

DISS. ETH NO. 27487

Essays on lending by the International Monetary Fund

A thesis submitted to attain the degree of
DOCTOR OF SCIENCES of ETH ZURICH
(Dr. sc. ETH Zurich)

presented by

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2021

To Lorenz

Acknowledgements

First and foremost, I would like to thank my supervisor Professor Jan-Egbert Sturm for giving me the opportunity to write this thesis, and for supporting and advising me during the whole time. I am also very grateful to my co-supervisor Professor James R. Vreeland for his constructive comments and for his support in the different phases of this project, in particular during my time at Georgetown University in Washington D.C. I am also very thankful of my colleagues at work for their support during the time. I am grateful for the constant support and encouragement from family and friends. But most importantly, I want to thank Lorenz for his unwavering support and faith in me, and Jakob, for being my sunshine.

Zurich, February 2021

Lena Lee Andresen

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Abstract

This dissertation is a collection of four essays on lending by the International Monetary Fund (IMF).

The first chapter proposes a conceptual model of the IMF lending process. There is ample anecdotal evidence that vested interests of major powers, such as geopolitics, influence how the IMF lends to countries. However, the empirical findings on this are mixed. I argue that this is due to the difficulty of choosing a good dependent variable in an opaque lending process. To remedy this, I propose a conceptual model of the IMF lending process. The model allows detecting entry points for influence of vested interests of the IMF's major shareholders, such as geopolitical interests. To test the real-life relevance of the model, I apply its insights to two case studies of long-term IMF program countries, Pakistan and Uruguay, which I consider extreme cases along the spectrum of being subject to US geopolitical interests.

The second chapter offers an empirical analysis of the influence of geopolitical interests in IMF lending using conceptually based dependent variables. Based on the conceptual model of the IMF lending process and descriptive evidence on Pakistan and Uruguay, I derive nine dependent variables. Using a panel data set of 189 countries for 1993-2007, I measure the impact of geopolitical interests on IMF lending on these dependent variables. To measure geopolitical interest, I focus on temporary membership in the United Nations Security Council (UNSC). I find that a dependent variable with a significant link to geopolitical interests is the bias in forecasting a country's fiscal balance. I find mixed validity for variables measuring bias in forecasting GDP, the size of IMF programs, the scope of conditions, and for poorer countries also the signing of IMF programs.

In the third chapter, I analyze how the influence of financial corporations on IMF lending has changed with the global financial crisis of 2007-2008. Using a yearly panel data set of 189 countries from 1993 to 2016, I find that with the crisis, the importance of the interests of financial corporations in IMF lending decisions has risen. A reason is that major IMF shareholders protect the exposure of their banks, which increased strongly in the years before the crisis. To impress global financial markets, they influence program design towards more money and more conditions. This serves to keep the program country's market access and avoid default. While financial corporate interests are linked to larger IMF programs for all countries, a positive link to more conditions is only found for

countries for which market access matters. For low-income countries with limited market access, IMF staff's technocratic interest in limited conditionality dominates.

The fourth chapter (co-authored with Jan-Egbert Sturm) concerns the effect of geopolitics on the short-term financial market reaction to IMF program approvals. Geopolitical interests seem to reduce the catalytic effect of IMF programs on capital flows, which may render IMF programs less effective. Using a monthly panel data set for IMF member countries for 1993-2019, we find that if geopolitics are involved, the approval of a new IMF program increases risk aversion of financial market participants. To measure geopolitical interest, we focus on IMF program approvals for temporary members of the UNSC. We find that when receiving an IMF program, UNSC temporary members face increased yields of bonds and bills, depreciating exchange rates, and lower stock prices. This indicates that investors sell the country's financial assets. We do not observe such a negative investor reaction for IMF program approvals for non-UNSC temporary members.

Zusammenfassung

Diese Dissertation besteht aus vier Forschungsarbeiten zu der Programmvergabe des Internationalen Währungsfonds (IWF).

Im ersten Kapitel stelle ich ein konzeptuelles Modell für den Programmvergabeprozess des IWF vor. Es gibt viele Anhaltspunkte dafür, dass spezielle Interessen von Grossmächten, zum Beispiel im Kontext der Geopolitik der USA, einen Einfluss auf die Programmvergabe des IWF haben. Die empirischen Ergebnisse in dieser Hinsicht sind jedoch eher durchmischt. Ich argumentiere, dass dies durch die Schwierigkeit bedingt ist, eine gute abhängige Variable zu finden. Um dies zu verbessern, erarbeite ich ein konzeptuelles Modell des Programmvergabeprozesses des IWF. Das Modell ermöglicht, die Einflusskanäle spezieller Interessen der grössten Anteilseigner des IWF zu erkennen. Um die praktische Relevanz des Modells zu testen, wende ich es auf zwei Fallstudien von IWF-Programmländern, Pakistan und Uruguay, an. Diese zwei Länder erachte ich als Extrembeispiele auf dem Spektrum geopolitischer Interessen der USA.

Das zweite Kapitel widmet sich der empirischen Analyse des Einflusses geopolitischer Interessen auf den Programmvergabeprozess des IWF unter Verwendung von konzeptbasierten abhängigen Variablen. Basierend auf dem konzeptuellen Modell des Programmvergabeprozesses des IWF sowie deskriptiver Evidenz für Pakistan und Uruguay identifiziere ich neun abhängige Variablen. Anhand eines Paneldatensatzes mit 189 Ländern im Zeitraum 1993-2007 messe ich den Einfluss geopolitischer Interessen auf die Programmvergabe des IWF. Für die Messung geopolitischer Interessen nutze ich die temporäre Mitgliedschaft im Sicherheitsrat der Vereinten Nationen. Ich zeige auf, dass die Verzerrung in der Prognose der Fiskalsituation eine abhängige Variable mit signifikantem Bezug zu geopolitischen Interessen darstellt. Gemischte Aussagekraft finde ich für Variablen, welche Verzerrungen in der Wachstumsprognose, die Programmgrösse, den Umfang der Konditionalität, sowie bei ärmeren Ländern die Unterzeichnung von IWF-Programmen messen.

Im dritten Kapitel untersuche ich, wie sich der Einfluss von Interessen von Finanzunternehmen auf die Programmvergabe des IWF mit der globalen Finanzkrise von 2007-2008 verändert hat. Anhand eines Paneldatensatzes mit 189 Ländern im Zeitraum 1993-2016 zeige ich auf, dass sich der Einfluss von Finanzunternehmensinteressen mit der Krise verstärkt hat. Grund dafür ist, dass die grossen Anteilseigner des IWF die Finanzunternehmen in ihren Ländern beschützen, deren grenzüberschreitende Risiken vor der

Krise stark zugenommen haben. Um die globalen Finanzmärkte zu beeindrucken, beeinflussen die grossen Anteilseigner des IWF die Programmvergabe hin zu mehr Konditionen und grösseren Kreditsummen. Damit wird erreicht, dass die Programmländer den Zugang zu internationalen Kapitalmärkten behalten und einen Staatsbankrott vermeiden. Während ein Zusammenhang zwischen Finanzunternehmensinteressen und grösseren Kreditsummen für alle Länder besteht, so findet sich ein Zusammenhang mit mehr Konditionen nur für Länder, für die der Kapitalmarktzugang von Relevanz ist. Für ärmere Länder mit eingeschränktem Kapitalmarktzugang dominiert das technokratische Interesse der IWF-Mitarbeiter, die Konditionalität zu limitieren.

Das vierte Kapitel (verfasst mit Jan-Egbert Sturm) behandelt den Effekt geopolitischer Interessen auf die kurzfristige Finanzmarktreaktion auf IWF-Programmzusagen. Geopolitische Interessen scheinen den katalytischen Effekt von IWF-Programmen auf Kapitalflüsse zu reduzieren, was die Effektivität der Programme verringern könnte. Anhand eines monatsbasierten Paneldatensatzes für IWF-Mitgliedsländer im Zeitraum 1993-2019 zeigen wir, dass IWF-Programmzusagen die Risikoaversion von Finanzmarktteilnehmern erhöhen wenn geopolitische Interessen eine Rolle spielen. Für die Messung geopolitischer Interessen nutzen wir die temporäre Mitgliedschaft im Sicherheitsrat der Vereinten Nationen. Die Resultate zeigen auf, dass temporäre Mitglieder nach Programmzusagen mit höheren Zinsen für kurz- und langfristige Staatsanleihen, Wechselkursabwertungen, und tieferen Aktienkursen konfrontiert sind. Dies ist ein Anzeichen dafür, dass Investoren die Finanzwerte des Programmlandes verkaufen. Für Nichtmitglieder des Sicherheitsrates zeigt sich bei IWF-Programmzusagen keine solche negative Finanzmarktreaktion.

Introduction

Since the global financial crisis (GFC) of 2007-2008, the International Monetary Fund (IMF) has been back at the center of attention. Just before the crisis hit the world economy in 2007, it was debated whether the era of “great moderation” had made the IMF and its “raison-d’être” – safeguarding the stability of the international monetary system – obsolete (Frankel, 2007). It turned out differently. Since the crisis, the IMF has undertaken some of the largest programs of its history. Among them is the widely debated rescue program for the embattled Greek economy of 2010, which the IMF undertook together with the European Union.

The increased public visibility of such programs brought back the long-standing criticism that IMF lending is not only driven by economic considerations, as laid out in the IMF Article of Agreements, but also by vested interests of the IMF’s most powerful member states. For example, the aim of the program for Greece of 2010 appeared to be not primarily to stabilize the Greek economy, but to protect heavily exposed European and US financial institutions (Catan & Talley, 2013).

If political considerations dominate IMF lending, this questions the IMF’s ability to fulfil its task of ensuring global macroeconomic stability. Adding to this, the more “political” IMF lending decisions appear to be, the less credible the economic reforms laid out in IMF programs are. This could negatively affect the signaling effect of IMF lending to a country for financial markets.

Already before the GFC, in particular in the context of the debt crisis in the 1980s and the large IMF programs in the late 1990s, it was argued that IMF lending was influenced by political interests, and in particular by the US. Bird (1996) and Knight and Santaella (1997) give an overview of earlier research on the subject. Sturm et al. (2005) as well as Moser and Sturm (2011) review the literature since the mid-1990s. Dreher et al. (2015) add to research by providing detailed insights of the influences on US geopolitical interests on IMF program design. Chapman et al. (2015) shed light on the role of geopolitics in the IMF catalytic effect. Copelovitch (2010) and Breen (2014) offer valuable insights on the political economy consideration in the IMF lending process.

This dissertation combines four essays on vested interests in IMF lending, with a focus on the years since the GFC. In my first chapter, I propose a conceptual model of the IMF lending process, which is in this form novel in the literature. Despite ample anecdotal evidence, the statistical significance of variables measuring vested interests in IMF lending

is often contradicting. Adding to this, there appears to be little consensus on suitable dependent variables for IMF lending decisions, which shows that there is room for improving our understanding of the IMF lending process in general. The conceptual model I propose allows detecting entry points for influence of vested interests of the IMF's major shareholders, such as geopolitical interests. To test the real-life relevance of the model, I apply its insights to two case studies of long-term IMF program countries, Pakistan and Uruguay. I consider these two countries as extreme cases along the spectrum of being subject to US geopolitical interests. I choose Pakistan as the "political" case given ample anecdotal evidence for US geopolitical interests in the country, particularly in context of the US "war on terror", and Uruguay as the "non-political" case given the absence of such evidence. Based on the combined insights of the conceptual model and the case studies, I propose a number of promising dependent variables for future research. These are measures of bias in program forecasts, program outcome, and program size. Variables on forecast bias and program outcome have not yet been analyzed in the context of influences in IMF lending.

In my second chapter, I build on the conceptual model and the case studies on Pakistan and Uruguay and provide an empirical analysis of nine conceptually based dependent variables. I focus on the relatively homogenous time after the cold war and before the GFC, which includes the "great moderation" before the crisis. Using a panel data set of 189 countries for 1993-2007, I measure the impact of US geopolitical interests on IMF lending on these dependent variables. I use ordinary least squares (OLS) for all regressions for transparency and comparability, and add conditional logit and Poisson regressions depending on the variable characteristics. To measure geopolitical interest, I use information on temporary membership in the United Nations Security Council (UNSC). Temporary UNSC membership makes a country exposed to US geopolitical interest, as the US can incentivize the country to vote in line with the US on the Security Council. This variable has the advantage to be quasi-random, and hence addresses the potential endogeneity issues of other variables used in earlier research. I find that a dependent variable with a significant link to geopolitical interests is the bias in forecasting a country's fiscal balance. Validity is mixed for variables measuring bias in forecasting GDP, the size of programs, the scope of conditions, and for poorer countries also the signing of programs. The main contribution of this chapter is the combination of conceptually based variables and empirical analysis. In addition, some of the investigated dependent variables are new, such as the implementation ratio and variables measuring bias in the forecasts of GDP and fiscal balance.

In the third chapter, I shed light on the influence of financial corporations on IMF lending, which has received much attention in the anecdotal evidence of cases like the IMF

program for Greece in 2010. Specifically, I analyze how the influence of financial corporations on IMF lending has changed with the GFC. I investigate a yearly panel data set of 189 countries from 1993 to 2016, applying OLS and Poisson methods. I find that with the crisis, the importance of the interests of financial corporations in IMF lending decisions has risen, as major IMF shareholders protect the exposure of their banks, which increased strongly in the years before the crisis. To impress global financial markets, they influence program design towards more money and more conditions. This serves to maintain the program country's market access and avoid default. While financial corporate interests are linked to larger IMF programs for all countries, a positive link to more conditions is only found for countries for which market access matters. For low-income countries (LICs) with limited market access, IMF staff's technocratic interest in limited conditionality dominates. I add to earlier research by investigating whether the GFC constitutes a structural change in how financial corporations influence IMF lending. In addition, given that access to financial markets does not matter to all countries to the same extent, I differentiate between richer and poorer countries.

The fourth chapter is co-authored with Jan-Egbert Sturm. In this chapter, we analyze how vested interests influence the catalytic effect of IMF lending. Specifically, we investigate the effect of US geopolitical interests in a country on the short-term financial market reaction to IMF program approvals. Using OLS, we analyze the effect of a new IMF program while being temporary member of the UNSC on four different financial market variables: sovereign bond yields, yields of short-term government bills, domestic stock prices, and exchange rate movements against the US dollar. To measure geopolitical interest, we focus on program approvals for temporary members of the UNSC. We find that if geopolitics are involved, the approval of a new IMF program increases risk aversion of financial market participants. We find that when receiving an IMF program, UNSC temporary members face increased yields of bonds and bills, depreciating exchange rates, and lower stock prices. This indicates that investors sell the country's financial assets. Such a negative investor reaction is not observed for IMF program approvals for non-UNSC temporary members. We add to the existing literature by analyzing the role of geopolitics on the IMF catalytic effect using temporary membership in the UNSC, which addresses the endogeneity issues of other variables used in this context. We further add to earlier research by using monthly data, which allows a more much more precise, albeit short-term, study of the reaction of financial markets. We further extend the literature by enlarging the variables measuring the financial market reaction to include not only bonds, but also short-term bills, stock prices, and exchange rates.

