
Population Growth	-0.379	-0.585*	-0.255	-0.835	-1.434*	-0.653
	(0.36)	(0.29)	(0.35)	(1.19)	(0.63)	(1.08)
Secondary Education (% of Population)	0.089*	0.105**	0.083*	0.032	-0.001	0.041
	(0.04)	(0.02)	(0.04)	(0.04)	(0.03)	(0.03)
Government Size	-0.094*	-0.118**	-0.092*	-0.094	-0.147**	-0.125**
	(0.04)	(0.03)	(0.04)	(0.05)	(0.04)	(0.05)
Central Bank Independence	1.487	-0.404	1.631	9.332*	6.077*	10.227*
	(1.27)	(0.77)	(1.21)	(4.28)	(2.72)	(4.09)
Parliamentary System	-2.729	-3.2	-3.046	-0.359	0.215	-0.416
	(2.50)	(2.55)	(2.49)	(2.08)	(2.06)	(2.04)
Polity	-0.266	0.571		-0.307	-0.085	
	(0.41)	(0.30)		(0.40)	(0.31)	
GDP Per Capita (Lagged &						
Logged)	-3.498**	-1.041**	-3.406**	-1.870**	-1.436*	-1.945**
	(0.43)	(0.27)	(0.42)	(0.69)	(0.62)	(0.64)
Economic Freedom	2.278**		1.998**	0.381		0.063
	(0.46)		(0.38)	(0.59)		(0.55)
_cons	11.347	-1.214	10.137	8.38	12.418*	8.053
	(6.42)	(4.72)	(5.46)	(6.83)	(5.06)	(6.25)
No. of observations	417	700	433	285	414	326
No. of Countries	31	31	32	28	29	31

Table 4.12: Impact of Political Ideology on Growth Rate – Western vs Non-Western Democracies

		Non-Western				
laffatta tatka Davida davi	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS
	2 nd stage	and 1 (112)	2 nd stage	2 nd stage	2 nd stage	2 nd stage
Vallaule	(m1)	2 ^m stage (m2)	(m3)	(m4)	(m5)	(m6)
	b/se	b/se	b/se	b/se	b/se	b/se
Rightist Government	-1.97	-3.464	-3.055	7.254**	-1.934	4.612*
	(1.99)	(2.49)	(1.73)	(2.71)	(3.50)	(2.08)
Leftist Government	-1.564	-3.777	-2.713	4.443	-1.355	2.517
	(1.96)	(2.46)	(1.75)	(2.38)	(3.23)	(1.96)
Broad Money (% of GDP)	0.01	0.039**	0.004	-0.017	0.163**	-0.006
	(0.02)	(0.01)	(0.02)	(0.04)	(0.05)	(0.04)
Government Size	-0.068	0.143	-0.139	-0.003	-0.118	-0.042
	(0.09)	(0.08)	(0.09)	(0.16)	(0.22)	(0.15)
Control on Corruption	1.894**	2.301**	1.642**	0.16	-0.77	0.024
	(0.63)	(0.54)	(0.60)	(0.55)	(0.67)	(0.50)
Parliamentary System (01=Yes)	0.70	-10.570**	-0.134	3.907	1.912	3.802
	(3.34)	(2.74)	(3.21)	(4.11)	(4.99)	(4.00)
Polity	-0.843	-4.076**		0.619	-2.785*	
	(1.25)	(1.23)		(0.97)	(1.11)	
Central Bank Independence	-3.213	-1.401	-1.65	4.338	-36.178**	3.706
	(3.18)	(2.66)	(2.67)	(7.04)	(5.95)	(6.83)
GDP Per Capita (Lagged &						
Logged)	-0.325	-2.657**	-0.036	0.084	-7.891**	0.072
	(0.83)	(0.69)	(0.80)	(1.33)	(1.63)	(1.21)
Economic Freedom	-4.842**		-6.848**	-8.772**		-8.604**
	(0.96)		(0.76)	(1.24)		(1.17)
_cons	48.736**	65.978**	57.845**	55.414**	113.973**	62.362**
	(15.25)	(14.39)	(10.06)	(10.64)	(12.98)	(8.84)
No. of observations	217	337	230	328	450	345
No. of Countries	16	16	17	29	29	30

Table 4.13: Impact of Political Ideology on Inflation – Western vs Non-Western Democracies

		Western		Non-Western			
Inoquality (Gini) is the	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	
Dependent Variable	2 nd stage	2^{nd} stage (m2)	2 nd stage	2 nd stage	2 nd stage	2 nd stage	
	(m1)	z stage (mz)	(m3)	(m4)	(m5)	(m6)	
	b/se	b/se	b/se	b/se	b/se	b/se	
Rightist Government	1.967	3.345*	2.145	-2.115*	-0.953	-1.573*	
	(1.30)	(1.57)	(1.40)	(0.93)	(0.66)	(0.72)	
Leftist Government	1.718	3.034	1.859	-2.407**	-1.853**	-2.005**	
	(1.29)	(1.57)	(1.39)	(0.81)	(0.63)	(0.66)	
Trade Openness	0.047**	0.035**	0.038**	-0.012	-0.009	-0.013	
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	
Central Bank Independence	-1.485	2.292*	-3.018	3.448	2.773*	3.404	
	(2.08)	(0.95)	(2.21)	(1.95)	(1.08)	(1.90)	
GDP Per Capita (Logged &							
Lagged)	0.698	-0.194	0.502	-5.845**	-2.764**	-5.670**	
	(0.54)	(0.52)	(0.58)	(0.73)	(0.51)	(0.70)	
Control on Corruption	-0.432*	-0.16	-0.661**	-0.309	-0.351*	-0.298	
	(0.22)	(0.20)	(0.23)	(0.20)	(0.15)	(0.19)	
Polity	1.098**	-0.046		0.05	0.105		
	(0.26)	(0.26)		(0.28)	(0.19)		
Economic Freedom	-1.029*		-0.577	0.568		0.587	
	(0.52)		(0.55)	(0.53)		(0.50)	
_cons	18.384*	26.808**	30.243**	101.401**	76.957**	100.131**	
	(7.83)	(6.62)	(8.04)	(6.00)	(4.08)	(5.67)	
No. of observations	144	220	144	420	515	372	
No. of Countries	11	11	11	32	36	33	

Table 4.14: Impact of Political Ideology on Inequality – Western vs Non-Western Democracies

Note: **, * show significance levels of 1% and 5%, respectively.

We have also investigated the influence of ideology on economic freedom. The main objective of this exercise is to find whether ideology causes economic policy convergence or not. Our results (table 4.15 and 4.16) show it does not. The leftist ideology causes a decline in economic freedom in the sample of non-western countries where a majority of democracies are non-consolidated (table 4.16). The OLS and Fixed Effect results of ideology and economic freedom are given in the appendices 4.1 and 4.2.

