Chapter 1

Introduction

1.1 Introduction

The European sovereign debt crisis and the US fiscal cliff made one thing clear: many developed economies have been slack in controlling their public finances. At the time of writing, the US gross public debt level has surpassed 100% of GDP, while, according to the OECD, in Japan gross public debt exceeds 150% of GDP. Debt figures are no better in Europe. Several European Union (EU) countries do not meet the rules as set in the Stability and Growth Pact and have debt ratios above 60% of GDP and/or annual fiscal deficits exceeding 3% of GDP. These figures raise worries about the sustainability of public finances in the industrialized world. This has put economic reforms and fiscal adjustments on top of the policy agenda, especially in the EU.

In this thesis economic policy reforms are defined as a change in economic policy that results in a statistically significant impact on the targeted economic variable. Economic reforms may change ‘the rules of the game’ by changing the institutional framework in which optimising agents operate (North 1994). However, economic reform may also be the result of policy adjustments. It is not always straightforward to determine when a change in economic policy is a policy adjustment (i.e. a game played under constant rules), or when it can be characterised as an institutional change (i.e. a change of the rules of the game). A fiscal policy adjustment, for example, can result from a change in the budgetary institutions (e.g. the implementation of a balanced budget rule), but it can also result from adjustments to economic policy under an unchanging institutional setup. In this thesis, economic reforms and policy adjustments are both captured under the heading of ‘economic policy reforms’.

Dependent on the specific research question addressed, numerous definitions of economic policy reforms exist. Economic reforms identified using composite indexes, such as the Economic Freedom Index, are generally defined as a particular change (over a given period) of the index that exceeds some threshold (e.g. Dreher et al. 2009, Leibrecht and Pitlik 2015). Fiscal adjustments are generally defined as: a discretionary (i.e. cyclically adjusted) significant positive change in the general government’s financial balance (e.g. Alesina and Perotti 1995, Mierau et al. 2007, Tavarez 2005).1 As implied by varying definitions, the specific empirical identification method used to identify reform often relies on ‘ad hoc’ criteria lacking any notion

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1 Here significant does not refer to statistical significance.
of statistical significance. The aim of chapter 2 is to develop a more general methodology that overcomes some of the measurement issues concerning economic policy reform identification.

In addition to measurement, both the triggers and the consequences of economic policy reforms are the main topics of this thesis. There is a lack of empirical knowledge about the factors that drive economic policy reforms. And, apart from these triggers, little is known about the economic consequences of certain economic policy reforms.

Conventional wisdom and theory has it that economic crises trigger change. When pressure on public finances mounts, countries undertake economic policy reforms. Economic analysis that treats the government as a benevolent social planner is incomplete when it comes to understanding the occurrence of economic policy reform. The reason is that political and institutional factors restrain policymakers in implementing policies that would lead to optimal outcomes. A theoretical foundation that includes the constraints arising from heterogeneous political preferences and the institutional context therefore is warranted (Drazen 2000).

In practice, welfare enhancing economic policy reforms are often delayed. Based on neoclassical economic theory such sub-optimal ‘behaviour’ is hard to explain. Political economy models, however, prove helpful explaining delays and occurrences of economic policy reforms. There are models where political opponents engage in a so-called ‘war of attrition’. That is, governments postpone unpopular and controversial policies, even if they are optimal from a social welfare perspective, until the ‘political costs’ of reform have fallen below the ‘political benefits’ of postponing it (Alesina and Drazen 1991).

Related models focus on asymmetric information between voters and the incumbent government with respect to the expected economic outcome of reform. These studies, for example, show that if the government has private information about the expected outcome of a reform, only political actors who are unlikely to support reform ex ante can credibly signal to the electorate that reforms will be beneficial ex post (see Cukierman and Tommasi 1998). In contrast, partisan theory suggests that right- and left-wing parties implement policies in line with the preferences of their electorates instead of basing policy on a social welfare analysis (Hibbs 1977).

A second type of models stresses the role of ex-ante uncertainty about the economic outcome of reform in explaining delay (Dewatripont and Roland 1995; Fernandez and Rodrik 1991). Welfare enhancing reforms can be rationally delayed or blocked if there is ex ante

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2 Even though this view is ‘conventional wisdom’ (Drazen and Easterly 2001), there is only scant empirical evidence. Drazen (2000) provides an overview of the political economy models that lead to this prediction.