Overall, I find that with the GFC, the importance of vested interests in IMF lending has by no means diminished. However, the crisis has underlined that not only geopolitical

interests matter, but also other forms of major power interests, such as financial sector interests. Finally, to understand what drives the decision-making in a highly opaque decision making process and within changing policy trends, I find that it is key to aim for an in-depth understanding of the subtle mechanisms and complex political economy processes that are at the center of the interplay of the interests of major powers, financial markets, and international institutions.

1 A conceptual model of the IMF lending process

1.1 Introduction

The large IMF programs in context of the GFC brought back the long-standing criticism that IMF lending is not only driven by economic considerations, as laid out in the IMF Article of Agreements, but also by vested interests of the IMF's most powerful member states. Already before the GFC, in particular in the context of the debt crisis in the 1980s and the large IMF programs in the late 1990s, it was argued that IMF lending was influenced by vested interests of major powers, in particular by US geopolitical interests.

This relates to the more general question on whether political interests in official financial flows lead to inferior outcomes. In this context, Dreher et al. (2014) find that politically motivated aid is insignificant or even harmful to growth (p. 32). If political considerations dominated IMF lending, this questions the IMF's ability to fulfil its task of ensuring global macroeconomic stability. It also reduces the credibility of reform efforts under IMF programs.

Many empirical studies have since analyzed the factors influencing IMF lending. Sturm et al. (2005) and Moser and Sturm (2011) give a good overview of empirical studies on the subject. However, despite the anecdotal evidence, the significance of political variables in empirical studies on the subject is contradicting and often low (Dreher et al., 2015). Adding to this, there appears to be little consensus on suitable dependent variables for IMF lending decisions. Hence, there is room for improving our understanding of the IMF lending process in general.

I argue that a reason for the mixed empirical evidence for vested interests in IMF lending is the lack of conceptual backing of the dependent variables used in the models. To remedy this, I propose a conceptual model of the IMF lending process, which is novel in the literature. Based on theoretical considerations by Copelovitch (2010) and Breen (2014), the model allows detecting entry points for influence of vested interests of the IMF's major shareholders, such as US geopolitical interests. This allows finding conceptually based dependent variables for future research on factors that influence IMF lending decisions. I test the real-life relevance of the model by applying its insights to two case studies of long-term IMF program countries, Pakistan and Uruguay, over the period of

1993 to 2013. I consider these as critical cases along the spectrum of being subject to US geopolitical interests, with Pakistan being the “political” case and Uruguay the “non-political” case of IMF lending.

The main finding is that conceptually valid dependent variables for future research on IMF lending are measures of the change of program forecasts, program outcome, and program size. Variables on forecast bias and program outcome have not yet been analyzed in the context of influences in IMF lending. I find mixed validity for variables measuring the signing of an IMF program, its implementation, and the number of prior actions in a program. Low conceptual validity is found for variables measuring conditionality. While the channel of influence on conditionality is conceptually appealing, the available indicators on the number and scope of conditions have a low validity based on the case studies and suffer from important data issues. Low validity is also found for variables measuring the use of IMF credit and the length of the program approval process.

The remainder of this chapter is organized as follows. Section 1.2 provides a review of recent literature on the topic. Section 1.3 offers theoretical considerations on the dependent variable problem and on modelling a process. Section 1.4 proposes a conceptual model of the IMF lending process based on the official IMF information and political economy considerations. In Section 1.5, I apply the model’s insights to two case studies of long-term IMF program countries, Pakistan and Uruguay. Section 1.6 presents the combined insights from the conceptual model and the case studies. The last Section concludes.

1.2 Literature review

There is a large amount of literature since the 1990s on factors influencing IMF lending decisions. Bird (1996) and Knight and Santaella (1997) give an overview of earlier research on the subject. Sturm et al. (2005) provide a review of research since the mid-1990s. They find a lack of clarity on the variables determining IMF involvement and contradicting evidence on the influence of political factors in IMF lending. They test which of the various political and economic variables used in earlier research are robust determinants for IMF lending decisions (pp. 178-179). They find that the majority of political variables suggested in earlier research are not significantly related to the two dependent variables on signing an IMF arrangement and use of IMF credit. In particular, while political factors such as changes in the program country's government have an influence on the signing of an IMF arrangement, the use of IMF credit appears to be primarily related to economic factors (pp. 194-195).

Dreher et al. (2009) investigate the relation of temporary UNSC membership and IMF programs. Temporary members of the UNSC may be ready to trade their UNSC votes to the US for better accessibility of IMF loans, which they value higher than their UNSC voting power. UNSC voting behavior thus appears to be a good measure for US geopolitical interests. They find a robust positive relationship between UNSC membership and IMF program participation, as well as evidence that UNSC membership reduces conditionality in IMF programs. (pp. 752-753). Dreher and Vreeland (2011) further find that voting in line or against the US in the UNSC is related to the likelihood of signing of an IMF arrangement in a given year and IMF loans size (p. 19).

Moser and Sturm (2011) update and extend the work by Sturm et al. (2005) find that a number of non-economic variables are robustly related to the dependent variables. These are the existence of a history of IMF programs in the country prior to the current program, domestic elections around the program start, how autocratic a country is, the country's level of international reserves, real economic growth rates, and currency crises. However, they do not find a robust positive link between IMF lending and geopolitical interest variables such as UNSC membership and US trade relations.

Presbitero and Zazzaro (2012) analyze a newer set of IMF lending decisions during the GFC, using data from January 2008 to June 2010. They find that political similarity with the G7 has a positive effect on the probability of signing an IMF program in a given year.

Breen (2014) finds that observed variation in conditionality in a dataset of 87 IMF programs from 1997 to 2006 is influenced by economic exposure of a group of the major IMF shareholders, the G5 countries, which are the US, the UK, France, Germany, and Japan. Economic factors however are poor predictors of variation in conditionality. Breen argues that the G5 cooperate to reduce conditionality in an IMF program when their banks and exporters are exposed to the requesting country and would risk loss in the event of IMF payout suspension due to not meeting the imposed conditions. The dependent variable Breen uses is the number of binding conditions.

Dreher et al (2015) add to the studies by Dreher et al. (2009) as well as Dreher and Vreeland (2011) by analyzing the effect of temporary membership in the UNSC on IMF conditionality. They use dependent variables on the conditionality included in IMF programs, the number of conditions, and the scope of conditions, i.e., in which area of the economy the conditions apply. They find that UNSC members face about 30% less conditions per program. Regarding the scope of conditions, they find that UNSC temporary membership is linked to fewer conditions in crucial areas of the economy, such as debt repayment, balance of payments, credit to the government, and domestic pricing.

1.3 Theoretical considerations

1.3.1 The dependent variable problem

Past research on political influences in IMF lending decisions has focused on the independent variables, and, to a lesser extent, on the choice of the econometric model. Many of the various dependent variables chosen in past research on the subject, such as the use of IMF credit by a country in a given year, or the number of conditions in a program, may be appealing due to their numeric simplicity and data availability. However, the conceptual backing of these dependent variables is often lacking.

I argue that a cause for the conflicting results on the influence of political factors on IMF lending decisions, despite ample anecdotic evidence, might be the choice of the dependent variable. It is common that research centers on the independent variables. As Cohen (1995) writes, it is often the case that the dependent variable is treated as given, or simply beyond doubt. Green-Pedersen (2007), who analyses the dependent variable problem in the study of welfare state retrenchment¹, argues that the dependent variable problem is a problem of theoretical conceptualization. Only when it is clear what to measure it can be discussed what data fits best (p. 13).

Finding dependent variables that are good representations of IMF lending decisions requires an in-depth understanding of the mechanisms and political economy aspects of the IMF lending process. Following Green-Pedersen (2007), it needs to be clarified which steps in the lending process actually constitute a decision, which may or may not be influenced by the independent variables to be tested (pp. 3-4). Then, channels need to be identified through which the supposed political interests can influence decisions, and it needs to be analyzed how these channels can be best measured. This should allow detecting dependent variables to measure political influences in the IMF lending process, which are based on a conceptual understanding of the subject of study.

1.3.2 Thoughts on modelling a process

There appears to be no attempt in the literature to design a conceptual model of the IMF lending process that allows discerning channels of influence of vested interests. The few studies that model aspects of IMF lending use static economic equilibrium models.² To shed light on the design of a conceptual model of the IMF lending process, it is thus useful

¹ The dependent variable problem is further addressed in the areas of climate change (Dupuis & Biesbroek, 2013), marital quality (Norton, 1983), and in the study of policy change (Howlett & Cashore, 2007).

² For example, see Drazen (2002), Joyce (2003), and Corsetti et al. (2003).

to review the notion and requirements of conceptual models in general and of process models in particular.

Designing a conceptual model

While the notion of conceptual modelling is not clearly defined, useful insights into the design of conceptual models can be found in the computer simulation literature, such as in Robinson et al. (2010). They define a conceptual model as an appropriate simplification of a real system, which allows a better understanding of the problem question. A conceptual model is independent of a possible next step, such as a model that can be “simulated”, or a model that can be tested with empirical data. The scope and the level of detail of the model define the content of the conceptual model. While deciding on the model content, assumptions about real world aspects that are uncertain or based on belief are introduced, and simplifications are incorporated to improve understanding (p. 12).

The design of a conceptual model should balance simplicity with accuracy. A key requirement for a conceptual model is to keep the model as simple as possible. Simplicity allows easier interpretation and understanding. With rising simplicity, however, the amount of assumptions in the model increases, reducing the model’s relation to the real-life problem. At the same time, a conceptual model should be as accurate as necessary. However, with rising accuracy, the complexity of the model increases, reducing at some point its intelligibility (Robinson et al., 2010, pp. 20-21).

The stages of conceptual modelling can be summarized as a collection of information on the real-life problem, an identification of entities and processes to be represented, and the identification of the relations between entities and processes. The design of a conceptual model is ideally an iterative process through evolutionary development, in which the model is “fed” with new information from the real-life problem (Robinson et al., 2010, pp. 22-24).

Modelling a process

Within the public policy literature, three broad types of models exist as a potential basis for a process model. These are the systems model of political processes as proposed by Easton, the stages model of public policy processes, and the decision tree.³

Among these, the simple stages model of a public policy process appears to be a good point of departure for the IMF lending process. While very simple, showing the process in stages over continuous time allows to identify and depict channels of influence at various stages of the decision making process. The lack of a time dimension or sequentiality

³ See Birkland (2014, pp. 26-27).

excludes Easton's systems model. A decision tree model also does not appear appropriate for the IMF lending process, as it focuses on a sequence of active decisions with separate consequences, while my model focuses more on the influences of vested interests during a largely pre-set and often partially automatic process. However, a decision tree model allows capturing the political economy aspects related to the IMF lending process.

1.4 A conceptual model of the IMF lending process

Based on the insights from the theory on conceptual modelling, the problem question for the conceptual model of the IMF lending process is: What are the channels of influence of vested interests in the IMF lending process? The scope of the conceptual model is the IMF lending process of a single program for a single country, from the actual or potential economic need for a funding to the final disbursement and the decision about a follow-up program, as this is often based on the prior program's performance. Given the complexity of the IMF lending process, the level of detail will be reduced as much as possible to ensure the model's understandability.

I will start with a staggered process model based on the official information provided by the IMF Articles of Agreement and related official documents of the IMF, and add layers and channels of influence based on information derived from theoretical considerations based on the political economy literature, and from real-life information derived from case studies.

1.4.1 Modelling the official IMF lending process

A simple model of IMF lending

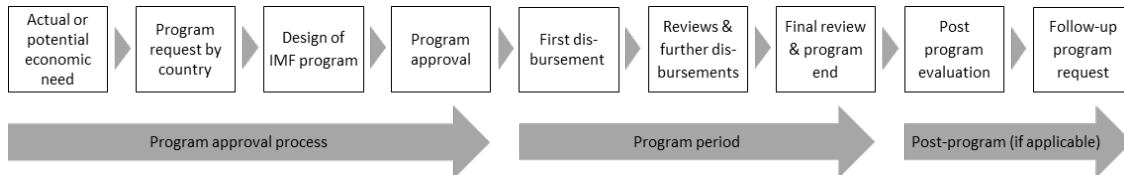
The Articles of Agreement of the IMF clearly define what should drive IMF lending decisions. According to Article I, Section V, the aim of IMF lending is "To give confidence to members by making the general resources of the Fund temporarily available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity" (IMF, 2011).

Therefore, economic factors should be the exclusive driver of IMF lending decisions. The demand for IMF loans should be based on the existence of economic difficulties such as balance of payment problems. The IMF should provide loans with the goal to correct these economic difficulties. Balance of payments difficulties can also be of potential nature, in which case a country can ask for a precautionary program. This gives the country the

right to draw on IMF resources without further scrutiny in case the economic need materializes in the future (IMF, 2007, p. 21).

Figure 1.1 offers a simplified visualization of the IMF lending process based on official IMF information (IMF, 2020c). The model depicts a simple staggered process model.

Figure 1.1: A simple model of the official IMF lending process



Note: Based on IMF (2020c).

The IMF lending process begins with the member country’s economic need for funds, which leads to a request for an IMF program. With this, the program design phase starts. A first step are discussions between country authorities and IMF staff on program modalities and the economic policy program. Program modalities refer to program size, lending vehicle, program length, and number of payout tranches.

The economic policy program describes the scope of envisaged policies and the conditionality attached to it, which allows the monitoring of program implementation. Generally, the IMF sees itself as merely “supporting” the program. The IMF states, “it is understood that the economic program is entirely that of the country”, which is in view of the IMF crucial to ensure ownership of the program (IMF, 2007, pp. 22-23). Nevertheless, the IMF monitors the program implementation by setting conditions, or reform goals, that have to be met before each payout of the program’s instalments. This implementation is checked in the program reviews.

According to the IMF, conditionality “[helps] countries solve balance of payments problems without resorting to measures that are harmful to national or international prosperity”. Conditionality also ensures safeguarding IMF resources, as it ensures that the country's balance of payments will be strong enough to permit it to repay the loan. All conditionality must be “macro-critical” – that is, either critical to the achievement of macroeconomic program goals or necessary for the implementation of specific provisions under the IMF's Articles of Agreement (IMF, 2020b). This makes clear that the sole aim of conditionality is to ensure that the above-cited Article I, section v, is fulfilled.