		Р	olity score 6 to	Polity Score 09 to 10				
Economic Freedom is the Dependent Variable	1st order (Rightist Ideology)	2nd order (Leftist Ideology)	2nd order (m2)	2nd order (m3)	2nd order (m3)	2nd order (m5)	2nd order (m6)	2nd order (m6)
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Ideology (Right)			-0.065	-0.024	-0.127	-0.065	0.002	-0.128
			(0.10)	(0.09)	(0.11)	(0.09)	(0.09)	(0.10)
Ideology (Left)			-0.127	-0.096	-0.231*	-0.073	-0.01	-0.178
			(0.10)	(0.09)	(0.10)	(0.10)	(0.09)	(0.10)
Population Growth	-0.003	-0.006	-0.140**	-0.128**	-0.094*	0.013	0.031	0.071
	(0.02)	(0.02)	(0.04)	(0.04)	(0.04)	(0.05)	(0.05)	(0.05)
Secondary Education	0.001	0.000	0.021**	0.024**	0.032**	0.018**	0.020**	0.026**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Government Size	0.003	-0.003*	-0.032**	-0.030**	-0.032**	-0.016**	-0.013**	-0.016**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Central Bank Independence	-0.029	-0.102	0.543**	0.642**	1.122**	0.398**	0.515**	0.839**
	(0.08)	(0.07)	(0.16)	(0.16)	(0.16)	(0.15)	(0.15)	(0.14)
Parliamentary System								
(01=Yes)	-0.054	0.025	-0.399	-0.342	-0.447	0	0	0
	(0.10)	(0.09)	(0.22)	(0.23)	(0.23)	(.)	(.)	(.)
Polity	-0.021	0.003	0.202**		0.246**	0.186		0.272*
	(0.02)	(0.02)	(0.04)		(0.04)	(0.11)		(0.11)
GDP Per Capita (logged &								
lagged)	0.014	0.015	0.385**	0.410**		0.294**	0.301**	
	(0.02)	(0.02)	(0.05)	(0.05)		(0.05)	(0.05)	
Closeness of Election	0.080**	0.956**						
	(0.03)	(0.04)						
CE years in office	-0.604**	-0.989**						
	(0.03)	(0.04)						
_cons	0.079	0.015	1.120*	2.215**	3.040**	1.423	2.755**	2.437*
	(0.22)	(0.20)	(0.47)	(0.41)	(0.44)	(1.09)	(0.40)	(1.14)
No. of observations	666	666	666	719	667	476	525	476
No. of Countries	62	62	62	66	62	45	45	45
F-Statistics			412.465			333.14		

Table 4.15: Impact of Political Ideology on Economic Freedom – FE-2SLS Results

		Western			Non-Western				
	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS	FE-2SLS			
Economic Freedom is the	2nd order	2nd order							
Dependent variable	(m1)	(m2)	(m2)	(m4)	(m5)	(m5)			
	b/se	b/se	b/se	b/se	b/se	b/se			
Ideology (Right)	-0.012	0.138	-0.074	-0.27	-0.221	-0.311			
	(0.10)	(0.12)	(0.11)	(0.17)	(0.13)	(0.19)			
Ideology (Left)	0.042	0.171	-0.108	-0.312*	-0.300*	-0.308			
	(0.11)	(0.12)	(0.11)	(0.15)	(0.13)	(0.16)			
Population Growth	0.001	0.032	0.069	-0.733**	-0.699**	-0.737**			
	(0.04)	(0.05)	(0.04)	(0.13)	(0.11)	(0.14)			
Secondary Education	0.023**	0.028**	0.032**	-0.004	-0.001	0.009*			
	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)			
Government Size	-0.020**	-0.019**	-0.015**	-0.043**	-0.041**	-0.047**			
	(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)			
Central Bank Independence	0.113	0.248	0.696**	3.289**	3.228**	3.883**			
	(0.16)	(0.18)	(0.15)	(0.51)	(0.48)	(0.54)			
Parliamentary System (1=Yes)	-0.477	-0.333	-0.596	-0.770**	-0.740**	-0.817**			
	(0.31)	(0.36)	(0.33)	(0.26)	(0.26)	(0.29)			
GDP Per Capita (logged & lagged)	0.367**	0.387**		0.490**	0.477**				
	(0.05)	(0.06)		(0.08)	(0.08)				
Polity	0.323**		0.348**	0.015		0.085			
	(0.05)		(0.05)	(0.05)		(0.06)			
_cons	-0.518	1.657*	1.672*	3.623**	3.653**	5.876**			
	(0.68)	(0.65)	(0.67)	(0.77)	(0.69)	(0.73)			
No. of observations	386	401	387	261	299	261			
No. of Countries	31	32	31	29	32	29			

Table 4.16: Impact of Political Ideology on Economic Freedom - Western vs Non-Western Democracies

Note: **, * show significance levels of 1% and 5%, respectively.

Policies take time to implement and give results. Therefore, we have also calculated the effect of time lags (t1, t2, and t3) on our dependent variables. Appendix 4.3 and 4.4 show no partisan effect on growth rate in the sample of all democracies and consolidated democracies, respectively. However, in Appendix 4.5, which comprises the sample of unconsolidated hybrid regimes, both leftist and rightist governments have a positive effect on growth rate. Utilising

inflation as a dependent variable, we also find no difference between rightist and leftist governments (Appendices 4.6, 4.7 and 4.8).

As indicated in Model 2 (t2), inequality is reduced in leftist governments when the sample is composed of *all democracies* (appendices 4.9 and 4.10) and hybrid regimes (appendices 4.13 and 4.14). This means it takes almost two years to show the partisan effect on inequality. However, in the sample of consolidated democracies, the effect is statistically insignificant (appendices 4.11 and 4.12).

We also find a partisan ideological effect on economic freedom only in the sample of unconsolidated countries (Appendix 4.17). Economic Freedom rises when rightists are in government (model 1, t1) and declines when leftists are in power (model 3, t3).

Populist governments can choose policies that differ from the status quo since their narrative is usually anti-establishment or anti status quo. Populist leaders act as a strong figure, appeal voters based on their distinct approach dealing with the main stream issues (Berman 2021). Therefore, we have taken a sample of countries covering the period 2003 to 2019 since populism has been on rise since 2003 (Kyle and Meyer 2020). Appendices 4.18 and 4.19 show no significant difference in the results with compare to the Tables 4.8, 4.9, 4.10 and 4.15. There exists a convergence in the consolidated democracies and divergence is observed only in hybrid regime; economic freedom is reduced in the leftist government.