3 Chapter 2 deals with this crisis hypothesis.
uncertainty about the distribution of costs of the reform and no credible commitment is made to compensate the cost-bearing groups.

More recent research combines elements of different models. For example: a more ideologically fractionalised government may be a better reformer because the parties in government face high political costs if they reverse reforms agreed upon. When the reforming government consists of parties representing diverse constituencies the promise to compensate ex post reform losers becomes more credible, especially in high-trust societies (Leibrecht and Pitlik 2015). There is more political capital at stake as the government is likely to break down if constituencies represented in the government are not compensated, this signals credibility of the reform.

Another class of models are about electoral cycles. Self-interested politicians that care about re-election are unlikely to push for economic reforms that may harm re-election chances. The models in this area predict that governments cut taxes before elections, but, dependent on the assumptions made, some models predict that spending is raised pre-elections whereas others predict that (wasteful) spending is cut before elections (see Drazen 2000). This view is tested in chapter 2 and 3.

In sum, there is a large theoretical literature explaining the delay, occurrence and resilience of economic policy reforms. Persson and Tabellini (2000: 481) argue: “the gap between theory and evidence is a final weakness of the existing literature”. Commensurate empirical evidence has yet to materialise. Several empirical contributions have attempted to fill the gap (e.g. Leibrecht and Pitlik 2015, Potrafke 2009, Mierau et al. 2007, Tavarez 2005). However this literature builds on questionable measurement and identification of economic policy reform. By developing an improved identification methodology this thesis takes a step in filling this gap. The aim of chapters 2 and 3 is to test several of the theories mentioned above.

Fundamentally, governments need a political majority to carry out reforms or adjustment programs. Chapter 4 investigates how the ideological preferences of individual voters impact the political majority generated at elections.

The dominant hypothesis is that voters’ economic self-interests govern their choices (Downs 1957). However, in large-scale elections the economic benefit of voting becomes small, as the impact of individual voters on the election outcome is negligible. This implies voter participation rates that are close to zero, which is in stark contrast to reality. The Theory of Expressive Voting has been invoked to explain voter turnout at elections. But also to argue that expressive preferences can tip elections in favour of what a majority considers the moral/social optimum, rather than the economic self-interests of the majority (Feddersen et al. 2009, Tullock 1971). This argument is important because it is left unexplored how the
ideological preferences of voters impact their decisions in political elections. The ideological profile of a given reform may be particularly important if it appeals to expressive rather than economic preferences of a majority of voters.

By employing a laboratory experiment we analyse individuals’ choices in large elections by comparing it to situations where the individual is highly likely to impact the outcome of a collective decision. We test two hypotheses: 1) Whether ideological preferences make voters more likely to participate in elections. 2) Whether individuals are more likely to vote according to their ideological preference in large elections.

Fowler (2006) finds evidence that benevolent voters with a strong party affiliation are more likely to participate in large-scale elections. Yet there is not much evidence whether voters with an ideological preference are more likely to turn out compared to voters without a clear ideological preference. Feddersen et al. (2009) find evidence that voters are more likely to behave ‘moral’ in large scale-elections, where “moral” refers to a choice that distributes income equally while simultaneously maximising aggregate income. The non-moral/selfish choice maximises the individuals’ economic self-interest. We argue that such a situation is rare in democratic decisions. In a more realistic setting a certain reform choice has a trade-off in terms of societal consequences (e.g. redistribution versus higher aggregate income). There is lack of evidence whether choices of participating voters in large election depends on the individuals’ ideological/societal preference or strict economic self-interests. This is the topic of chapter 4.

Another central issue in the reform literature is the assessment of the economic consequences of reforms. Reforms often take place gradually; an important condition for reform progress is whether the reform outcome delivers what it is supposed to, before additional reforms steps are taken. Additionally, from a societal perspective it is important to evaluate the economic effects of reforms. The aim of chapter 5 is to evaluate whether healthcare financing privatisations curb aggregate healthcare expenditures.