The program discussions result in an official program request by the country in the form of a Letter of Intent (LOI), which is often accompanied by a more detailed Memorandum on Economic and Financial Policies and a Technical Memorandum of Understanding. According to the IMF, these documents are prepared by the country authorities, in “cooperation with” and “assisted by” IMF staff. These documents are

accompanied by a report by IMF staff. This report describes the economic projections on which the program is based, as well as the timeline for the monitoring of program implementation (IMF, 2007, pp. 22-23).

The next step is the approval of the program by the Executive Board, which is based on the staff report. The Executive Board decision is based on whether the member's country is consistent with IMF provisions, which request the member country's commitment to carry out the policies "that will solve the BOP problems" (IMF, 2007, p. 23). The approval is not automatic, but quasi expected. Cases of rejections of program requests are rare and are often caused by very particular circumstances, such as arrears to the IMF or legal issues of fundamental nature. Such cases are usually detected and rejected by IMF staff prior to presentation to the Executive Board.

After program approval by the Executive Board, the program implementation phase begins (IMF, 2020c). The first payout takes place immediately after program approval. The subsequent disbursements take place after program reviews, during which the continued implementation of performance criteria is verified and approved by the Executive Board (IMF, 2007, p. 21).

For the program review, IMF staff prepares a report and assesses past program implementation. The goal of the review is to make sure that conditions for the next purchase or disburse are met, and to make sure that the program generally remains on track. If however one or more performance criteria is not met, the country authorities can request a waiver for non-observance of a performance criterion. It is up to the Executive Board to grant a waiver, if it assesses that overall program performance continues to be satisfying, and that the program continues to be on track. This is usually the case if the Executive Board considers that the non-observance is minor or temporary, or if authorities have undertaken corrective measures (IMF, 2007, p. 23).

The evolution of IMF lending practice over time

While the official description of the IMF lending suggests a straightforward process, this is hardly the case in reality. The effective practice of IMF lending process and the related lending design has evolved considerably over the last decades. This evolution highlights the role of IMF policy trends, which have an important impact on variation over time in the IMF lending process.

Programs per year and program size

While the number of IMF programs per year has hovered between 10 and 30 since the 1950s, the average size per IMF program has varied strongly over the last decades and has increased massively in the last years. While the size of an average loan in 1953 was about

SDR 28 million, this amount increased strongly in the late 1990s, temporarily peaking in 2002 at above SDR 2000 million. Thereafter, the average loan size decreased again to the level of the late 1950s. Between 2008 and 2012, the average yearly loan size rose to above SDR 3000 million, and to above SDR 15000 million for the fiscal year 2013. (IMF, 2002; IMF, 2011; IMF 2012b; IMF, 2013).

Lending vehicles

The variety and complexity of IMF lending vehicles has evolved considerably from the basic modalities that are described in the IMF Articles of Agreement, reflecting changing IMF policy trends. In the first decades of the IMF, the Stand-By Arrangement (SBA) was the only lending vehicle, and it continues to be a main lending vehicle until today. The SBA is aimed at resolving short-term balance of payment needs, over a period of one to two years. It is often of precautionary nature.

From the 1970s on, the number of lending vehicles has increased dramatically, with frequently changing names and modalities. This led to an increase in complexity of IMF lending vehicles. In 1974, a second facility was added to the SBA, the still existing Extended Fund Facility (EFF). Compared to the short-term SBA, the EFF allows a period of up to three years to deal with more extensive economic difficulties requiring more fundamental economic reforms. Exclusively precautionary vehicles aimed at crisis prevention were also introduced. In 2010, these were revamped into the Precautionary and Liquidity Line (PLL) and the Flexible Credit Line (FCL). Both vehicles are only accessible for countries with strong fundamentals. The PLL has less conditionality and higher access levels than the SBA. The FCL goes a step further, as it has no conditionality and no pre-set access limit (IMF, 2014, p. 45). Finally, fast access to lending is also available in emergency or conflict, with limited conditionality.

In the mid-1970s, the IMF introduced concessional lending for LICs, which implies lower interest rates compared to regular programs. Concessional loans were at first disbursed through the Trust Fund, then through the Structural Adjustment Facility. From 1987, concessional lending was channeled through the Enhanced Structural Adjustment Facility Trust, which was renamed Poverty Reduction and Growth Facility Trust in 1999, and as Poverty Reduction and Growth Facility and Exogenous Shocks Facility Trust in 2006. In 2010, this became the Poverty Reduction and Growth Trust (PRGT), which remains the key source for the IMF's concessional lending.

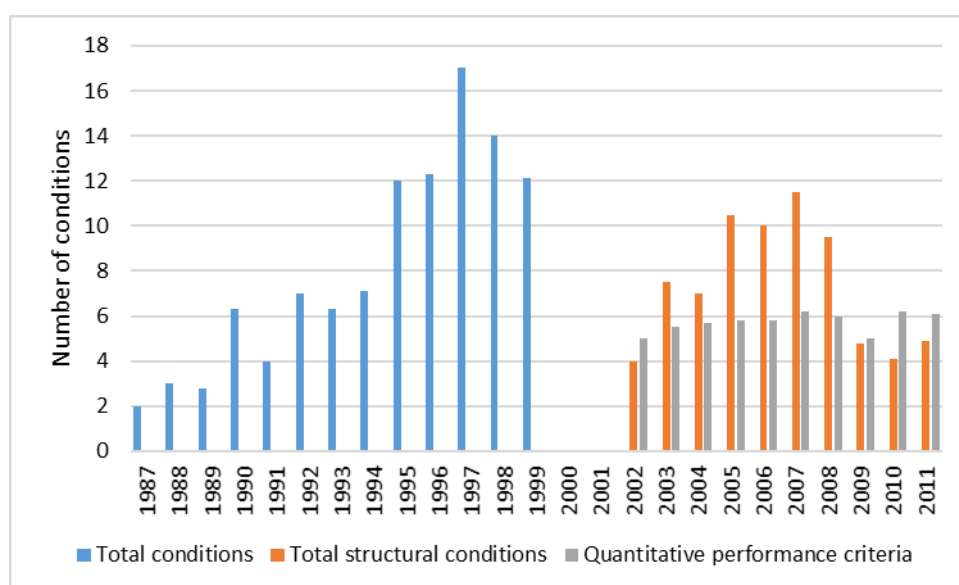
The concessional vehicles were redesigned as the Standby Credit Facility for short-term balance of payment needs, the Rapid Credit Facility for emergency assistance with limited conditionality, such as in case of natural disasters or conflict, and the main

concessional tool for protracted balance of payment needs, the Extended Credit Facility (IMF, 2014, p. 45).

Conditionality

The conditionality attached to IMF programs has varied greatly over time (see Figure 1.2). Since its introduction in the 1950s, the number of conditions and the scope of conditionality have repeatedly been a major source of debate in the Executive Board. While generally accepted as necessary to ensure some sort of program discipline, the Executive Board has repeatedly tried to reign in “proliferating” conditionality. Thus, the evolution of program conditionality is strongly influenced by changing policy trends in the IMF.

Figure 1.2: Evolution of the number of conditions in IMF programs over time



Note: The figure shows the average number of conditions per program and per year from 1987-2011. 1987-1999: Average of total number of conditions per program. 2002-2011: Average number of conditions per review. Source: IMF (2001b, p.10), IMF (2012a, p. 27).

In the first years of the IMF, lending was still influenced by the original idea of Keynes, who – against the ideas of the Americans – favored “automatic” lending in case of balance of payment need (Boughton, 2006, p. 14). Hence, the earliest IMF programs were not subject to conditionality in the later sense.

The Executive Board adopted the principle of conditionality in 1952. The idea behind this was, somewhat counterintuitively, to revive IMF lending. At that time, IMF lending had practically come to a standstill as the US, de facto the only source of resources, had become increasingly reluctant to lend without any rules attached. Nevertheless, conditionality remained liberal until the 1970s. Up to a certain amount, the so-called gold tranche, there were no rules. Beyond this amount, increased justification was needed relative to the size of drawing (Dell, 1981, pp. 10-13). The absence of binding conditionality

in the early decades implies that it is not possible to effectively measure program implementation in this time.

Despite the initially liberal approach, the introduction of conditionality gave rise to the problem of unequal treatment of members, and thus the suspicion of vested interests beyond economic need.⁴ In the 1960s, the increased use of conditionality in IMF programs led to the perception that limits and targets were proliferating. Thus, in 1968, the Executive Board decided to limit conditionality for a first time, and focus on those performance criteria deemed essential for evaluating program implementation (Dell, 1981, pp. 10-12).

In the late 1970s, the IMF again came under pressure to liberalize its conditionality, mainly from developing countries. In 1979, this resulted in the adoption of a set of guidelines on conditionality. Largely reiterating the decision of 1968, these called for a limitation of performance criteria on essential policy issues, and for taking into account the domestic social and political objectives of the member, as well as the specific circumstances and causes for balance of payment problems (Dell, 1981, pp. 26-27).

During the 1980s, the perception grew that IMF programs focused too narrowly on demand reduction, and with this endangered economic growth. In addition, it was argued that the heavily indebted countries in the 1980s did not face liquidity but structural issues, which were increasingly considered relevant for the macroeconomic objectives of the IMF. The addition of new structural facilities in the 1980s, as well as the accession of 22 before centrally planned economies in the 1990s, which almost all received IMF programs, added to the increase of the overall number of structural performance criteria, prior actions, and benchmarks in IMF programs (IMF, 2001b, pp. 8-17).

In 2001, more than two decades after the last review of conditionality, another major effort was undertaken to reform conditionality. Based on the finding that conditionality had once again proliferated, efforts were made in the following years to streamline conditionality. The number of conditions did however not decrease as a consequence.

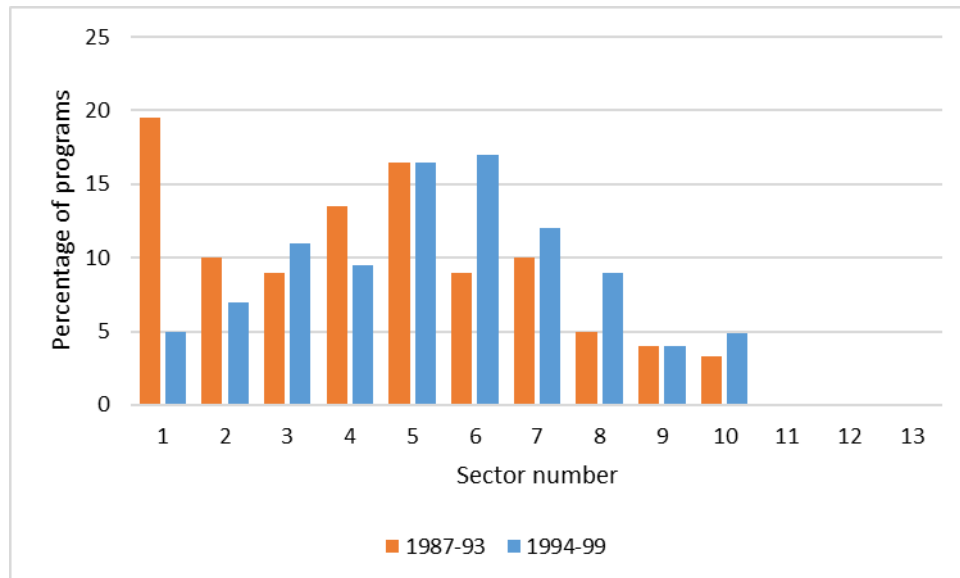
In context of the GFC, conditionality was again reformulated. Structural performance criteria were discontinued in 2010, with a shift to an approach based on reviews to monitor structural reforms. The aim was to increase flexibility of conditionality framework, allow for a conditionality adapted to country characteristics, and reduce the stigma of structural performance criteria and their associated waivers (IMF, 2012b, p. 7).

Until the early 1980s, conditions generally focused on fiscal reforms and the exchange rate (IMF, 2020b). In course of the 1980s, in context of the debt crisis and the related severe structural issues in many developing countries asking for IMF support, the scope of

⁴ The SBA for the UK in 1967 led to a big debate among IMF member countries. The program allowed very high access to funding, but had very little conditionality attached to it. Particularly the developing countries were unhappy with the program and the unequal treatment of requesting countries. See Dell (1981, p. 13).

conditionality broadened significantly (see Figure 1.3). The most marked change was a shift away from measures focusing on the exchange rate system, and a somewhat softer shift towards privatization reforms and financial sector policies (IMF, 2001b, pp. 21-24).

Figure 1.3: Evolution of the scope of conditionality over time, 1987-1999



Note: The figure shows the percentage of programs with conditions in a specific sector of the economy. The sector numbers are: 1: exchange system; 2: trade regime; 3: capital account; 4: pricing and marketing; 5: public enterprises, reform and restructuring; 6: privatization; 7: general government tax and expenditure reform; 8: social security system; 9: social safety net; 10: financial sector, 11: agricultural sector; 12: labor market; 13: economic statistics. Source: IMF (2001b, p. 22).

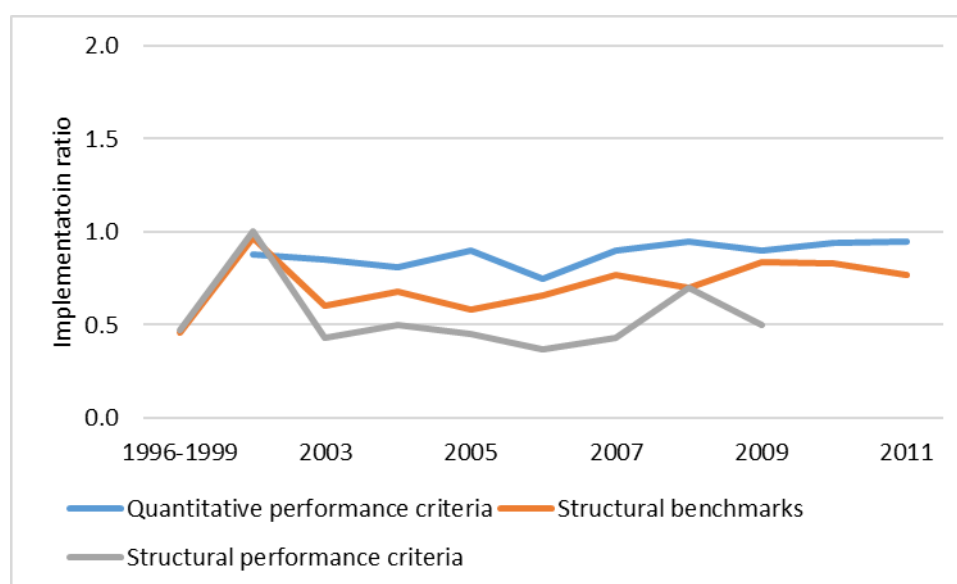
As a consequence of the major review of conditionality in 2001, efforts were made in the following years to refocus conditionality on critical areas of the economy. The scope of conditions was refocused on macroeconomic stabilization and financial systemic issues (IMF, 2012b, p. 7).