In our main model, we control two categories of control variables. One category is composed of the main determinants of our outcome variables. For instance, for growth rate, we control the effects of gross capital formation, population growth, secondary education, and government size. The second category is composed of institutional constraints, such as central bank impendence and the parliamentary system. One potential problem in our model specification could be that ideology could affect some of these variables. If, for example, ideology affects education, then it could also indirectly affect growth. To address this issue, we have alternately removed the first category of control variables while retaining the second category and vice versa. Appendices 4.20 and 4.21 show that this treatment does not affect the validity of our results in Tables 4.8, 4.9, 4.10 and 4.15. Likewise, in appendix 4.22, we dropped all controlled variables and only estimated the regressions with ideology, and found no significant differences with the results.

Discussion: Our findings show that economic convergence obtains in economic growth and inflation equations, and when democracies are mature and developed, confirming our hypotheses H1 and H4. But economic divergence only exists when we observe the impact of ideologies on inequality and economic freedom in unconsolidated democracies as we predicted in hypotheses H2 and H3. Thus, the evidence for economic policy divergence is limited to only the sub-samples of hybrid regimes.

Our results contrast with Ferris and Voia (2010) and Sakamoto (2008) that leftist governments achieve higher growth rates. In arriving at our results, we carefully address endogeneity concerns, and include more countries and a longer time period in our chosen sample. Ferris and Voia cover only Canada from 1870 to 2005 and Sakamoto's (2008) sample is comprised of 18 OECD countries. We agree with Potrafke (2012) who finds no effect of ideology on the growth rate in 21 OECD countries from 1951 to 2006.

Likewise, as regards inflation, our results differ from the existing literature (like Hibbs 1977, Tufte 1978, Franzese 2002) that leftists pursue expansionary policies, and therefore the growth rate and inflation are higher in their case. These studies are largely theoretical in nature, unlike our study. They lack a robust empirical estimation.

Furthermore, the governments classified as neither Rightist nor Leftist are probably broader coalition governments composed of multiple parties that are relatively small in size in the majority of cases. There are also a relatively small number of major parties that are large and, at the same time, Centrist rather than Rightist or Leftist. Such small parties may represent relatively narrow interest groups and if they channel government spending to causes benefiting disproportionately their support bases, it may lead to rising inequality, as is indicated in Tables 4.7 and 4.8, given that coalition/centrist government is the omitted category. Many papers (for example, Volkerink and De Haan 2001) also argue that coalition governments spend more than single-party governments, causing a fiscal deficit.

Moreover, we observe that economic freedom is quite consistently significant in our FE-2SLS regressions, and it seems to lead to lower inflation and higher growth. In contrast, ideology is mostly insignificant in our growth and inflation regressions and in consolidated democracies, implying that economic freedom matters more for these key macroeconomic indicators than political ideologies. A substantial amount of literature (for succinct review, see Hall and Lawson 2014) also shows the positive impact of economic freedom in achieving high growth and low inflation. Thus, the evidence from our paper justifies the position that once economic policies receive more attention from policymakers, the role of political parties *per se* in affecting economic outcomes is generally limited in scope in consolidated democracies.

Conclusions

This paper investigates the effect of ideological differences in political parties on the key macroeconomic outcomes: growth, inflation, and inequality. Reviewing the existing literature, we identify mixed theoretical support for economic policy convergence. Our results using the instrumental variable approach indicate no effect of parties' ideological bias on growth and inflation. In contrast, inequality is reduced under leftist governments when the sample is composed of non-consolidated democracies. However, this effect disappears in consolidated democracies. To further confirm these results, we have applied the effect of ideology on

economic freedom and observed that economic freedom is enhanced in the rightist governments and declines in the leftist governments – but only in hybrid regimes. Our result indicates that partisan ideological effect also takes time (lags) to affect inequality and economic freedom in unconsolidated regimes. Thus, this research provides substantial evidence for economic convergence in growth and inflation regressions, and in the sample of developed democracies. Furthermore, it finds economic divergence in inequality and economic freedom in the sample of hybrid regime.

Appendix A4

Economic Freedom is the		All Democracies	Consolidated Democracies			
Dependent Variable	OLS	OLS	OLS	FE	FE	FE
	b/se	b/se	b/se	b/se	b/se	b/se
Ideology (Right)	0.024	-0.009	0.048	-0.076	-0.107	-0.099
	(0.06)	(0.06)	(0.07)	(0.06)	(0.06)	(0.07)
Ideology (Left)	-0.025	0.024	-0.13	-0.150*	-0.177**	-0.230**
	(0.06)	(0.06)	(0.07)	(0.06)	(0.06)	(0.07)
Population Growth	-0.051	-0.061*	0.068*	-0.161**	-0.147**	-0.112*
	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)	(0.05)
Secondary Education	-0.002	-0.003	0.019**	0.018**	0.021**	0.033**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Government Size	-0.026**	-0.023**	-0.023**	-0.031**	-0.029**	-0.030**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Central Bank Independence	0.620**	0.777**	0.720**	0.515**	0.612**	1.301**
	(0.10)	(0.10)	(0.11)	(0.16)	(0.16)	(0.15)
Parliamentary System (1=Yes)	-0.029	-0.058	0.212**	-0.444*	-0.391	-0.525*
	(0.06)	(0.06)	(0.06)	(0.23)	(0.24)	(0.25)
GDP Per Capita (logged & lagged)	0.407**	0.449**		0.459**	0.469**	
	(0.03)	(0.03)		(0.04)	(0.04)	
Polity	0.102**		0.190**	0.153**		0.188**
	(0.02)		(0.02)	(0.04)		(0.04)
_cons	3.235**	3.629**	3.955**	1.196**	2.052**	3.298**
	(0.20)	(0.18)	(0.22)	(0.44)	(0.36)	(0.42)
No. of observations	737	791	739	737	791	739
r2	0.53	0.49	0.4	0.57	0.55	0.49

Appendix 4.1: of Political Ideology on Economic Freedom – OLS Results

Economic Freedom is the		All Democracies		Consol	Consolidated Democracies			
Dopondent Variable	OLS	OLS	OLS	FE	FE	FE		
Dependent variable	b/se	b/se	b/se	b/se	b/se	b/se		
Ideology (Right)	0.015	-0.016	-0.043	-0.003	-0.051	-0.053		
	(0.07)	(0.07)	(0.08)	(0.07)	(0.07)	(0.08)		
Ideology (Left)	0.028	0.064	-0.12	-0.014	-0.061	-0.122		
	(0.07)	(0.07)	(0.08)	(0.07)	(0.07)	(0.07)		
Population Growth	0.038	0.015	0.170**	-0.069	-0.046	-0.012		
	(0.04)	(0.04)	(0.04)	(0.05)	(0.05)	(0.05)		
Secondary Education	0.012**	0.009**	0.033**	0.013**	0.016**	0.026**		
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)		
Government Size	-0.028**	-0.023**	-0.027**	-0.013**	-0.011*	-0.012*		
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)		
Central Bank Independence	0.338**	0.515**	0.413**	0.404**	0.515**	1.115**		
	(0.10)	(0.11)	(0.11)	(0.15)	(0.16)	(0.15)		
Parliamentary System (1=Yes)	-0.125*	-0.197**	0.158*	0	0	0		
	(0.06)	(0.07)	(0.06)	(.)	(.)	(.)		
GDP Per Capita (logged & lagged)	0.379**	0.380**		0.405**	0.408**			
	(0.04)	(0.04)		(0.05)	(0.05)			
Polity	-0.026		0.347**	0.199		0.299*		
	(0.07)		(0.07)	(0.11)		(0.12)		
_cons	3.702**	3.430**	1.384*	0.579	2.081**	1.833		
	(0.61)	(0.25)	(0.62)	(1.08)	(0.37)	(1.17)		
No. of observations	514	568	515	514	568	515		
r2	0.53	0.47	0.44	0.51	0.49	0.43		