In summary, the overarching research question of this thesis is: what causes economic policy reforms and what are the economic consequences of economic policy reforms? This research question is split into the following four sub-questions, which subsequently are addressed in chapter 2-5:

1. How can economic policy reforms be identified?
2. What drives economic policy reforms?
3. How does individuals’ voting behaviour impact the likelihood of economic reforms?
4. What are the economic consequences of economic policy reforms?
Chapter 2 of this thesis focuses on measurement. Without a proper identification methodology the causes and consequences of the investigated economic policy reforms cannot be assessed. Chapter 2 uses healthcare financing privatisations as illustration. Chapter 3 also uses (parts of) the proposed methodology to test central theories explaining fiscal adjustments. Chapter 4 relates to the primary research question by investigating how the preferences of individual voters tie to political choices. Chapter 5 uses the methodology proposed in chapter 2 to identify reforms in order to evaluate the consequences of healthcare financing privatisations. Chapter 6 provides an overview of the main findings of the research and discusses policy implications and limitations.

The following sub-sections provide an introduction to chapters 2-5 of this thesis.

1.2 Identifying economic policy reforms

A major reason for the lack of evidence on the economic impact of reforms is the difficulty to measure reform (Campos and Horváth 2012). Naturally, a similar logic applies to the factors that trigger or delay economic reforms. Chapter 2 aims to develop a methodology to identify economic reforms more precisely than previous methods.

Structural reforms can have elements of both ‘stroke-of-the-pen’ policies, i.e. the passing of a law with no measurable economic effect (Easterly 2006), and ‘rigid institutions’, i.e. an implemented reform only becomes visible after some time has passed (Acemoglu et al. 2006). Consequently, when measuring reforms, and especially their timing, the distinction between policy input and economic outcome is important. In several commonly used reform indexes this distinction is not made.\(^4\) Our proposed methodology utilises both policy input data and economic outcome data without mixing it.

More specifically, gradual changes in the financing of public activities often take place without any change in ownership. This is, for example, the case when health, education and law enforcement provision are outsourced to private companies, and/or when the financing of these sectors is privatised. Such reforms can be identified with appropriate data measuring the extent of public and private involvement in a given sector.\(^5\) This should be combined with *de jure* data on policy changes to validate whether (gradual) shifts are policy induced. By employing the Bai

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\(^4\) This holds true for the Economic Freedom of the World index of the Fraser institute and the Index of Economic Freedom of the Heritage foundation, for example. This makes it hard to evaluate outcomes of reforms if these are also used to score reform efforts (Rodrik 2005). Furthermore, Campos and Horvath (2012) show that the Economic Freedom of the World index is subject to changes without attendant changes in the underlying data. This means that the algorithm used to calculate the index has changed. There is lack of information about how this algorithm is constructed. Also, the index makes use of ill-defined reference points. To obtain the highest score a country must reach the level of a ‘well-functioning market economy’. This introduces subjectivity in the scores given to individual countries.

\(^5\) E.g. concerning provision of healthcare: the private share of total hospital beds. Concerning financing of healthcare: the private share of total expenditures.
and Perron (1998; 2003) endogenous structural break filter, statistically significant changes in the degree of privatisation can be identified. However, such changes can also come from factors unrelated to policy such as exogenous shifts in consumer preferences and/or prices. To overcome this problem, the identified structural changes need to be validated to ensure that they originate in policy and do not reflect some other factor. The employment of *de jure* data on reforms does exactly this. The development of this methodology is the main contribution of chapter 2.

The chapter applies the methodology to identify healthcare financing privatisations. The identified reforms are used to test several ‘usual suspects’ from the theoretical reform trigger/delay literature. This also sets the chapter apart from previous empirical work on the determinants of reform. In this literature reforms are commonly measured across sectors (e.g. Bortolotti and Pinotti 2008, Pitlik and Wirth 2003). This may not be appropriate since reforms of some sectors are more politically controversial than others. The proposed methodology makes it possible to test theories without assuming a common process of reform across sectors.

The first part of chapter 2 deals with the identification of structural reforms. The second part of chapter 2 examines the determinants of the identified privatisations. This is done to highlight the usefulness of the proposed methodology. First, the ‘usual suspects’ (that are believed to determine economic policy reforms) are discussed. Then, a binary outcome random effects logistic model is used to test these determinants. The chapter ends with a robustness analysis.

### 1.3 What drives successful fiscal adjustments?

The aim of this chapter is to re-assess the economic and political drivers of successful fiscal adjustments. The dominant view in this literature is that adjustments that are expenditure based are more likely to reduce public debt in the long-term than adjustments that are tax based (Alesina et al. 1998; 2012, Alesina and Ardagna 1998; 2010; 2013, Alesina and Perotti 1995).