In context of the reformulation of conditionality during the GFC, efforts were undertaken to once again stope the proliferation of reform areas and to refocus conditions on the IMF’s core areas of expertise. Fiscal measures once again became the focus (IMF, 2012a, pp. 9-17).

As conditionality itself, the implementation of program conditions has been a long-standing issue. The comparison of program implementation over time is complicated by the fact that the names and definitions of the various forms of conditions have changed over time. According to the IMF’s approach, the implementation ratio is based on a weighted average of assessed conditions. For this, the value of two is assigned to for fully met conditions, the value of one for conditions that were partially met or met with delay, and a zero for conditions that were not met or waived (IMF, 2001b).

Overall, program implementation has never been overwhelming and varied strongly over time, as Figure 1.4 shows. The overall implementation ratio has hovered in the last decades at about 0.6, with substantial variation over time. The implementation of structural performance criteria was particularly low and volatile, before their abolishment in context of the GFC.

Figure 1.4: Evolution of the implementation of conditionality over time, 1996-2011



Notes: The implementation ratio is based on the IMF approach, and is an indicator between 0 and 2. This is based on a weighted average of assessed conditions: 2 for fully met conditions, 1 for partially met and met with delay, 0: not met or waive. This excludes prior actions. 1996-1999: Average of 24 program countries. 2002-2011: non-concessional programs only. Source: IMF (2001b, p. 71; p. 87), IMF (2012a, p. 47).

1.4.2 Political economy considerations in IMF lending

Political influences in the IMF lending process

Despite the fact that the lending process of the IMF is clearly laid out in the official IMF documents, the effective process is far from clear. Most strikingly, it is well established that the IMF Executive Board almost never votes on IMF issues, but usually just accepts proposals unanimously.⁵ The decision-making process on IMF lending thus takes place elsewhere. The rather obscure inner workings of the IMF decision making process, and hence ultimately the question of who effectively rules IMF decisions, have given rise to several strings of interpretation from a political economy perspective.⁶

According to Breen (2014), it has become consensus among political economy scholars that the IMF decision-making process is not as straightforward as the official IMF

⁵ See, for example, Sterne (2013).

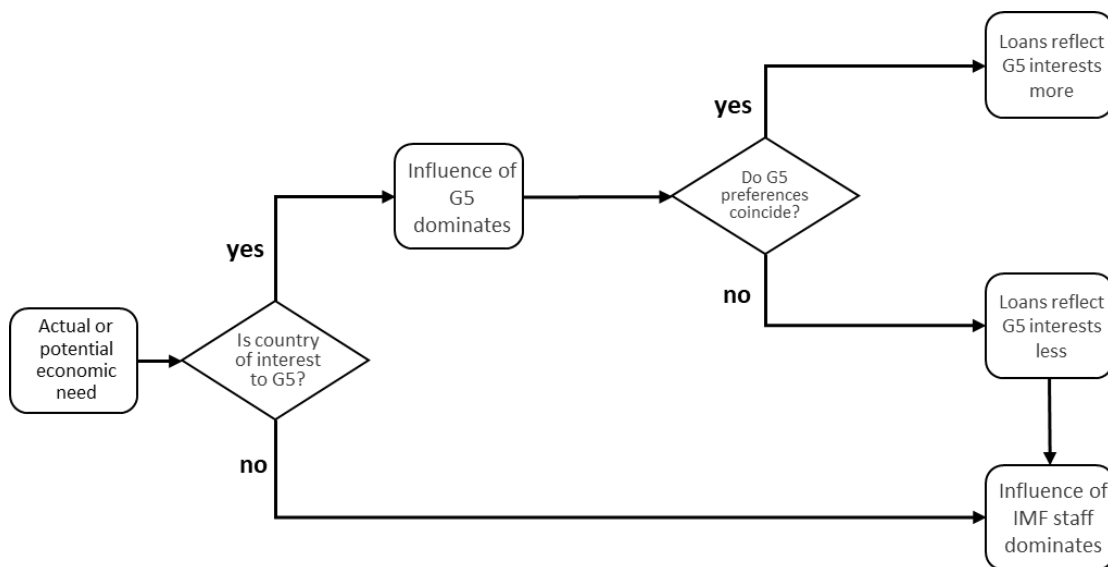
⁶ For an overview of recent literature on these competing views, see Breen (2014).

procedures might suggest. However, views diverge on who controls the decision-making power and how this influences the decision-making process. Breen finds that there are two contradicting views in the literature. The first view is that all power is held by the member countries. This can be the group of the major IMF shareholders, the G5. It can also be, more commonly, only the US, which has a de facto veto power on IMF decisions. The second view is that the IMF staff and its bureaucracy dominate all decision-making in the IMF (pp. 13-14).

I base my view of the IMF lending process on a common agency theory of IMF policy making as proposed by Copelovitch (2010). He finds empirical support for a common agency in IMF lending, and shows that in cases where aggregate G5 interests are weaker, IMF loans tend to be influenced by bureaucratic and technocratic interests of IMF staff (p. 69). The common agency theory of the IMF lending process combines the two views described above, assuming that both the IMF member states and IMF staff have partial but incomplete authority over IMF lending. Figure 1.5 gives a visualization of the decision-making process in the IMF based on the common agency theory.

According to Copelovitch (2010) and further developed by Breen (2014), the G5 de facto control the IMF Executive Board and act collectively as the political principal. Based on their combined voting power, these countries exercise de facto control over the IMF Executive Board. Preference heterogeneity among the G5 is a key determinant of variation in IMF loan size and conditionality. If G5 interests coincide or if they engage in logrolling, the G5 considerably influence IMF loan design. However, conflicting G5 interests, or lack thereof, creates scope for IMF staff to exploit "agency slack" and increase its autonomy (Copelovitch, pp. 49-50).

Figure 1.5: Decision-making tree in the IMF lending process



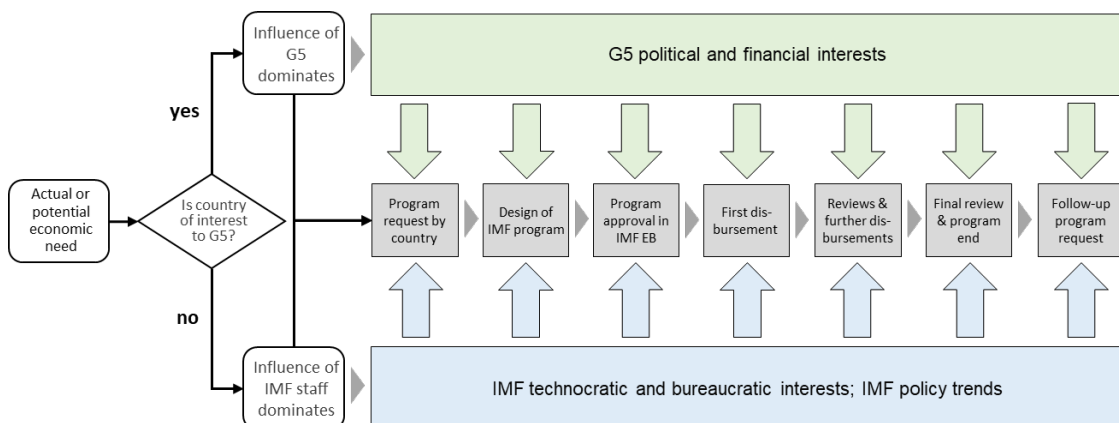
Notes: Based on Copelovitch (2010). The G5 are the major IMF shareholders.

I assume that in a given lending process, if the G5 have strong vested interests in a country, they will influence the program design and lending process. If a major IMF shareholder has intense interests in a particular country, for example if the country is of geopolitical importance to it or if its domestic banks are strongly exposed to it, the G5 engage in logrolling (Breen, 2014). The G5 countries will cooperate to support the interests of the G5 state with the most intense interests, hoping for similar treatment when it is their turn in the future. Thus, the G5 countries engage in strategic interaction among them (Copelovitch, 2010, p. 58).

If the interests of the major IMF shareholders are less intense in a particular country, then IMF staff has more influence on the IMF lending process and design. In this case, the technocratic interests and bureaucratic incentives of IMF staff dominate. The assumption is that IMF staff are trained economists, which strive to achieve the official IMF lending goal of ensuring macroeconomic stability (Copelovitch, 2010, p. 57). Hence, if IMF staff interests dominate, IMF staff designs loans based on country-specific macroeconomic indicators that determine the country's financing needs. IMF staff will further base conditionality on the amount of policy adjustment they deem is needed to ensure long-term debt sustainability, following the formal aim of IMF lending as laid out in the Articles of Agreement (see above).

Overall, the empirical record of this technocratic view, supporting that key economic variables should determine IMF lending, is mixed. This supports the idea that technocratic interests of IMF staff play a role in some cases, but not always. Bureaucratic incentives imply that IMF staff favors larger loans with more conditionality, as this gives the IMF a larger role (Copelovitch, 2010, pp. 53-54).

Figure 1.6: The IMF lending process enriched with political economy considerations



Notes: The starting point of the IMF lending process is the actual or potential need of a country for IMF funds, which results into a decision tree at the left of the chart. This results in the grey flow chart in the middle, which depicts the official IMF lending process. The green and blue boxes and arrows depict the influence political economy considerations. Green arrows channel interests by the major IMF shareholders, the G5, and blue arrows the interests and policy trends by the IMF.

Figure 1.6 shows the next intermediary step towards a full IMF lending process model. This is a reduced version of the staggered model of the official IMF lending process, enriched with the described political economy considerations. The starting point of the model is, once again, the actual or potential economic need of a country for IMF loans, without which no country will recur to the IMF given the political costs that are attached to IMF loans due to the conditionality.

This results in the grey flow chart in the middle, which depicts the official IMF lending process. The green and blue boxes and arrows depict the influence political economy considerations. Green arrows channel interests by the major IMF shareholders, the G5, and blue arrows channel technocratic and bureaucratic interests by IMF staff, as well as IMF policy trends.

If a country is of interest to the IMF's major shareholders, simplified as the G5, influence of the G5 will dominate the entire IMF lending process, which will begin with the program request by the country until the final program review and a possible follow-up program request. If however the country is of no specific relevance to the G5, then the influence of IMF staff will dominate. In that case, IMF staff interests and policy trends dominate the entire IMF lending process.

Channels of influence in the IMF lending process

In the model depicted in Figure 1.6, it is assumed that vested interests influence each step of the lending process. This is arguably not the case in reality. Hence, to reach the full conceptual model of the IMF lending process, the final question is how, and at what stage, these interests could influence the IMF lending process. For this, I propose a number of channels of influence, following Dreher et al. (2014, p. 7).

For each established channel of influence, be it based on past research or a new proposal, I analyze if the channel is referring to a step in the process that can be influenced. For each proposed channel of influence, I suggest corresponding variables to measure the suggested influence. These variables could function as dependent variables for the IMF lending process in future research. Similarly, I attribute dependent variables used in past research to the channel of influence they are supposed to measure. Table 1.4 gives an overview of the channels of influence and possible candidates for dependent variables.

Program request phase: Channel of probability

The first step in the process, the program request by the country, is mostly the consequence of actual or potential economic need. In past research, the most widely used dependent variables for IMF lending decisions are measures of the use of IMF credit and the signing of an IMF program. Both can be attributed to this step.

Table 1.1: Channels of influence and related dependent variables

Channel of influence		Dependent variable
Channel	Effectiveness	
Probability	Mixed	Use of IMF resources
		Signing of IMF program
Conditionality	High	Number of conditions
		Scope of conditions
Forecasts	High	Change of forecast in program proposal compared to first review
Program size	High	IMF program size
Length of approval process	Low	Time span between Letter of Intent and Executive Board approval
Implementation	High	Implementation ratio
Follow-up program despite low implementation	High	Program outcome indicator
Prior actions	High	Number of prior actions

The widespread use of these variables is arguably based on data availability. From a conceptual perspective, dependent variables relating to the timing of a program are based on the idea that political interests somehow lead to an IMF program, or make it more likely, or are related to the precise timing of an IMF program. Major powers could signal to the government of the country in question that they would render a program less costly, as the size of the program might be higher while its conditionality might be softer. This could increase the probability of a country to request an IMF program. Hence, it is possible that this step is subject to a channel of influence, which I label the channel of probability.

However, the variable on the use of IMF credit nevertheless has conceptual issues. Data on the use of IMF credit is easily accessible as a calculated value from the World Bank. This yearly variable denotes IMF drawings per country beyond the country's reserve tranche position. It includes purchases and drawings under concessional and non-concessional programs, as well as SDR allocations (World Bank, 2013). This indicator thus pools IMF program data by mixing concessional and non-concessional loans. According to Moser and Sturm (2011), this pooling is problematic, as their determinants can vary substantially (p. 3). Adding to this, Sturm et al. (2005) explain the lack of impact of political variables on the dependent variable use of IMF credit with the fact that disbursement decisions are usually based on economic factors (p. 194).

A second widely used dependent variable that relates to the probability of an IMF program measures the signing of an IMF arrangement in a given year for a country. Sturm et al. (2005) find support for the idea that political economic considerations, such as elections around the time of signing of a program, matter for the probability of signing an IMF program. However, they find no evidence for an impact of vested interests of the major IMF shareholders, such as geopolitical considerations (p. 194). Moser and Sturm (2011) confirm these findings (p. 17).

In conclusion, the validity of this channel of influence on the probability of an IMF program is mixed, depending on the variable used to measure this channel.

Program design phase: Channel of program size

The next step in the process is the program design phase, which is clearly subject to influence. Based on political economy considerations, the effective decision-making process on IMF lending takes place before an IMF program request is approved in the Executive Board. As Copelovitch (2010) suggests, an IMF loan request is prepared by IMF staff "in the shadow" of a potential vote by the Executive Board. During the design phase, IMF staff constantly takes the interests of the major shareholders. This results in the program proposal in a staff report, which is then subject to approval by the Executive Board (p. 57).

There are several possible channels of influence on the program design phase. A first channel concerns the program size. Data on this is available on the IMF website for all countries, and from 1993 on in the IMF Monitoring of Fund Arrangements (MONA) database. This variable has been widely used in past research, for example in Oatley and Yackee (2004), Moser and Sturm (2011), and Dreher and Vreeland (2011).