Appendix 4.2: of Political Ideology on Economic Freedom – FE Results

Growth Rate	1st stage	1st stage	(Lag 1)	1st stage	1st stage	(Lag 2)	1st stage	1st stage	(Lag 3)
	(Rightist Ideology)	(Leftist Ideology)	Model 1	(Rightist Ideology)	(Leftist Ideology)	Model 2	(Rightist Ideology)	(Leftist Ideology)	Model 3
				0.7	0.7		0.07		
Rightist Government			0.377			1.206			1.378*
			(0.654)			(0.726)			(0.651)
Leftist Government			0.717			1.411			1.596*
			(0.651)			(0.728)			(0.659)
Closeness of Election	0.044*	0.027		0.098**	0.027		0.097**	0.032	
	(0.020)	(0.024)		(0.037)	(0.025)		(0.035)	(0.026)	
CE years in office	-0.524**	-0.967**		-0.508**	-0.949**		-0.508**	-0.970**	
	(0.033)	(0.032)		(0.031)	(0.033)		(0.031)	(0.038)	
Constant	0.511*	(0.031)	5.274	0.557*	0.336	4.059	0.831**	-0.089	4.994
	(0.227)	(0.172)	(3.330)	(0.234)	(0.184)	(3.409)	(0.226)	(0.186)	(3.357)
Control Variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	654	654	654	655	655	655	651	651	651
Number of Countries	64	64	64	63	63	63	63	63	63
F Statistics			691.52			648.21			633.91

Appendix 4.3: Effect of Political Ideology on Economic Growth - All democracies are in Sample

Note: **, * show significance levels of 1% and 5%, respectively.

Appendix 4.4: Effect of Political Ideology on Economic Growth - Consolidated Democracies are in Sample

Growth Rate	1st stage	1st stage	Lag1	1st stage	1st stage	Lag2	1st stage	1st stage	Lag3
	(Rightist	(Leftist	Model 1	(Rightist	(Leftist	Model 2	(Rightist	(Leftist	Model 3
	Ideology)	Ideology)		Ideology)	Ideology)		Ideology)	Ideology)	
Rightist			-0.734			0.395			1.073
Government									
			(0.711)			(0.810)			(0.686)
Leftist Government			-0.525			0.579			1.301
			(0.710)			(0.797)			(0.690)
Closeness of	0.619**	0.774**		0.187**	0.017		0.166**	0.023	
Election									
	(0.037)	(0.036)		(0.040)	(0.028)		(0.037)	(0.030)	
CE years in office	-0.586**	-0.945**		-0.507**	-0.921**		-0.522**	-0.957**	
	(0.037)	(0.039)		(0.036)	(0.037)		(0.033)	(0.042)	
Constant	0.259	0.107	1.062	0.269	0.373	0.334	0.514*	0.025	-0.617
	(0.242)	(0.200)	(3.372)	(0.250)	(0.202)	(3.391)	(0.244)	(0.213)	(3.397)
Control Variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	485	485	485	492	492	492	493	493	493
Number of	47	47	47	47	47	47	46	46	46
Countries									
F-Statistics			567.417			562.286			555.27

	1st stage	1st stage	Lag1	1st stage	1st stage	Lag2	1st stage	1st stage	Lag3
Growth Rate	(Rightist	(Leftist	Model 1	(Rightist	(Leftist	Model 2	(Rightist	(Leftist	Model 3
	Ideology)	Ideology)		Ideology)	Ideology)		Ideology)	Ideology)	
Rightist			2.990*			3.400**			2.171
Government									
			(1.369)			(1.217)			(1.231)
Leftist Government			3.273*			3.383*			0.127
			(1.353)			(1.529)			(1.750)
Closeness of Election	0.580**	0.870**		-0.011	0.049		0.005	0.081	
	(0.078)	(0.045)		(0.064)	(0.055)		(0.057)	(0.051)	
CE years in office	-0.547**	-0.960**		-0.948**	-0.957**		-0.886**	-0.968**	
	(0.079)	(0.049)		(0.071)	(0.062)		(0.074)	(0.062)	
Constant	1.235**	-0.216	16.419*	0.733*	0.103	15.533*	0.662	0.227	22.157**
	(0.442)	(0.244)	(7.056)	(0.349)	(0.289)	(6.916)	(0.336)	(0.219)	(6.802)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	204	204	204	201	201	201	197	197	197
Number of Countries	32	32	32	32	32	32	33	33	33
F-Statistics			277.62			273.32			273.05

Appendix 4.5: Effect of Political Ideology on Economic Growth – Hybrid Regime is the Sample

Note: **, * show significance levels of 1% and 5%, respectively.

Appendix 4.6: Effect of Political Ideology on Inflation - All democracies are in Sample

	1st stage	1st stage	Lag1	1st stage	1st stage	Lag2	1st stage	1st stage	Lag3
Inflation	(Rightist	(Leftist	Model 1	(Rightist	(Leftist	Model 2	(Rightist	(Leftist	Model 3
	Ideology)	Ideology)		Ideology)	Ideology)		Ideology)	Ideology)	
Rightist			0.121			-0.875			-1.839
Government									
			(1.441)			(1.534)			(1.439)
Leftist			-0.337			-1.220			-1.817
Government									
			(1.417)			(1.515)			(1.410)
Closeness of	0.121**	0.768**		0.123**	0.001		0.099**	0.014	
Election									
	(0.036)	(0.040)		(0.035)	(0.026)		(0.034)	(0.030)	
CE years in office	-0.433**	-0.967**		-0.401**	-0.964**		-0.444**	-0.980**	
	(0.037)	(0.038)		(0.035)	(0.036)		(0.034)	(0.042)	
Constant	0.611*	0.123	60.513***	0.759**	-0.167	64.250***	1.202**	-0.678	61.844***
	(0.273)	(0.214)	(6.135)	(0.262)	(0.198)	(6.005)	(0.262)	(0.206)	(5.770)
Control Variable	Yes								
Observations	490	490	490	489	489	489	485	485	485
Number of	47	47	47	46	46	46	45	45	45
Countries									