There are, however, several reasons to doubt this finding. First, the findings on which this view is based are mostly built on simple comparisons of the average change in fiscal expenditures and revenues during successful and unsuccessful adjustments. Such an approach ignores factors that simultaneously are correlated with the probability that a successful fiscal adjustment occurs and the choice of expenditure cuts or tax increases during the adjustment. We apply conditional fixed-effects models to re-assess the evidence and explicitly take account of several control variables.

Second, the standard approach to identify fiscal adjustments relies on what can be characterised as ‘ad hoc’ filters. Instead of relying on a rigorous notion of statistical
significance, rough filters based on simple algorithms are designed to identify adjustments. Adjustments are generally defined as: *a discretionary (i.e. cyclically adjusted) significant positive change in the general government's financial balance.* The notion ‘significant’ in the definition does not refer to ‘statistical significance’, but rather to whatever the applied filter picks-up.⁶ These filters are based on a one-size-fits-all principle, as they do not take into account that the budgetary process in some countries may lead to a much more volatile budget balance than the budgetary process in other countries. A filter that does not take volatility into account is prone to identify fiscal adjustments that are the result of the budgetary institutions in place, rather than a deliberate attempt of politicians to improve the budget balance. As such, empirical analyses that have used these ad hoc filters may suffer from severe measurement error. Therefore, in this chapter, different versions of the Bai and Perron (1998; 2003) endogenous structural break filter are used to identify the start of fiscal adjustments.

Third, most previous studies have ignored potentially important political-economy determinants of successful fiscal adjustments. These determinants are included in the empirical models that are estimated in this chapter. To that end, this chapter relies on our own update of the World Bank Database of Political Institutions measuring political characteristics in 21 OECD countries from 1975 to present. To investigate the robustness of our results different filters to identify fiscal adjustments and alternative definitions of what constitutes a successful fiscal adjustment are applied.

### 1.4 Expressive voting and political ideology

The aim of this chapter is to test the micro-behaviour of voters in large-scale elections. This ties to the basic condition for reform in developed democracies: A political majority is needed to induce economic reform.

Little is known about the importance of ideological considerations relative to pure economic self-interests of individual voters. The Theory of Economic Voting stresses that voters predominantly care about economic considerations when voting, while non-selfish concerns, i.e., how does the election affect others, matter less. However, in large-scale elections the individuals’ vote is unlikely to affect which candidate, party or government is chosen. When the probability that an individuals’ vote will impact the final outcome is very low, the discounted expected benefit of voting also becomes very low. If the discounted benefit is lower than the cost of voting, the economic voting model predicts that the individual will abstain from

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⁶ For example, an improvement of the budget balance by at least 0.25% points in the first year, a minimum duration of 2 years and a total improvement of the budget balance by at least 2% points. This is a so-called ‘gradual adjustment’.
participation. However, this result is inconsistent with turnout rates observed in real elections (Levine and Palfrey 2007). This is the so-called Paradox of Voting (Downs 1957).

A common solution to the paradox is based on the argument put forward by Tullock (1971). He argues that voters behave uncharitable/selfish in situations where they are likely to determine the outcome, but may behave charitable in situations where they are unlikely to determine the outcome. This argument is based on theories of ‘internal dissonance reduction’, ‘warm-glow’ or ‘identity confirmation’

The “charity of the uncharitable” argument has two important implications for how ideology may impact the political majority generated in elections. Firstly, voters who can identify themselves ideologically with a political candidate, party or outcome may be more likely to turn out and vote in large-scale elections. The reason is that expressive ideological preferences are independent of pivotal probability. Secondly, the actual choice of participating voters may shift from self-interested (instrumental) behaviour to expressive behaviour when the electorate grows large.

Even though highly relevant for contemporary politics, the evidence concerning the second implication has not been linked to political ideology. We provide this link by tracing out the instrumental and expressive incentives of voters. In particular, we focus on the impact of the size of the electorate. To that end, we develop a decision-theoretic model.