The use of this variable supposes that vested interests can influence the size of an IMF program, which should be based on a country's quota and its economic need. Oatley and Yackee (2004) find that IMF loan size is influenced by the amount of debt the country owes to US Banks, corresponding to US financial interests (p. 41). There is also anecdotal evidence that some of the very large IMF programs in context of the European debt crisis were subject to vested interests by major powers. Very high access levels are also mentioned in context of non-economic considerations in the 2011 review of conditionality (IMF, 2012b). At the same time, as described above in the evolution of IMF program design, the size of IMF programs has increased over time, and it has varied substantially in the past decades as a consequence of IMF bureaucratic interests and policy trends.

Overall, the program size appears to be an effective channel of influence of the IMF program design phase, but it is subject to influence both from major shareholders and from

IMF staff interests. The case studies should give more insight on the link between vested interests and program size.

Program design phase: Channel of forecasts

Another channel of influence in the program design phase relates to the economic forecasts on which the program is based, and which are presented to the Executive Board in the staff report for program approval. Vested interests in a country may influence the forecasts in the program proposal, leading to overly optimistic forecasts that make program approval easier to pass in the Executive Board – or in the discussions beforehand.

Bias in IMF forecasts has been analyzed in the context of surveillance, for example in Dreher et al. (2008). The 2014 report of the IMF's Independent Evaluation Office (IEO) on IMF forecasts analyses statistical bias in IMF program forecasts in detail. The report finds that while forecast bias varies with the IMF lending vehicle, statistically significant biases exist for short-term GDP growth and for inflation, which tends to be forecasts lower than out-turns. Pessimistic bias is significant for the fiscal balance, which leaves more room for maneuver to the governments. It is also found that the biases are particularly present at program start and tend to fade out within one year after program onset. Forecasts are often reduced or reversed at the first program review (Independent Evaluation Office of the International Monetary Fund [IEO], 2014, p. 42).

The link between bias in forecasts and political motives in IMF lending has not yet been researched. It might thus be interesting to construct a dependent variable that measures by the discrepancy in forecasts in program proposals as compared to the first program review. The underlying variables could be short-term GDP growth, inflation, fiscal balances, and possibly other relevant indicators such as foreign investment and general government debt. Data on forecasts can be derived from the IMF MONA database.

Program design phase: Channel of conditionality

A third channel of influence in the program design phase is related to conditionality. The conditionality of an IMF program can be considered as the costs for a country that arise from asking for a loan from the IMF. If a major shareholder of the IMF has vested interests in a country, it may influence the program design to reduce the conditionality attached to it. Political interests in a country receiving IMF programs could undermine the credibility of program conditionality (Dreher et al., 2015, p. 7). Also, as described above in the evolution of IMF conditionality, the conditions attached to IMF loans have also varied greatly over time with varying IMF policy trends.

Various studies on IMF lending and vested interests tried to capture a possible impact on program conditionality by counting the number of conditions in a given program (Dreher et al., 2015). The MONA database has greatly simplified access to great amounts

of data on conditionality from the 1990s on. While earlier studies counted all conditions in a program, newer studies such as Breen (2014) and Dreher et al. (2015) count only binding conditions, such as performance criteria and prior actions, and leave out softer conditions such as indicative targets and structural benchmarks.

Breen (2014) finds clear evidence that the exposure of the G5 to the country through finance and trade links affects the number of binding conditions in IMF programs. Dreher et al. (2015) find that geopolitical interests influence the number of conditions, as temporary UNSC membership leads to fewer prior actions and performance criteria in a given program, but the link is weak.

However, from a conceptual point of view, simply counting conditions is problematic. In the 2011 review of conditionality by the IMF, it is argued that counting performance criteria is not useful, as the number of conditions has changed over time as a consequence of IMF policy adaptation. More insights on the validity of the dependent variable number of conditions can be expected from the case studies.

Another dependent variable related to measuring the impact of vested interests on program conditionality is the scope of conditionality. This variable was proposed in several newer studies, such as Stone (2008) and Dreher et al. (2015), probably related to the improved data availability provided by the IMF MONA database.

This variable is based on the idea that another way to reduce the burden of conditionality is to reduce the economic areas impacted by conditions. Dreher et al. (2015) calculate this variable by categorizing all conditions into twenty policy areas, and sum the total number of policy areas covered, controlling for the duration of an agreement (pp. 6-8). They find some evidence that geopolitical interests of major IMF shareholders lead to reduced conditionality in crucial policy areas such as debt repayment, balance of payments, credit to the government, and domestic pricing (pp. 22-23). The scope of IMF conditionality has also varied substantially over time as a consequence of IMF policy trends, as described above.

The variable on the scope of conditions has conceptual issues. It is somewhat questionable that conditions in more areas of the economy automatically imply a greater burden on the countries' authorities. One condition that implies fundamental change in a crucial policy area may be more costly than several conditions implying small changes in many not very crucial areas of the economy. The case studies should shed more light on this.

Program approval phase: Channel of length of approval process

The next step in the process, the program approval in the Executive Board, can be considered automatic. The much discussed voting in the IMF Executive Board does not

appear to play a role in IMF lending, as there are very few instances in the history of the Executive Board where the Executive Board effectively turned down a loan request, or let alone modified it (Copelovitch, 2010, p. 56).

Related to this, McDowell (2013) suggests that the length of the IMF loan approval process could be a channel of influence of vested interests. The dependent variable proposed is the calculation of the time span between the Letter of Intent and the Executive Board approval of a program request. However, this channel of influence is problematic due to two reasons. First, the Letter of Intent appears to be the result of the informal bargaining process between the country and the IMF staff that is overshadowed by implicit Executive Board interests. Thus, the approval of the Letter of Intent by the Executive Board can be considered automatic. Second, the observance that the time span between Letter of Intent and Executive Board approval has shortened considerably over time. It seems that the time between Letter of Intent and Executive Board approval is primarily influenced by bureaucratic factors that were rendered more efficient over time.

In conclusion, the length of approval process does not appear a valid channel of influence for vested interests in the IMF lending process. It will not enter into the final conceptual model.

Program design phase: Channel of implementation

The next step in the process concerns the program reviews and related disbursements. This step is again subject to influence of vested interests, through the channel of program implementation. For example, if a country is a military ally of the US, the government could assume that low implementation would be more likely to be accepted and “waived” in the IMF Executive Board, as the US would lobby for lenience with the other major shareholders. If the IMF does not sanction lower implementation, this reduces the political cost of an IMF program.

In the 2011 review of conditionality, the impression is given that a program is influenced by vested interests if there are implementation problems, such as delayed reviews and cancelled reviews. Related to this is unusual leniency by staff in face of poor program implementation, e.g., if a structural benchmark is not met but this is not considered a problem for the review (IMF, 2012b).

Thus, repeated approved program reviews and disbursements despite a low implementation ratio of program conditionality in past reviews or programs could be a channel of influence of major power interests. The implementation ratio can be calculated following the IMF approach, as described above. The IMF calculates an indicator between zero and one, based on a weighted average of assessed conditions, excluding prior actions, which are always met by design. A two is assigned to fully met conditions, a one to

partially met conditions and conditions met with delay, and a zero to not met conditions or conditions that were waived (IMF, 2012a, p. 47).

Follow-up program phase: Channel of prior actions

Political interests by major IMF shareholders in a program might reduce the program ownership by the country authorities. In the IMF's 2011 review of conditionality, it is argued that the number of prior actions in a program are an indicator for lack of ownership of the program by country authorities (IMF, 2012b, p. 19). Thus, a reduction in ownership may be an indirect channel of influence of geopolitical interests in IMF programs.

Prior actions are a specific type of conditionality. These are measures a country agrees to meet before the official program start, which is the Executive Board approval, or before an interim review takes place. According to the IMF, prior actions are meant to ensure that the foundations are in place for a program to succeed, or are put in place between reviews to put a program back on track following deviations from the agreed economic program (IMF, 2020b). Thus, as programs are virtually always granted even if a country's track record of past programs is low, and as reviews mostly pass no matter what, prior actions are a signal that there are serious issues.

Prior actions can be added to any program and also program reviews, not only successor programs. However, if they are added to successor programs or increased in number, this could be an indication that there is an issue with ownership. Hence, in the conceptual model, the channel of influence on prior actions matters for the follow-up program phase.

Dreher et al. (2013) find a link between geopolitical interests in an IMF program country and the number of prior actions (p. 16). As with the other forms of program conditionality, the number of prior actions in a program is also influenced by IMF policy trends. As described above, the average number of prior actions in program has varied greatly over time. Adding to this, the use of prior actions in program design is also influenced by IMF bureaucratic interests to ensure payback of outstanding IMF loans from earlier programs or already disbursed program tranches.

Follow-up program phase: Channel of program outcome

A second possible channel of influence in the phase of the follow-up program is the forbearance of a low program outcome. Dreher et al (2014) argue that politically motivated aid reduces the motivation of a country to ensure a successful economic outcome. Similarly, political interests might lead to repeated IMF programs despite evidence that the prior program where not successful in improving the economic situation in the country (pp. 7-8). However, there is no straightforward indicator to measure program outcome,

and a link between poor program outcome and major power interests has not been analyzed in past research.

A program outcome indicator could be constructed based on the information provided in the IMF MONA database. The database provides information on whether the outcome of a program was unusual in any form, such as off-track, cancelled, replaced, modified, subject to waivers, or extended. From this, an indicator for program outcome could be created that allows comparability between programs. While there may be many reasons for a low program outcome, and while few countries with an IMF program history would likely achieve a one in the program outcome indicator, it can be argued that in programs subject to political influence, the outcome is lower.

1.4.3 A full conceptual model of the IMF lending process

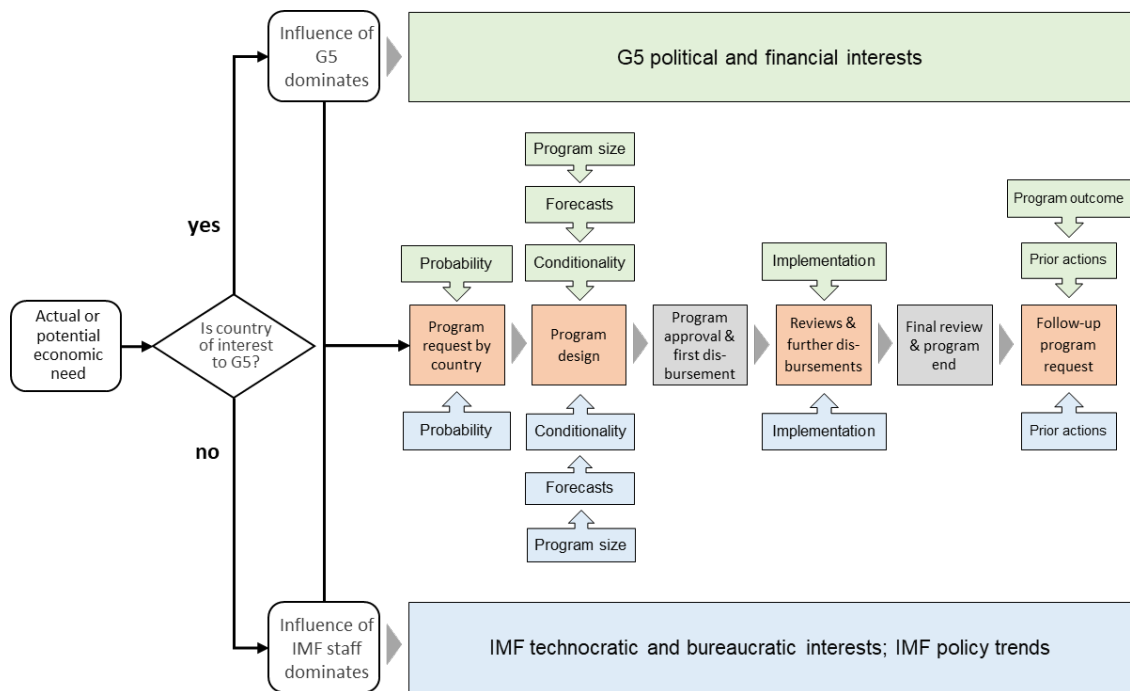
All the building blocks on the IMF lending process combined lead to the final conceptual model, depicted in Figure 1.7. The starting point of the model is again the actual or potential economic need of a country for funding, without which hardly any country would turn to the IMF. The next step is a decision-making tree based on political economy aspects of IMF lending. If major shareholders of the IMF, simplified as the G5, have vested interest in the country, be it of geopolitical or related nature, the influence of the G5 will dominate the IMF lending process. However, if the major shareholders are not particularly interested in the country, then the bureaucratic and technocratic interests and policy of IMF staff and the policy trends of the IMF will dominate the lending process.

After this fundamental decision is made, the IMF lending process starts. It is depicted with the orange and grey staggered process in the middle of the chart. The steps of the process can be subject to channels of influence (orange boxes), or they can be automatic and thus not subject to influence (grey boxes).

The first step of the IMF lending process is the program request by the country. This step is quasi automatic as virtually all countries applying to the IMF receive funding. However, the probability of a program may be subject to influence by vested interests.

The next step in the process is the program design phase. Here, the program modalities, such as lending vehicle, size of funding, number of reviews, conditionality, and the underlying program forecasts are set. This step is again subject to influence by vested interests. The program design phase is subject to intense negotiations between the authorities of the requesting country, IMF staff, and the major shareholders represented in the IMF Executive Board. The specific channels of influence in the program design phase are the program size, forecasts, and conditionality.

Figure 1.7: Full conceptual model of the IMF lending process



Notes: The starting point of the IMF lending process is the actual or potential need of a country for IMF funds, which results into a decision tree at the left of the chart. This results in the orange and grey flow chart in the middle, which depicts the official IMF lending process. In this, grey boxes are automatic steps, whereas orange boxes are steps that are subject to influence. The green and blue arrows on the top and bottom depict channels of influence based on political economy considerations. Green arrows channel interests by the major IMF shareholders, the G5, and blue arrows channel interests and policy trends by the IMF.

The next step in the process is the program approval by the Executive Board, and soon thereafter the first disbursement of funds. This step is considered automatic and thus not subject to influence by vested interests.

After this, the next step takes together all program reviews and further disbursements for simplicity. Each review implies a decision by the IMF Executive Board to grant the next disbursement of money. While the reviews are usually approved, in case of unsatisfying implementation of program conditionality, this step may nevertheless be subject to intense negotiations between country authorities, IMF staff and the major IMF shareholders – usually before the review comes to the Executive Board. If major shareholders have vested interests they will lobby hard for a review to pass. Thus, this process step is subject to a channel of influence on implementation. Program conditionality may be adapted or waived, the next review may be delayed, or the entire program may be extended to allow for more time or replaced with another program for a fresh start. In rare cases of severe non-compliance and lack of agreement between country authorities, IMF staff and major shareholders, a program may also be suspended or cancelled.