Inflation Rate	1st stage	1st stage	Lag1	1st stage	1st stage	Lag2	1st stage	1st stage	Lag3
	(Rightist Ideology)	(Leftist Ideology)	Model 1	(Rightist Ideology)	(Leftist Ideology)	Model 2	(Rightist Ideology)	(Leftist Ideology)	Model 3
Rightist Government			-0.249			-5.949*			-0.193
			(1.838)			(2.534)			(1.861)
Leftist Government			-0.862			-6.154*			-0.801
			(1.844)			(2.568)			(1.912)
Closeness of Election	0.147**	-0.008		0.191**	-0.025		0.177**	-0.013	
	(0.041)	(0.035)		(0.039)	(0.031)		(0.038)	(0.035)	
CE years in office	-0.480**	-0.933**		-0.402**	-0.905**		-0.435**	-0.926**	
	(0.046)	(0.051)		(0.041)	(0.045)		(0.039)	(0.052)	
Constant	0.128	0.146	85.257**	0.461	0.033	92.605**	0.565	0.186	72.852**
	(0.336)	(0.265)	(7.616)	(0.321)	(0.236)	(7.854)	(0.328)	(0.262)	(7.385)
Control Variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	333	333	333	334	334	334	336	336	336
Number of Countries	30	30	30	30	30	30	30	30	30
F-Statistics			539.35			567.59			523.02

Appendix 4.7: Effect of Political Ideology on Inflation - Consolidated Democracies are in Sample

Note: **, * show significance levels of 1% and 5%, respectively.

	1st stage	1st stage	Lag1	1st stage	1st stage	Lag2	1st stage	1st stage	Lag3
Inflation Rate	(Rightist	(Leftist	Model 1	(Rightist	(Leftist	Model 2	(Rightist	(Leftist	Model 3
	Ideology)	Ideology)		Ideology)	Ideology)		Ideology)	Ideology)	
Rightist Government			-1.301			0.428			-3.853
			(2.519)			(2.230)			(2.294)
Leftist Government			-2.801			0.700			-1.943
			(2.533)			(2.541)			(2.685)
Closeness of Election	0.606**	0.084		0.023	0.047		0.003	0.038	
	(0.067)	(0.057)		(0.064)	(0.066)		(0.052)	(0.062)	
CE years in office	-0.395**	-0.944**		-0.767**	-0.961**		-0.670**	-0.998**	
	(0.082)	(0.057)		(0.092)	(0.061)		(0.088)	(0.057)	
Constant	1.296**	-0.156	93.866**	0.985**	0.103	95.555**	1.073**	-0.304	99.840**
	(0.419)	(0.301)	(12.640)	(0.368)	(0.313)	(12.063)	(0.363)	(0.261)	(11.670)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	174	174	174	173	173	173	167	167	167
Number of Countries	25	25	25	26	26	26	25	25	25
F-Statistics			277.62			273.32			273.05

Appendix 4.8: Effect of Political Ideology on Inflation – Hybrid Regime is the Sample
Gini Coefficient	1st stage	1st stage	(Lag 1)	1st stage	1st stage	(Lag 2)	1st stage	1st stage	(Lag 3)
	(Rightist	(Leftist	Model 1	(Rightist	(Leftist	Model 2	(Rightist	(Leftist	Model 3
	Ideology)	Ideology)		Ideology)	Ideology)		Ideology)	Ideology)	
Rightist Government			-2.351**			-0.993			-0.061
			(0.750)			(0.737)			(0.745)
Leftist Government			-2.877**			-1.757*			-0.889
			(0.727)			(0.716)			(0.722)
Closeness of Election	0.039	0.027		0.046	0.020		0.038	0.021	
	(0.027)	(0.022)		(0.026)	(0.019)		(0.028)	(0.020)	
CE years in office	-0.934**	-0.958**		-0.924**	-0.960**		-0.910**	-0.960**	
	(0.040)	(0.029)		(0.036)	(0.026)		(0.038)	(0.026)	
Constant	0.490	0.263	82.494**	0.135	0.244	78.079**	0.184	0.036	76.499**
	(0.342)	(0.289)	(4.878)	(0.317)	(0.246)	(4.650)	(0.338)	(0.241)	(4.759)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	443	443	443	444	444	444	441	441	441
Number of Countries	45	45	45	47	47	47	46	46	46
F Statistics			707.89			696.82			653.77

Appendix 4.9: - Effect of Political Ideology on Inequality (Gini Coefficient) - All democracies are in Sample

Note: **, * show significance levels of 1% and 5%, respectively.

Appendix 4.10: Effect of Political Ideology on Inequality (Palma ratio) - All democracies are in Sample

Palma Ratio	1st stage	1st stage	(Lag 1)	1st stage	1st stage	(Lag 2)	1st stage	1st stage	(Lag 3)
	(Rightist	(Leftist	Model 1	(Rightist	(Leftist	Model 2	(Rightist	(Leftist	Model 3
	Ideology)	Ideology)		Ideology)	Ideology)		Ideology)	Ideology)	
Rightist Government			-0.772**			-0.300			-0.123
			(0.251)			(0.246)			(0.249)
Leftist Government			-0.909**			-0.524*			-0.340
			(0.243)			(0.239)			(0.241)
Closeness of Election	0.039	0.027		0.046	0.020		0.038	0.021	
	(0.027)	(0.022)		(0.026)	(0.019)		(0.028)	(0.020)	
CE years in office	-0.934**	-0.958**		-0.924**	-0.960**		-0.910**	-0.961**	
	(0.040)	(0.029)		(0.036)	(0.026)		(0.038)	(0.026)	
Constant	0.490	0.263	13.220**	0.135	0.244	11.272**	0.184	0.036	10.999**
	(0.342)	(0.289)	(1.631)	(0.317)	(0.246)	(1.553)	(0.338)	(0.241)	(1.590)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	443	443	443	444	444	444	441	441	441
Number of Countries	45	45	45	47	47	47	46	46	46
F Statistics			707.89			696.82			653.77

Gini Coefficient	1st stage (Rightist Ideology)	1st stage (Leftist Ideology)	Lag1 Model 1	1st stage (Rightist Ideology)	1st stage (Leftist Ideology)	Lag2 Model 2	1st stage (Rightist Ideology)	1st stage (Leftist Ideology)	Lag3 Model 3
Rightist Government			-1.067			-0.523			0.610
			(0.797)			(0.884)			(0.790)
Leftist Government			-1.494			-1.055			0.088
			(0.800)			(0.901)			(0.818)
Closeness of Election	0.065	0.026		0.067*	-0.012		0.043	-0.013	
	(0.036)	(0.030)		(0.033)	(0.025)		(0.032)	(0.025)	
CE years in office	-0.898**	-0.934**		-0.863**	-0.957**		-0.870**	-0.958**	
	(0.049)	(0.043)		(0.043)	(0.038)		(0.042)	(0.037)	
Constant	0.496	0.451	59.417**	0.306	0.077	61.989**	0.204	0.362	54.589**
	(0.596)	(0.527)	(6.549)	(0.588)	(0.463)	(6.718)	(0.580)	(0.430)	(6.781)
Control Variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	242	242	242	241	241	241	243	243	243
Number of Countries	26	26	26	27	27	27	27	27	27
F-Statistics			560.27			602.12			555.85

Appendix 4.11: Effect of Political Ideology on Inequality (Gini Coefficient) - Consolidated Democracies are in Sample

Note: **, * show significance levels of 1% and 5%, respectively.