Our model is embedded in the Public Choice literature on voter turnout (e.g. Feddersen et al. 2009, Levine and Palfrey 2007). In our model, voters have to make two binary decisions. First, they have to decide whether to participate in the election by paying a fixed voting cost. Second, participating voters have to decide option to vote for. In our setup: option 1 is a stylised version of socialism, whereas option 2 is a stylised version of capitalism. At the same time voters face individual monetary incentives that may be in conflict with the outcome they prefer ideologically. The main predictions of the model are: 1) that non-centre voters (voters with a socialist/left or capitalist/right ideological preference) are more likely to participate as the electorate grows large and 2) expressive ideological preferences are determining their preferred outcome choice. We test the predictions of the model in a laboratory experiment with 90 subjects. A (separate) survey on the ideological preference of the subjects is used to measure ideology. Computer simulated voters are introduced in the experiment to increase the size of the electorate such that it is comparable to the size of large-scale elections. A Heckman selection model used to analyse the data from the experiment.

7 Fowler (2006) presents evidence supporting this hypothesis.
8 Feddersen et al. (2009) presents evidence supporting this hypothesis.
1.5 Do healthcare financing privatisations curb total healthcare expenditures?

The aim of this chapter is to evaluate whether more private healthcare financing curbs total Health Care Expenditures (HCE). Healthcare reforms, hereunder healthcare financing privatisations, have long been proposed as a tool to contain the rising healthcare expenditures in advanced economies (OECD 1987, OECD 1992, Oxley and Macfarlan 1995). However, there is a gap in the knowledge about the effects of these reforms. Several studies have tried to disentangle the consequences of healthcare privatisations, both in terms of quality, equality and costs (Colombo and Tapay 2004, Saltman and Figueras 1998, Tuohy et al. 2004). One common characteristic of these studies is their reliance on case study evidence, which is largely descriptive and does not investigate causal relations rigorously. This research has not been able to establish whether healthcare financing privatisations deliver efficiency increases or cost savings.

A large literature investigates the determinants of HCE. These studies generally use a ‘determinants approach’, where HCE is regressed on variables thought to affect it. This literature cannot answer whether decreases in the share of publicly financed HCE curb total spending, since the common econometric approach suffers from simultaneity and possibly spurious regression relationships (De Mateo and De Mateo 1998, Hansen and King 1996). Some studies look at whether the share of publicly financed HCE impacts total HCE. Leu (1986) finds that a larger public share is associated with higher total spending on health care. To the contrary, Hitris and Posnett (1992) find no effect of the publicly financed share of HCE on total spending.

Theoretically, more private healthcare financing improves efficiency. That is, if healthcare is largely publicly financed, consumers are not cost conscious as they have incentives to demand more than the optimum level of health care. Similarly, healthcare providers have incentives to accommodate demand. Consequently, if payment for healthcare shifts from public to private ‘pockets’, all else being equal, demand reduces to more optimal levels and total HCE will decrease.

However, the privatisation literature suggests that privatisations often happen as a consequence of ‘special interest politics’ instead of pure efficiency reasons. For example, right wing market-oriented governments privatise healthcare financing to reduce the re-distributional effects of a public tax financed system. If this rationale is behind privatisations (rather than an economic welfare analysis), then it is far from clear that privatisations deliver efficiency gains (see Cavaliere and Scabrosetti 2008). In sum, it has not been established whether healthcare financing privatisations curb total healthcare expenditures.
This chapter takes a quantitative approach to analyse the consequences of healthcare financing privatisations. It sets the analysis apart from previous work, which suffers from the absence of a methodology that can identify reforms consistently across countries over time. Ideally, costs should not be considered in isolation from quality and equality in healthcare. In order to assess efficiency data on the overall level of quality and equality of health(care) in countries are needed. Such data is unavailable at the time of writing. It is however possible to assess cost effects of healthcare financing privatisations. Such analysis is the main contribution of this chapter.

The methodology to identify reforms developed in chapter 2 is used to identify healthcare financing privatisations. In turn, Propensity Score Matching (PSM) is used to evaluate the effect of those reforms. PSM has become a standard and effective way to assess the effect of policy interventions in the absence of experimental data (Person et al. 2001). Using part of the results of chapter 2, common causes for reform are included in the model to predict the propensity scores. In addition, sector specific variables are included in the analysis. To probe the robustness of the results, several matching techniques are used to compare the outcome of the analysed privatisations with (an) appropriate counterfactual(s).