The next step in the process, the final review and program end, is again automatic and not subject to influence.

The final step in the process model, a follow-up program request, is optional, but often the case as many countries have a history of consecutive IMF programs. Comparable to the step on review and further disbursements, this step is again be subject to influence. A first channel of influence refers to the program outcome. If the G5 have vested interests in the country, they will lobby for fresh funds despite an unsuccessful past program. A second channel of influence are prior actions, which indicate ownership issues in the previous program. Both channels will also be influenced by IMF staff interests, in particular to ensure that the country pays back outstanding funds to the IMF from earlier programs, which is more likely with a new IMF program, independent of prior program success. Adding prior actions also makes a payback of outstanding funds more likely.

1.5 Evidence from case studies

1.5.1 Case study design

In past research on the impact of political and financial interests on IMF lending decisions, the focus on theoretical models and data on IMF programs led to great distance to the object of study. I argue that this somewhat blurred the insights. Following Flyvbjerg (2006), I propose to use evidence based on the intense observation offered by case study research to reduce this distance to the object of study (p. 6).

Flyvbjerg (2006) suggests that case study research is less about verification of theory, and more about falsification. This follows the falsification test proposed by Karl Popper, who suggested the example of the assumption that all swans are white. The observation of a single black swan falsifies the assumption (p. 11). For the search of a dependent variable for detecting political influences in IMF lending, this implies that if even in a case of a specific IMF program, which is widely considered as politically influenced, a depended variable does not hold, then it is very likely that the depended variable is not a valid one for all other cases.

The aim of this case study analysis is two-fold. A first goal is to find evidence to adapt the “standard” IMF process based on theoretical assumptions. Second, the analysis should allow finding information on the validity of established and newly proposed dependent variables to detect vested interests.

Case selection

The unit of case study research in this study, or the “case”, is be a program country, i.e., a country that has a history of IMF programs. The smallest possible unit in this context that covers the entire IMF lending process would be a single IMF program for a specific country, from its early design to the final program review. The next greater unit would be a country with several IMF programs over time, or a program country. Taking a program country as case appears superior to a single program. It allows detecting more patterns repeated program decisions that may also take into account the country’s past implementation record, which might offer additional insights.

The case selection does not intend to find the typical case, but much more cases that help understand the research questions (Stake, 1995, pp. 3-5). Following Flyvbjerg (2006), the case selection approach is to find two critical cases of program countries as proposed by. A critical case is defined as a case with strategic importance for the research question. In investigating whether a dependent variable may hold information on vested interests in IMF lending decisions, a critical case is extreme along the dichotomy of being highly influenced, or not influenced at all, by vested interests. Critical cases are thus program countries that are either widely considered to have IMF programs dominated by political interests – the “political” case, or countries with IMF programs without indication political interests – the “non-political” case.

The “political” case allows testing which dependent variables may be useful for detecting vested interests. The “non-political” case allows to test and adapt the process model so that is as closely possible to the standard case of IMF lending without vested interests. This case also holds information on dependent variables. For example, variables expected to fulfil certain criteria according to the theoretical model but which do not hold in the “non-political” case should be rejected.

Arguably, the large majority of program countries will be somewhere in the middle of these two extremes. Such a strategic selection of critical cases allows generalizing the case study findings. For example, if a dependent variable is relevant in a case that is widely considered as “political”, then it is likely to be relevant for all cases. If however a variable does not appear relevant even in this extreme case, then it is likely to be irrelevant for all cases. This also holds for a case, which is critical in the opposite way, i.e., it there are no indications for political interests.

Adding to this, if there is evidence for political interference even in the “non-political” case, then it is safe to assume that all cases are to some extent influenced by political interests, only to a varying degree (Flyvbjerg, 2006, pp. 13-14).

The “political” case: Pakistan

For the “political” case, I will focus on the most widely researched form of vested interests in the context of IMF lending, which is US geopolitical interest in a country. An indicator for this is US aid flows (Dreher et al., 2014). Overall, from 1990 to 2012, the ten largest recipients of US aid flows were Iraq, Afghanistan, Egypt, Israel, Russia, Ethiopia, Pakistan, Colombia, Sudan, and Jordan. In 2001-2012, Iraq and Afghanistan, the two countries where the US led military campaigns at the time, continued to be the largest recipients of US aid. Pakistan followed on the third place.

I select Pakistan for the “political” case. While not the largest recipient of US aid flows in the mentioned periods, Pakistan stands out in several regards. First, it has a very long and particular history of IMF programs. From 1958 to 2013, Pakistan had 19 IMF programs. Due to its long-term dependence on IMF loans, the IEO selected Pakistan as a case study for its 2002 evaluation of prolonged use of IMF resources (IEO, 2002). This allows very detailed insights in IMF programs in Pakistan. Secondly, there is a large literature on political influences in Pakistan’s IMF programs and other forms of aid flows, as described in the case study below. Finally, Pakistan had an overall poor implementation record of its IMF programs, leading to frequent waivers of performance criteria and not seldom program cancellation. This allows detailed insights into the IMF lending process if things do not evolve as theory would predict.

The “non-political” case: Uruguay

For the “non-political case”, the country should be marked by the absence of interference of vested interests. To facilitate the selection, I relied on a number of additional criteria for selection.

First, to ensure low geopolitical importance, the country should rank low on the above-mentioned list of US aid flows, and it should not be in strategically important locations, such as the Middle East or Eastern Europe, or an outright known ally of the US.

Second, the country should not be considered an advanced market by international investors. Limited international financial integration reduces the probability of large financial sector interests due to outstanding public debt to private investors at the time when the countries enters into an IMF program.

Third, poorer countries eligible for IMF concessional financing are excluded, as the conditionality for these countries is different, reducing comparability. Fourth, small island states, who usually fit the criteria above but face very particular economic circumstances, are also excluded from the list. Finally, the country should have an IMF program history, thus at least two IMF programs in the last decades.

The country with the lowest rank in US aid flows from 1990 to 2012 that also meets all other selection criteria is Uruguay. There is also a wealth of information on Uruguay's programs with the IMF, as in 2005 Uruguay was chosen for an ex-post assessment of its IMF program history that is publicly available (IMF, 2005b). Based on these grounds, I select Uruguay for the "non-political" case.

Case study procedure

The procedure for the case study research is as follows. In a first step, I examine the country's history with the IMF and the circumstances of the IMF programs. In a second step, I analyze the findings from the case study on the various program parameters, with a focus on comparability between countries. This will be based on the MONA database, which offers condensed information on program outcome, performance criteria, purchases and reviews from 1993 on.

1.5.2 Pakistan

Pakistan's IMF program history

Pakistan has a long history of IMF programs, as Table 1.2 shows. Pakistan can also be considered a case of considerable political influences in its IMF programs – and a case where IMF support has often failed to benefit the economy.

1958-1969: Phase of economic growth

After Pakistan achieved independence from Great Britain in 1947, its economy entered a phase of economic growth that lasted until the late 1960s. At that time, Pakistan's economy was largely based on agriculture, and on exports of textile fibers, hides, and tea (Ghafoor & Hanif, 2005, p. 346).

In 1958, in context of growing political turmoil, General Ayub Khan ended the parliamentary system and took over the government (Blood, 1994). Khan adopted an economic reform program, laying the grounds for Pakistan's "decade of development", which received considerable attention in the developing world (McCartney, 2011, p. 100). Under Khan's rule, Pakistan entered its first SBA with the IMF for a duration of one year to address its deteriorating payments position (IMF, 1958-2013). As world trade improved from 1959 on and raw material prices recovered, and aided by internal reforms and increased foreign aid, Pakistan cancelled the SBA three months before expiration without ever drawing on it (IMF, 1958-2013).

Table 1.2: Pakistan's history of IMF programs, 1950-2013

Year agreed	Year ended	Program size	In percentage of quota	Percentage drawn
1958	1959	25'000'000	25%	0%
1965	1966	37'500'000	25%	100%
1968	1969	75'000'000	40%	100%
1972	1973	100'000'000	43%	84%
1973	1974	75'000'000	32%	100%
1974	1975	75'000'000	32%	100%
1977	1978	80'000'000	34%	100%
1980	1981	1'268'000'000	297%	28%
1981	1983	919'000'000	215%	79%
1988	1991	655'560'000	120%	88%
1993	1994	265'400'000	35%	33%
1994	1995	985'700'000	130%	30%
1995	1997	562'590'000	74%	52%
1997	2000	1'137'300'000	150%	33%
2000	2001	465'000'000	45%	100%
2001	2004	1'033'700'000	100%	83%
2008	2011	7'235'900'000	700%	40%
2013	2016	4'393'000'000	425%	66%

Notes: Source: IMF (2020e). The unit of the program size is in Special Drawing Rights (SDR).

Khan tied close relations with Western countries, and particularly with the US. Pakistan became a key ally of the US in the cold war, given India's links with Moscow (Ahmad & Mohammed, 2012, p. 4). Khan's economic reform programs appealed to Western countries. In the course of the 1960s, foreign aid, particularly from the US, became a key factor in Pakistan's economic and military development (McCartney, 2011, p. 106). Pakistan's economy continued to grow throughout the 1960s, based on economic reform programs, which led to increased agricultural output and a growing manufacturing sector.

However, from the mid-1960s on, growth slowed, and increasing income disparities between the geographically separated West and East Pakistan became a concern (McCartney, 2011, p. 101). In 1965, Pakistan entered a second SBA in the context of a renewed deterioration of its balance of payments, against the backdrop of loose monetary policy and liberalized import regulations, which had led to rising imports (IMF, 1958-2013). In 1968, Pakistan entered another one-year SBA, which was fully drawn.

Pakistan's SBAs in 1950s and 1960s were within the so-called gold tranche, referring to drawings that do not increase IMF holdings of the member's currency above member's quota. For such gold-tranche drawings, the review of implementation of the program's proposed reforms tended to be liberal (IMF, 1958-2013).

1970-1987: crisis years and return to growth

In 1971, East Pakistan declared independence and became Bangladesh. The turmoil surrounding the independence led to an economic contraction in the remaining parts of Pakistan. In 1972, led by Zulfikar Ali Bhutto of the newly founded socialist Pakistan People's Party (PPP), a reform program was launched to revive the economy (Blood, 1994). In this context, Pakistan entered a one-year SBA. The economy recovered in 1973, and growth averaged around 6% in the next fifteen years. Despite strong growth, fiscal and external imbalances loomed large. To correct these vulnerabilities, Pakistan repeatedly resorted to IMF programs in the 1970s (IEO, 2002, p. 119). One-year SBAs were agreed in 1973, 1974, and in 1977. These SBA were all almost entirely drawn upon.

After renewed political turmoil surrounding the elections in 1977, the military took over the government, led by General Zia ul-Haq (Blood, 1994). In 1979, adding to the balance of payments imbalances that the earlier IMF programs had not been able to correct, the Pakistani rupee came under pressure due to its peg to the US Dollar, which appreciated strongly (IMF, 2002, pp. 119-120). The initially US blocked a request for debt relief by Pakistan, citing the low implementation record in the prior IMF programs.

The US position changed in 1980. Pakistan received the long-sought debt relief, its IMF quota was almost doubled (which allows larger IMF program sizes), and a large EFF over three years was agreed. A reason for the change of the US position was the Soviet-Afghan war from 1979 to 1989. Due to the renewed strategic importance of Pakistan in the US actions in Afghanistan, US-Pakistan relations improved under the military reign of ul-Haq, after a period of deteriorating bilateral relations under the previous reign of Zulfikar Ali Bhutto (Seiber, 1981, pp. 69-70). While program implementation of the 1980 EFF was strong in the first year, it deteriorated over time and the IMF eventually declared the program as off-track (IEO, 2002, p. 120).

1988-2000: Rising economic difficulties as debt becomes unsustainable

From the late 1980s on, Pakistan's economic situation again deteriorated markedly. Once again, debt became increasingly unsustainable. Poverty, which had declined in the two decades before, was on the rise again. After General Zia ul-Haq died in 1988 under obscure circumstances, Benazir Bhutto from the PPP became Pakistan's new Prime Minister (Blood, 1994). In December 1988, her government entered a new SBA to address the economic difficulties.

The 1990s saw frequent government changes between Benazir Bhutto from the PPP and Nawaz Sharif of the Pakistan Muslim League. In 1999, General Pervez Musharraf seized power in another military coup. The following years were marked by institutional decay, with considerable government interference in enterprises and the banking sector,

as well as widespread corruption. During this time, Pakistan had quasi-continuous IMF support. All programs in the period from 1993 until 2000 suffered from substantial implementation issues and went off-track, mostly after the first or second review (IEO, 2002, pp. 120-121).

2001-2013: War on Terror and economic stagnation

From 2001 to 2007, supported by new efforts towards economic liberalization under Musharraf and helped by a period of strong global economic growth, Pakistan's economy improved markedly. Debt levels declined from almost 80% to around 50%. After the attacks of 11 September 2001, Musharraf declared his support to the US in Afghanistan. In turn, the US declared Pakistan a crucial partner in the US counterterrorism efforts. Increasing stability in Pakistan, by making it more democratic and prosperous, was among "the most important US foreign policy efforts" (Kronstadt, 2011). In return for Pakistan's support, the US lifted several sanctions imposed in the context of Pakistan's nuclear ambitions, and promised approximately USD 1.2 billion in foreign aid (Momani, 2004, p. 44).

In December 2001, the IMF approved a three-year EFF for Pakistan. The program was aimed at tackling continued widespread poverty and weak social development indicators (IMF, 2001a). As in previous programs, the implementation record was low. Nevertheless, the program was completed in December 2004 without drawing of the last tranche in a context of improved economic conditions (IMF, 2004). The government did not seek a successor program and proclaimed its "graduation" from IMF support (Fasihuddin, 2009).

However, three years later, the economic situation deteriorated again in context of renewed political instability and the GFC. After severe political turmoil, Musharraf was ousted in 2008, and Asif Ali Zardari of the PPP became President. Zardari was the widower of former Prime Minister Benazir Bhutto, who had been assassinated in 2007 (BBC, 2015). The new government requested a SBA for three years in November 2008, the largest IMF program in Pakistan's history. As with previous programs, the SBA suffered from low implementation. In 2011, the program ended without disbursement of the final tranche, amid disagreement between the IMF staff and Pakistani authorities over program targets. The government then proclaimed to follow its own reform program without IMF support (Lamont, 2011). Nevertheless, as the economic situation deteriorated further, the government recurred to the IMF for a three-year arrangement in 2013.