Appendix 4.12: Effect of Political Ideology on Inequality (Palma Ratio) - Consolidated Democracies are in Sample

Palma Ratio	1st stage (Rightist	1st stage (Leftist	Lag1 Model 1	1st stage (Rightist	1st stage (Leftist	Lag2 Model 2	1st stage (Rightist	1st stage (Leftist	Lag3 Model 3
	Ideology)	Ideology)		Ideology)	Ideology)		Ideology)	Ideology)	
Rightist			-0.244			-0.137			0.172
Government			(0.306)			(0.350)			(0.307)
Leftist Government			-0.380			-0.330			0.003
			(0.307)			(0.357)			(0.318)
Closeness of Election	0.065	0.026		0.067*	-0.012		0.043	-0.013	
	(0.036)	(0.030)		(0.033)	(0.025)		(0.032)	(0.025)	
CE years in office	-0.898**	-0.935**		-0.863**	-0.957**		-0.870**	-0.958**	
	(0.049)	(0.043)		(0.043)	(0.038)		(0.042)	(0.037)	
Constant	0.496	0.451	6.029**	0.306	0.077	6.009**	0.204	0.362	5.135*
	(0.596)	(0.527)	(2.512)	(0.588)	(0.463)	(2.663)	(0.580)	(0.430)	(2.635)
Control Variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	242	242	242	241	241	241	243	243	243
Number of Countries	26	26	26	27	27	27	27	27	27
F-Statistics			560.27			602.12			555.85

Gini Coefficient	1st stage (Rightist Ideology)	1st stage (Leftist Ideology)	Lag1 Model 1	1st stage (Rightist Ideology)	1st stage (Leftist Ideology)	Lag2 Model 2	1st stage (Rightist Ideology)	1st stage (Leftist Ideology)	Lag3 Model 3
Rightist Government	8;,		-2.724**			-1.122			0.170
			(0.727)			(0.764)			(0.776)
Leftist Government			-3.145**			-2.280**			-0.871
			(0.706)			(0.745)			(0.744)
Closeness of Election	0.691**	0.082*		0.054	0.079		0.051	0.060	
	(0.052)	(0.040)		(0.059)	(0.046)		(0.061)	(0.051)	
CE years in office	-0.880**	-0.930**		-0.884**	-0.926**		-0.805**	-0.950**	
	(0.076)	(0.042)		(0.073)	(0.044)		(0.084)	(0.044)	
Constant	0.955	-0.428	103.725**	0.562	0.197	102.016**	0.518**	-0.268	100.239**
	(0.573)	(0.398)	(6.501)	(0.586)	(0.405)	(6.725)	(0.618)	(0.393)	(6.510)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	215	215	215	215	215	215	212	212	212
Number of Countries	27	27	27	29	29	29	29	29	29
F-Statistics			293.96			300.67			289.94

Appendix 4.13: Effect of Political Ideology on Inequality (Gini Coefficient) – Hybrid Regime is the Sample

Note: **, * show significance levels of 1% and 5%, respectively.

Appendix 4.14: Effect of Political Ideology on Inequality (Palma Ratio) – Hybrid Regime is the Sample

	1st stage	1st stage	Lag1	1st stage	1st stage	Lag2	1st stage	1st stage	Lag3
Palma Ratio	(Rightist	(Leftist	Model 1	(Rightist	(Leftist	Model 2	(Rightist	(Leftist	Model 3
	Ideology)	Ideology)		Ideology)	Ideology)		Ideology)	Ideology)	
Rightist			-1 088**			-0.400			-0 090
Government			-1.000			-0.400			-0.070
			(0.236)			(0.235)			(0.223)
Leftist Government			-1.111**			-0.737**			-0.377
			(0.229)			(0.229)			(0.214)
Closeness of Election	0.691**	0.082*		0.054	0.079		0.051	0.060	
	(0.052)	(0.040)		(0.059)	(0.046)		(0.061)	(0.051)	
CE years in office	-0.880**	-0.930**		-0.884**	-0.926**		-0.805**	-0.950**	
	(0.076)	(0.042)		(0.073)	(0.044)		(0.084)	(0.044)	
Constant	0.955	-0.428	21.161***	0.562	0.197	19.902***	0.518**	-0.268	19.060***
	(0.573)	(0.398)	(2.108)	(0.586)	(0.405)	(2.066)	(0.618)	(0.393)	(1.871)
Control Variables	Yes								
Observations	215	215	215	215	215	215	212	212	212
Number of	27	27	27	29	29	29	29	29	29
Countries									
F-Statistics			293.96			300.67			289.94

Economic Freedom	1st stage (Rightist Ideology)	1st stage (Leftist Ideology)	(Lag 1) Model 1	1st stage (Rightist Ideology)	1st stage (Leftist Ideology)	(Lag 2) Model 2	1st stage (Rightist Ideology)	1st stage (Leftist Ideology)	(Lag 3) Model 3
Rightist Government			0.089			0.010			-0.023
			(0.100)			(0.108)			(0.097)
Leftist Government			0.024			-0.064			-0.107
			(0.097)			(0.106)			(0.095)
Closeness of Election	0.525**	0.820**		0.107**	0.022		0.104**	0.028	
	(0.032)	(0.032)		(0.035)	(0.026)		(0.035)	(0.027)	
CE years in office	-0.500**	-0.974**		-0.486**	-0.953**		-0.487**	-0.971**	
	(0.033)	(0.033)		(0.032)	(0.035)		(0.032)	(0.039)	
Constant	0.640**	0.048	1.020	-0.467	0.198	1.611**	-0.774	-0.294	1.336*
	(0.247)	(0.198)	(0.523)	(0.271)	(0.226)	(0.544)	(0.282)	(0.239)	(0.571)
Control variables	Yes	Yes		Yes	Yes		Yes	Yes	
Observations	607	607	607	607	607	607	602	602	602
Number of Countries	61	61	61	60	60	60	60	60	60
F Statistics			707.90			696.82			653.77

Appendix 4.15: Effect of Political Ideology on Economic Freedom – All Democracies are in the Sample

Note: **, * show significance levels of 1% and 5%, respectively.

Appendix 4.16: Effect of Political Ideology on Economic Freedom – Consolidated Democracies are in the Sample

	1st stage	1st stage	(Lag 1)	1st stage	1st stage	(Lag 2)	1st stage	1st stage	(Lag 3)
Economic	(Rightist	(Leftist	Model 1	(Rightist	(Leftist	Model 2	(Rightist	(Leftist	Model 3
Freedom	Ideology)	Ideology)		Ideology)	Ideology)		Ideology)	Ideology)	
Rightist			0.049			0.117			0.111
Government									
			(0.103)			(0.114)			(0.093)
Leftist			0.036			0.080			0.086
Government									
			(0.099)			(0.109)			(0.091)
Closeness of	0.698**	0.799**		0.196**	0.017		0.174**	0.025	
Election									
	(0.047)	(0.040)		(0.038)	(0.029)		(0.037)	(0.031)	
CE years in office	-0.550**	-0.951**		-0.467**	-0.930**		-0.490**	-0.956**	
	(0.037)	(0.041)		(0.036)	(0.039)		(0.034)	(0.044)	
Constant	0.120	0.707	1.628	-0.325	0.825	1.930**	-0.518	0.657	2.021**
	(0.569)	(0.507)	(1.057)	(0.564)	(0.495)	(0.980)	(0.567)	(0.522)	(0.989)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	436	436	436	442	442	442	442	442	442
Number of	44	44	44	44	44	44	43	43	43
Countries									
F Statistics			560.27			602.13			555.85

	1st stage	1st stage	(Lag 1)	1st stage	1st stage	(Lag 2)	1st stage	1st stage	(Lag 3)
Economic	(Rightist	(Leftist	Model 1	(Rightist	(Leftist	Model 2	(Rightist	(Leftist	Model 3
Freedom	Ideology)	Ideology)		Ideology)	Ideology)		Ideology)	Ideology)	
Rightist			0.505**			0.302			-0.050
Government									
			(0.183)			(0.158)			(0.172)
Leftist			0.176			-0.022			-0.479*
Government									
			(0.170)			(0.188)			(0.220)
Closeness of	0. 428**	0.928**		0.002	0.021		0.005	0.034	
Election									
	(0.087)	(0.045)		(0.062)	(0.054)		(0.055)	(0.052)	
CE years in office	-0.386**	-0.976**		-0.931**	-0.972**		-0.834**	-0.965**	
	(0.088)	(0.047)		(0.092)	(0.054)		(0.089)	(0.062)	
Constant	1.305**	-0.382	0.799	-0.616	0.374	1.282	0.537	-0.250	1.688
	(0.451)	(0.239)	(0.841)	(0.373)	(0.323)	(0.822)	(0.374)	(0.255)	(0.896)
Control variables	Yes	Yes		Yes	Yes		Yes	Yes	
Observations	171	171	171	168	168	168	164	164	164
Number of	29	29	29	29	29	29	30	30	30
Countries									
F Statistics			293.96			300.67			289.94

Appendix 4.17: Effect of Political Ideology on Economic Freedom – Hybrid Regime is the Sample

Note: **, * show significance levels of 1% and 5%, respectively.

Appendix 4.18: Effect of Political Ideology on our Outcome Variables from 2003 to 2019 – Hybrid Regime is the Sample

VARIABLES	1st stage	1st stage (Leftist	Growth	Inflation	Gini	Eco. Freedom
	(Rightist Ideology)	Ideology)	Model 1	Model 2	Model 3	Model 5
Rightist Government			-2.274	14.658*	-1.821*	-0.107
			(2.674)	(6.750)	(0.872)	(0.087)
Leftist Government			0.861	12.541*	-1.662*	-0.291**
			(2.576)	(5.760)	(0.826)	(0.087)
Closeness of Election	0.064	0.110*				
	(0.077)	(0.05)				
CE years in office	-0.683**	-0.886**				
	(0.095)	(0.063)				
Constant	2.348**	0.308	-2.596	58.782**	113.990***	4.586***
	(0.757)	(0.591)	(17.567)	(28.455)	(8.343)	(0.496)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	129	129	129	126	165	161
Number of Countries	21	21	21	19	24	24
F Statistics		122.10		142.26	140.89	109.46

	1st stage	1st stage	Growth	Inflation	Gini	Eco Freedom
VARIABLES	(Rightist Ideology)	(Leftist Ideology)	Model 1	Model 2	Model 3	Model 5
Rightist Government			-0.434	2.042	-1.913**	-0.126*
			(1.079)	(1.209)	(0.655)	(0.057)
Leftist Government			-0.836	0.806	-1.509*	-0.154**
			(1.047)	(1.121)	(0.631)	(0.057)
Closeness of Election	0.147**	0.006				
	(0.040)	(0.022)				
CE years in office	-0.881**	-0.988**				
	(0.057)	(0.031)				
Constant	2.311*	1.352*	18.152	7.427	101.256**	7.750**
	(0.992)	(0.542)	(15.891)	(19.255)	(9.873)	(0.405)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	313	313	313	220	186	352
Number of Countries	39	39	39	27	23	44
F Statistics		208.40		221.66	235.745	229.341

Appendix 4.19: Effect of Political Ideology on our Outcome Variables from 2003 to 2019 – Consolidated Democracies is the Sample

Note: **, * show significance levels of 1% and 5%, respectively.

Appendix 4.20: Effect of Political Ideology on our Outcome Variables – Dropping the First Category of Control Variables

VARIABLES	1st stage	1st stage	Pol	lity score 6 to) 10	Pol	ity Score 09 t	o 10
	(Rightist	(Leftist	Growth	Inflation	Economic	Growth	Inflation	Economic
	Ideology	Ideology)			Freedom			Freedom
			Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Rightist			-0.680	-0.339	-0.050	-0.267	0.267	0.090
Government								
			(0.715)	(1.309)	(0.099)	(0.773)	(0.851)	(0.096)
Leftist Government			-0.146	-0.937	-0.083	0.023	-0.122	0.056
			(0.699)	(1.271)	(0.099)	(0.765)	(0.847)	(0.098)
Closes of Election	0.087**	0.033						
	(0.024)	(0.020)						
CE in Office	-0.661**	-0.963**						
	(0.025)	(0.027)						
Constant	0.222	0.025	10.914**	57.142**	2.080**	-1.361	18.478*	2.815**
	(0.156)	(0.139)	(3.033)	(6.588)	(0.363)	(7.573)	(8.667)	(0.353)
Other Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Variables								
Observations	849	849	849	780	912	561	527	624
Number of	76	76	76	69	80	52	47	56
Countries								
F Statistics			699.12	689.99	412.47	532.39	536.84	333.14