Findings from the Pakistan case study

Evidence for political influence in IMF lending to Pakistan

There is widespread evidence that US geopolitical interests repeatedly influenced IMF lending to Pakistan, as described in a report of the IEO on countries with prolonged use of IMF resources. According to interviews with Pakistani authorities and IMF staff, many programs primarily served political considerations. There was a sense that due to US geopolitical interests in Pakistan, the IMF would support the country irrespective of program implementation or success. In this context, the report states, “the unrealistic macroeconomic assumptions as well as the pretense of toughness were merely a way of face-saving to justify continued lending to Pakistan” (IEO, 2002, p. 131).

Ahmad and Mohammed (2012) similarly describe IMF lending to Pakistan as connected to political relations between the US and Pakistan. At the core of US interests in Pakistan is the country’s strategic location at the Persian Gulf. In the 1970s and 1980s, during the Cold War, Pakistan sided with the US, while India was closely linked to the Soviet Union. US-Pakistani relations became particularly close during the Afghan War in the 1980s (pp. 2; 4-6).

Anwar (2006) gives further evidence for politically motivated US aid flows to Pakistan, citing the Pressler Amendment at the US senate in 1985, which clearly links US aid flows with the halt of nuclear arms development in Pakistan (p. 9). According to Ahmad and Mohammed (2012), a decline in direct US assistance to Pakistan led to increased US lobbying for IMF lending to keep Pakistan somewhat supported. During these times of reduced US aid for Pakistan, the IMF also engaged in defensive lending to protect its earlier engagement (pp. 4-6).

US interests in Pakistan became particularly important after the attacks of 11 September 2001. In the US National Security Strategy of September 2002, the US committed itself to help emerging markets to access to larger capital flows at lower cost, with the goal to achieve political and economic stability in the countries in question. For this goal, the US aimed to work actively with the IMF (Bush, 2002). Momani (2004) describes US involvement in IMF lending to Pakistan during this time as a tool to achieve foreign policy objectives via economic cooperation, such as providing foreign aid or investment to allies (p. 42).

Probability of program

As shown in Table 1.2, since the 1970s Pakistan had quasi-constant IMF programs, with an exception of five years without program in the early 1980s and four years after 2004. Therefore, it seems unlikely to capture influences of geopolitical interests on indicators measuring the probability of IMF programs, in particular not for yearly data.

Number of conditions

As the 2002 IEO report describes, the lack of ownership by the Pakistani government, which might be due to US geopolitical influence, was answered with increasingly tough but toothless conditionality. There was little discussion on the realism of program targets and on the likelihood of successful program implementation (IEO, 2002).

On average, between 1993 and 2013, Pakistan had 24 conditions per program. However, this number varied greatly across programs. The 1993 program had not a single binding criteria, while the programs in 1997 and 2001 had above ten binding conditions each, next to a multitude of structural benchmarks. After the GFC, the number of conditions per program was again below ten. This suggests that the number of conditions for Pakistan was also strongly influenced by the trends in IMF conditionality.

The data provided by the MONA database has important quality issues, which need to be taken in to account when counting conditions. Double counting is a key problem, as several consecutive programs had the same performance criteria, which kept not being implemented. Comparability of conditions over time is another issue. In the earlier years, conditions encompassed just about anything, while later these were differentiated into prior actions, structural benchmark, quantitative performance criteria.

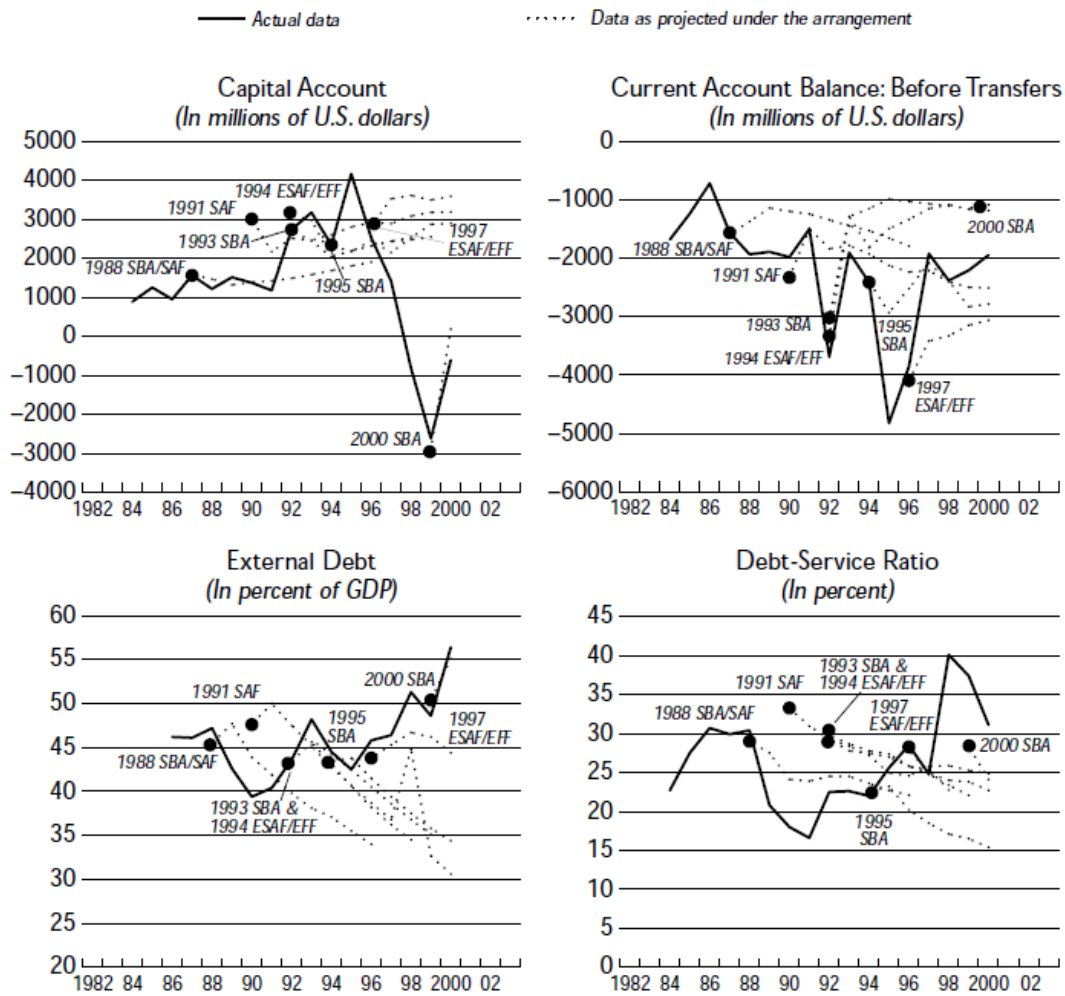
Scope of conditionality

For the case of Pakistan, the scope of conditions widened strongly over the years, making the detection of a pattern difficult. Based the MONA database, IMF programs from 1993 to 2013 for Pakistan contained conditions in about four policy areas on average. However, counting policy areas is complicated by the fact that the policy area differentiation in the MONA database changes in 2001. The overall number of policy areas subject to conditions varied over time in line with IMF policy trends, with relatively fewer areas covered in the early 1990s and after 2008.

Forecasts

Overly optimistic projections and targets were a major problem in IMF program design for Pakistan, in particular after 1993. Projections were overly optimistic economic for key indicators such as GDP, export growth, and domestic savings and investment, as shown in Figure 1.8. Program targets were also often overly optimistic, in particular tax revenues. According to the IEO of 2002, while it was unclear whether IMF staff or Pakistani authorities were to blame for repeatedly overoptimistic projections and program targets, overoptimistic forecasts in the program design helped in an environment of strong pressure to agree on a program (IEO, 2002, pp. 122-124). This suggests considerable influence of vested interests in IMF program forecasts.

Figure 1.8: IMF program forecasts and outcomes for Pakistan, 1982-2002



Notes: Source IEO, 2002, p. 123. The charts show that the forecasts under the arrangements were consistently too optimistic in the case of Pakistan. This was particularly pronounced for debt data.

Program size

The size of IMF programs for Pakistan increased strongly over time, particularly after 1980. In line with this, the IMF quota of Pakistan increased by ten times between 1950 and 1999, resulting in a relatively constant program size relative to quota over time (about 140% on average). The large increase in actual program size can be explained to some degree by IMF policy trends. However, there is also evidence for political interests influencing program size in Pakistan. According to Ahmad and Mohammed (2012), in the discussions for the SBA of 2008, many Executive Board members were initially against the proposed program, based on its large size and generous front-loading. In the end, this opposition was overcome by intense US lobbying (pp. 18-19). This suggests that the program size for Pakistan was influenced by IMF policy trends and US interests.

Implementation ratio

Overall, Pakistan's track record in program implementation was very weak. Relatedly, the effectiveness of IMF programs in correcting macroeconomic imbalances as well as structural economic problems was limited. According to the IEO, the reasons for these shortcomings were, somewhat cryptic, due to "systemic" issues associated with the IMF's approach to Pakistan (IEO, 2002, p. 122).

Looking at the data covered by the MONA database from 1993-2013, the calculated implementation ratio for Pakistan is a surprisingly high, 0.7 on average. This is in line with the average of IMF programs across countries. An explanation is that in the case of Pakistan, increasing conditionality was met with increasingly superficial implementation. For example, new laws that were performance criteria were enacted but never implemented, or new taxes required by performance criteria were adopted, but with so many exemptions that the new tax had almost no effect on revenue (IEO, 2002, pp. 127-129). Ahmed (2012) further describes how flexible the program conditionality was in the case of Pakistan. At program reviews, missed targets were simply reset, which made the program easier to implement (p. 8).

The implementation ratio, which is based on whether a condition is assigned a "met" or "not met" in the MONA database, does not account for this information. The indicator further suffers from data quality issues in the case of Pakistan. For data until 2001, the MONA database often gives no outcome for specific conditions, and where an outcome is provided, it recorded as descriptive text rather than an outcome category, which leaves room for interpretation.

Prior actions

According to the IEO report of 2002, ownership was a serious issue in Pakistan's IMF programs. Therefore, the number of prior actions was increased over in Pakistan's IMF programs (pp. 127-129). Ahmed (2012) supports the serious lack of ownership of IMF programs by the Pakistani government (p. 4). According to the MONA database, Pakistan had an average of about 14 prior actions per program between 1993 and 2013, with large variation between programs and a peak of 26 prior actions in the SBA agreed in 2000.

Length of approval process

Letters of Intent for Pakistan are available for the programs of 2000, 2001, and 2008 on the IMF website. The average time span between the date of the Letter of Intent and the program approval by the Executive Board was around 15 days, with 25 days for the program of 2000, 15 days for the program in 2001 right after the attacks of 11 September 2001, and only four days for the program in 2008. Thus, if anything can be derived from

these few data points, the very short negotiation period for the highly political 2001 program is astonishing.

Program outcome

Looking at the outcome of IMF programs is very telling in the case of Pakistan. All programs in the 1980s ran off-track (IEO, 2002). From 1993 on, when coverage by the MONA database starts, not a single program had a regular outcome. Programs were cancelled, replaced, modified, extended, subjected to a large number of waivers until eventually running off-track, or no information at all is given on the program outcome. Thus, the program outcome indicator for Pakistan is simply zero.

1.5.3 Uruguay

IMF program history of Uruguay

Uruguay has a long history of IMF program use. From 1961 to 2006, Uruguay had 22 programs (see Table 1.3). Over this period, the Uruguayan economy witnessed two debt crises, but also three long periods of more or less stable economic growth. Nevertheless, with on average less than a year between programs, Uruguay almost continuously relied on IMF support. Many of Uruguay's IMF programs were never drawn upon, and were thus of precautionary nature. On the other hand, some programs that were originally intended as precautionary were effectively drawn upon.

1961-1972: Economic stagnation

In the mid-1950s, Uruguay entered a period of stagnation that lasted until 1972, with average growth rates below 1%. In the first half of the twentieth century, its agricultural exports earned Uruguayans a decent living standard and allowed the building of an extensive welfare system, leading to Uruguay being dubbed the "Switzerland of Latin America". Continued reliance on extensive production techniques however led to stagnation in the agricultural sector, and its export dependency left Uruguay exposed to volatile world prices.

Like many countries in Latin America, Uruguay responded to these challenges with a growth model based on import-substitution, which led to the development of a protected industry. When growth in the increasingly uncompetitive industry and agricultural sector came to a halt in the 1950s, the large public sector became a heavy burden. These economic difficulties turned into a political crisis in late 1960s (Hudson & Meditz, 1990). In this period, Uruguay agreed with the IMF a total of six consecutive one-year SBAs to address economic stagnation and strong dependence on volatile world prices (Vreeland, 2003b, p. 329).

Table 1.3: Uruguay's history of IMF programs, 1950-2013

Year agreed	Year ended	Program size	In percent of quota	Percentage drawn
1961	1962	30'000'000	100	0%
1962	1963	30'000'000	100	50%
1966	1967	15'000'000	50	33%
1968	1969	25'000'000	45	80%
1970	1971	13'750'000	20	100%
1972	1973	20'000'000	29	100%
1975	1976	17'250'000	25	100%
1976	1977	25'000'000	36	0%
1977	1978	25'000'000	36	0%
1979	1980	21'000'000	25	0%
1980	1981	21'000'000	17	0%
1981	1982	31'500'000	25	100%
1983	1985	378'000'000	231	40%
1985	1987	122'850'000	75	100%
1990	1992	94'800'000	58	9%
1992	1993	50'000'000	22	32%
1996	1997	100'000'000	44	0%
1997	1999	125'000'000	55	91%
1999	2000	70'000'000	23	0%
2000	2002	150'000'000	49	100%
2002	2005	1'988'500'000	649	100%
2005	2006	766'250'000	250	34%

Notes: The unit of the program size is in Special Drawing Rights (SDR). Source: IMF (2020g).

The conditionality of these programs was relatively soft, as the programs were limited to the first credit tranche (IMF, 1958-2013). While no information on program implementation is available for this period, Bulmer-Thomas (2003) argues that the commitment of Latin American countries to the policies proposed by the IMF was generally very limited. Most governments, including Uruguay, followed inward-looking models of development, which were at odds with the IMF's monetary approach (p. 308).

1973-1981: First growth phase

In 1973, Uruguay entered a first growth phase that lasted until 1981. This period began with a military coup in 1973, which was a consequence of the political crises in the 1960s. The main economic goal of the military government was to put an end to the focus on protected industry development and re-establish an export-oriented growth policy. Further goals were to eliminate inflation and price controls, lower tariff barriers, and liberalize financial markets (Hudson & Meditz, 1990). Driven by strong export and investment growth, and supported by structural adjustment, the economy grew at a yearly rate of about 4% from 1973 to 1978, and inflation decreased considerably.