VARIABLES	Polity score 6 to 10						Polity score 9 to 10				
-	1st stage	1st stage	Growth	Inflation	Inequalit	Economic	Growth	Inflation	Inequalit	Economic	
	(Rightist	(Leftist			У	Freedom			У	Freedom	
	Ideology	Ideology)	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	
Rightist			-0.180	1.698	-0.928	-0.104	0.139	1.718	-0.468	-0.085	
Government											
			(0.453)	(1.641)	(0.551)	(0.076)	(0.477)	(1.917)	(0.678)	(0.064)	
Leftist Government			0.043	0.794	-1.226*	-0.129	0.296	0.332	-0.446	-0.083	
			(0.471)	(1.569)	(0.519)	(0.079)	(0.483)	(1.859)	(0.635)	(0.068)	
Closes of Election	0.136**	0.142**									
	(0.025)	(0.027)									
CE in Office	-0.609**	-0.045**									
	(0.026)	(0.007)									
Constant	-0.057	0.440**	2.940	87.301**	62.193**	1.079**	-0.668	104.65**	49.44**	2.817**	
	(0.151)	(0.161)	(2.112)	(6.247)	(2.065)	(0.367)	(4.927)	(13.531)	(5.399)	(0.287)	
Other Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Variables											
Observations	1,246	1,246	1,246	1,005	934	799	930	681	499	650	
Number of	65	65	65	53	59	64	47	34	34	51	
Countries											
F Statistics			699.12	689.99	738.58	412.47	532.39	536.84	565.78	333.14	

Appendix 4.21: Effect of Political Ideology on our Outcome Variables – Dropping the Second Category of Control Variables

Appendix 4.22: Effect of Political Ideology on our Outcome Variables – Dropping all Control Variables

VARIABLES		Polity score 6 to 10					Polity score 9 to 10				
	1st stage	1st stage	Growth	Inflation	Inequality	Economic	Growth	Inflation	Inequality	Economic	
	(Rightist	(Leftist				Freedom				Freedom	
	Ideology	Ideology)	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	
Rightist			0.128	1.589	0.070	-0.234*	0.701	1.154	0.063	-0.084	
Government											
			(0.443)	(1.082)	(0.288)	(0.092)	(0.458)	(1.070)	(0.314)	(0.084)	
Leftist Government			0.034	1.058	-0.469	-0.254**	1.102*	0.480	-0.118	-0.167	
			(0.466)	(1.130)	(0.302)	(0.097)	(0.466)	(1.089)	(0.319)	(0.087)	
Closes of Election	0.159**	0.146**									
	(0.021)	(0.021)									
CE in Office	-0.339**	-0.051**									
	(0.015)	(0.007)									
Constant	-0.085**	0.165**	3.031**	6.349**	41.265**	7.397**	1.998**	5.404**	36.832**	7.535**	
	(0.018)	(0.018)	(0.396)	(0.960)	(0.257)	(0.083)	(0.402)	(0.935)	(0.276)	(0.074)	
Other Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Variables											
Observations	2,248	2,248	2,248	2,172	2,334	1,227	1,497	1,481	1,556	848	
Number of	93	93	93	87	94	85	63	60	64	60	
Countries											
F Statistics			699.12	689.99	738.58	412.47	532.39	536.84	565.78	333.14	

Chapter 5 : Concluding Remarks

This thesis sheds light on the various and mutual interactions between economic and political freedoms, tax and non-tax revenue, and, in turn, their impact on policies and economic development. The first two chapters aims to find whether the availability of government revenue - whether from internal sources such as taxation or from abroad such as remittances - can help prop up democracy and economic freedom. The former covers both developed and developing countries while the later only deals with developing countries. The results find that there are limits to their favourable impact, as the non-linear (inverted-U-shaped) effects of taxation and remittances demonstrate. Excessive taxation and excessive reliance on remittances can thus be counter-productive in terms of discouraging democracy and economic freedom. Moreover, the democracy, in turn, has a newly identified benefit in that even when ideological orientation of the government changes after elections, economic outcomes are affected little by this. This benefit, however, only accrues to consolidated democracies.

The thesis thus demonstrates the paramount importance of democracy and the roles played by some of its determinants. It shows that taxation and remittances are the strong determinants of both democracy and economic freedom if they are at the moderate level. Moreover, in consolidated democracies, economic outcomes matter more and the objective of policymaking is to achieve better outcomes rather than simply pursuing ideological narrative to please party loyalists. Therefore, democracies are considered as a best form of human political organization. As democracies develop, this political organization gets better in allocating economic resources efficiency without partisan biases.

Our research supports the literature (i.e., Ahmed 2012; Easterly and Easterly 2006; Beblawi 1987; Luciani 1994; Ross 2001), which argue that the income generated by the productive sectors within the economy plays a crucial role in shaping institutions rather than

solely relying on income from foreign markets such as remittances, foreign aid and natural resource revenue. Income derived from foreign markets may not necessarily benefit the domestic economy, and can even lead to negative effects. Therefore, we support the idea that developing the productive sectors of the economy through industrialization can drive modernization which can become a crucial factor in institutional development within developing countries (Inglehart, 2020).

For further research, we suggest to researchers who are focusing on migration to consider investigating the impact of remittances' dependency on sound economic policies, such as export competitiveness, fiscal and monetary policies, in recipient countries. There exists no research on it. We anticipate that this effect of remittances dependency will be negative, as we have previously argued that relying on remittances acts as a curse by limiting the market's productive capacity. Additionally, researchers could further explore the influence of remittances on value-added tax (VAT) or sales tax, as remittances tend to boost consumption. These research efforts could lead to new insights comprehending the influence of remittances and migration overall.

There exist some limitations of this research as well. In Chapter 2, it takes tax revenue as an independent variable to explore its effect on political and economic freedom. However, there exist different forms of tax, like direct (e.g., income tax) and indirect (e.g., VAT, taxes on imports). It is possible that they influence institutions differently. Our aim was to explore the net effect of taxation on political and economic freedom; therefore, we did not explore each component of taxation separately. Moreover, we could not find any strong reason to assume that direct taxes affect both freedoms differently than indirect taxes given the fact that both are costs to the citizens. For further research, a researcher might explore them separately to find something meaningful. Chapter 4 shows convergence in macroeconomic outcomes in consolidated democracies. A majority of OECD countries have consolidated democracies. This research raises the question: if partisan ideology does not matter in shaping economic policy outcomes, does it affect liberal institutions in particular? Does it cause populism of the far left and far right, if the mainstream leftist and rightist parties are no different in outcomes? Hence, we invite further research on it. After completing my PhD, I plan to continue exploring these questions as my research journey unfolds.

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