Economic growth began to stagnate again in the late 1970s. In 1979, in context of the oil price shock, inflation doubled again and economic difficulties increased. The devaluation in Argentina in 1981 weighed on the Uruguayan economy. Rapid financial and economic liberalization in the years before led to a strong expansion of credit of private sector. In 1980s, falling beef prices, to which Uruguay was strongly exposed, led to serious difficulties in servicing debt (Hudson & Meditz, 1990).

During this period, the military government continued the practice of the past civilian governments to recur to IMF programs to support their economic goals. In 1975, the government signed an IMF program to combat economic stagnation and reduce the budget deficit (Vreeland, 2003b, p. 327). In the following years, Uruguay had consecutive SBAs, but did not draw on them. According to De Vries (1987), Uruguay had a very good implementation record in these years (p. 86).

1982-1984: First recession

In the early 1980s, the Latin American debt crisis hit Uruguay. The following recession lasted until 1984, with an average growth contraction of about 5% per year. Inflation and repeated currency devaluations led to increasing dollarization and a rising debt burden in US dollars, which the Uruguayan government refinanced to avoid bankruptcies (Hudson & Meditz, 1990). During this time, Uruguay requested two SBAs. These programs were part of concerted lending efforts of the IMF and other institutions to stem a debt crisis that affected large parts of the developing world at the time.

1985-1998: Second growth phase

The economy slowly recovered in the late 1980s. From 1985 to 1998, Uruguay entered a second growth phase that lasted for fourteen years. In 1985, the military government authorized elections, and a new civilian government took over. The new authorities pressed for further liberalization and once again called the IMF for help. In the same year, a SBA was agreed, aimed at addressing the remaining debt overhang (Vreeland, 2003b, p. 327). Tax increases narrowed the public sector deficit. A crawling band system for the Uruguayan peso eventually led to exchange-rate stabilization and lower inflation (Hudson & Meditz, 1990; IMF, 2005b).

In the early 1990s, as part of a concerted effort to deal with the continued debt overhang in Latin America, Uruguay began to issue Brady bonds, supported by IMF programs. This allowed a considerable reduction of the debt level (Boughton, 2012, p. 433). The IMF, possibly as a signal to attract investors, publicly declared the related SBA of 1990 (Vreeland, 2003b, p. 329, 332). In 1992, another SBA was agreed for signaling purposes. This program was mainly precautionary and largely implemented (Boughton, 2012, p. 433; Vreeland, 2003b, p. 331).

In the years from 1996 to 2001, Uruguay continued to rely on IMF programs, of which the majority was precautionary. These programs served as seal of approval for government policies and allowed intense IMF monitoring of reform progress. According to the IMF ex-post evaluation of 2005, many important economic reforms were realized during this time. At the same time, some reforms, particularly related to pension funds and the banking system, were completed with delay or not at all (IMF, 2005b, p. 3).

1999-2002: Second recession and banking crisis

In 1999, Uruguay entered another recession, which culminated in a banking crisis in 2002. The crises in Brazil and Argentina in 1998, Uruguay's main trading partners since the initiation of Mercosur, hit the Uruguayan economy hard. In context of the devaluation of the Brazilian real and the Argentine peso in 1999 and 2002, respectively, Uruguay's exchange rate depreciated massively (IMF, 2005b, p. 5). Adding to this, an outbreak of the foot and mouth disease in 2001 damaged beef exports, on which the Uruguayan economy continued to rely heavily.

In 2002, these developments culminated into a severe banking crisis in Uruguay. In context of Argentina's economic woes at the time, Argentinians began to withdraw their deposits from Uruguayan banks. As foreigners held almost half of the deposits in Uruguay's banks, the majority Argentinians, this quickly developed into a bank run. Pre-existing vulnerabilities in the Uruguayan banking system, such as dollarization, insufficient regulation, and supervision added to the crisis (IMF, 2005b, p. 3). Among IMF staff, the opinion was that as Uruguay was hit by this crisis mainly by contagion. Hence, the country should "receive the full support one should give to an innocent by-stander" (IMF, 2005b, p. 8).

To fight capital flight in March 2002, the Uruguayan authorities drew entirely on the SBA that had been agreed as precautionary in the year 2000. As this proved to be insufficient, another SBA was agreed in April 2002 and augmented in June 2002, to a total of SDR 1,988 million. This was the largest IMF program as a share of GDP ever accorded at that time. The program was further augmented by a one-week bridge loan by the US, and by increased contributions by the World Bank and the Inter-American Development Bank. In spring 2003, a debt exchange deal with private creditors allowed to reduce debt, which had soared during the crisis, to more viable levels. By then, Uruguay had regained market access and the crisis was over (IMF, 2005b, pp. 9-10).

2003-2013: Third growth phase

Uruguay returned to growth in 2003. In 2005, shortly after the 2002 program ended, another IMF program was agreed. This SBA was designed to address remaining vulnerabilities, in particular to stabilize the still shaky access to financial markets and thus

reduce debt rollover risks (IMF, 2008b, p. 14). Given the considerable economic improvement in 2006, the Uruguayan authorities cancelled the program in December 2006, and fully paid back all outstanding funds to the IMF.

In the 2008 ex-post assessment of the program, the IMF considered the implementation record of this program as disappointing, giving that ten waivers were needed to pass program reviews. Nevertheless, the IMF showed some understanding for the Uruguayan authorities, as it acknowledged that the improvement of Uruguay's economy had reduced the urgency of the reform package (IMF, 2008b, p. 28).

Findings from the Uruguay case

Evidence of political influences in IMF lending to Uruguay

Apart from the 2002 banking crisis, a key rationale for Uruguay's frequent recourse to IMF lending was less current economic need, but more ensuring an outside monitoring of economic reforms (Vreeland, 2003b; IMF, 2005b). In addition, according to the IMF, the precautionary SBAs of the 1990s were also meant as a shield against contagion in a volatile global environment, for a "generally responsible" country with strong fundamentals. The programs were considered a "seal of approval" by the IMF for the country's policies, in order to maintain international financial market access. The prolonged use of IMF lending was seen as a sign of good performance and cooperation (IMF, 2005b, p. 20). Apart from economic motives, domestic political factors also mattered, as many programs helped the government push through unpopular reforms.

There is no evidence that vested interests by major IMF shareholders influenced Uruguay's IMF programs. In particular, there is no evidence for geopolitical interests in Uruguay during that time.

An exception could be 2002 program, which may have been influenced by US financial sector interests. According to John B. Taylor, US Treasury Under-Secretary for International Affairs in 2002, the Uruguayans asked to the US for help during the crisis. This led the US not only to provide a bridge loan, but also to convince the IMF to accord the program against its initial will to do so, as the IMF wanted a debt default (Taylor, 2007). However, it is likely that the IMF would have lent to Uruguay in one form or another. Also, beyond "helping a friend" (Taylor, 2007), there is no indication for outright protection of US financial sector interests in this case.

IMF bureaucratic interests also influenced Uruguay's programs. For example, the rationale for the 2005 program was to regain capital market access, which ensured that the IMF was paid back after the massive 2002 program (IMF, 2008b, p. 3).

Probability of program

With time, the justification for program approval for Uruguay became a matter of routine (IMF, 2005b, p. 20). This supports the idea that program approval is an automatic step within the IMF lending process. It remains unclear how this could be a channel of influence for vested interests. In the case of Uruguay, due to the quasi-constant reliance of IMF programs, indicators measuring the signing of an IMF program and the use of IMF credit are not likely to be insightful.

Number of conditions

The number of conditions per program varied greatly over the years. In the three programs between 1997 and 2000, which the MONA database covers, there was not a single binding condition. This speaks for great leniency towards Uruguay, which may be due to their precautionary nature, and due to Uruguay's good standing with IMF staff, suggesting an influence of IMF staff interests.

In contrast, the programs of 2002 and 2005, which related to the banking crisis, had each over thirty binding conditions. A reason could be the very large program size and the related financial risk for the IMF, which again suggests an influence by IMF staff interests.

Overall, conditionality was comparable with other countries with precautionary SBAs, and evolved in line with the generally rising trend (IMF, 2005b, p. 22). IMF staff interests also influenced the programs to a lower than expected number conditions – but not because of vested interests of the IMF major shareholders.

Scope of conditions

Due to the massive program in 2002 in context of the financial crisis, the average scope of conditionality for Uruguay's programs is dominated by financial sector reforms. The number of policy areas covered by conditionality, based on the eight areas differentiated in the earlier MONA database, is about one on average for all programs. The three programs covered by MONA before 2002 had no binding conditions, hence the scope is zero. The two programs in 2002 and 2005 each had conditions in three areas. Overall, the very low number of countable conditions reduces the informational value of studying the scope of conditionality in Uruguay's programs.

Forecasts

There is no indication for overly optimistic program projections for Uruguay – rather the opposite. In the 2005 program, in context of the early cancellation of the program due to improved economic conditions, it was discussed that program projections on market access in the program design were rather too pessimistic (IMF, 2008b, p. 26).

Program size

The size of Uruguay's programs evolved with the overall trend in IMF programs until 2002. After this, Uruguay had unusually large IMF programs. The 2002 program in context of the banking crisis was massive in size, probably related to economic need. For the 2005 program, given its cancellation by the Uruguayan authorities due to economic improvement, it was later questioned whether the program size had been too large (IMF, 2008b, p. 26).

Implementation ratio

Overall, the average implementation record of 0.6 for Uruguay is comparable to other countries at the time (IMF, 2005b, p. 22). Structural benchmarks in the area of banking were often missed. It looks as if the IMF staff accepted that Uruguayan authorities, particularly in the precautionary programs, only implemented conditions that "would not generate excessive frictions in Uruguay's consensus-based polity" (IMF, 2005b, p. 14). This shows that the IMF adapted its conditionality and its perception of "good implementation" to some degree to the domestic political circumstances.

The implementation ratio for Uruguay suffers from data quality issues. In several programs, information on the various performance criteria is chaotic. Attributing the correct outcomes to a specific condition is a challenge, and sometimes outcomes for entire categories of conditionality are assigned a question mark in the database. Some conditions were waived, only to be listed again with a new date and new descriptions. This shows the risk of double-counting conditions.

Length of program approval

For Uruguay, the IMF website provides information on the dates of the Letters of Intent for four programs between 1999 and 2005. For these, the average negotiation time was 23 days. The 2002 program in context of the banking crisis took a long 47 days to negotiate, which is possibly due to the important financial risks of the program to the IMF.

Program outcome indicator

The calculated indicator for program outcome is 0.6. This is comparable to the average of all program outcomes across IMF program countries.

Prior actions

During the period covered by the MONA database, Uruguay had an average of five prior actions per program. Based on the anecdotic evidence, ownership was not an issue with Uruguay's IMF programs.

1.6 Combined insights from the conceptual model and the case studies

In conclusion, based on the combined insights of the conceptual model and the case studies, conceptually valid dependent variables for future research on IMF lending are indicators on program forecasts, outcome, and size (see Table 1.4). I find a mixed validity for variables measuring the signing of an IMF program, its implementation, and the number of prior actions in a program. I find a low conceptual validity for variables measuring conditionality, the length of approval process, and the use of IMF credit.

Table 1.4: Combined insights from the conceptual model and case studies

Channel of influence		Dependent variable		
Channel of influence	Effectiveness of channel	Indicator	Validity	Use in past research
Probability	Mixed	Use of IMF resources	Low	Yes
		Signing of IMF program	Mixed	Yes
Conditionality	High	Number of conditions	Low	Yes
		Scope of conditions	Low	Yes
Forecasts	High	Change of forecast in program proposal compared to first review	High	No
Program size	High	IMF program size	High	Yes
Length of approval process	Low	Time span between Letter of Intent and Executive Board approval	Low	Yes
Implementation	High	Implementation ratio	Mixed	No
Follow-up program despite low implementation	High	Program outcome indicator	High	No
Prior actions	High	Number of prior actions	Mixed	Yes

Table 1.5 allows a comparison of selected program indicators for Pakistan and Uruguay between 1950 and 2013. The information on the number of programs and the size of programs is available for the entire IMF lending history for both countries on the IMF website. The other indicators are based on the MONA database, which covers data from 1993 on.

Table 1.5: Selected IMF program indicators for Pakistan and Uruguay, 1950-2013

Channel of influence	Indicator	Pakistan		Uruguay	
		1950-1913 ¹	1993-2013 ²	1950-2013 ¹	1993-2013 ²
Probability	Number of programs signed	18	8	22	6
Conditionality	Number of conditions per program (average)	NA	24	NA	27
	Scope of conditions per program (average)	NA	4	NA	1
Program size	Program size (% of quota, average)	140%	207%	89%	205%
Length of approval process	Days between Letter of Intent and Executive Board approval (average)	NA	14.7	NA	23
Implementation	Implementation ratio (average)	NA	0.7	NA	0.6
Program outcome	Program outcome indicator (average)	NA	0.0	NA	0.6
Prior actions	Number of prior actions per program (average)	NA	14	NA	5

Notes: NA = not available. 1: Entire program history; 2: Programs covered by the IMF MONA database. Source: IMF (2020e), IMF (2020g), IMF MONA database.

The validity of the *channel of influence on probability*, which is promising based on the conceptual model, is not confirmed by the case studies. Both countries had almost consecutive use of IMF programs, and program approval became a matter of routine over time. Hence, indicators based on this channel hardly allow detecting an influence of vested interests. In the observed period, 1950-2013, Uruguay had slightly more programs than Pakistan, but usually with a shorter program duration. This results in an overall low validity for the indicator on the use of IMF credit. The indicator on the probability of signing an IMF credit receives a mixed validity, given its convincing theoretical base.

While conceptual validity of the *channel of influence on conditionality* is confirmed by the case studies, the mechanisms of the indicators that measure this channel do not work as expected. Both indicators, the number and scope of conditions, suffer from substantial data quality issues. Overall, both countries had a high average number of conditions. Uruguay had slightly more conditions than Pakistan, which is in line with the theory that countries subject to vested interests of IMF major shareholders have fewer conditions. However, looking at the detailed case studies, this supposed mechanism is not confirmed. Pakistan received more conditions over time to compensate for low ownership, which was probably due to US geopolitical interests. Uruguay at times received fewer conditions than expected because of good standing with IMF staff. Hence, this indicator receives a low overall validity.

The scope of conditions was almost double for Pakistan compared to Uruguay, which is at odds with the theory that countries subject to vested interests have a lower scope of conditions. Hence, this indicator receives a low overall validity.

The theoretical validity of the *channel of influence on forecasts* is confirmed by the case studies. While the case of Uruguay does not contradict theory on this channel, the case of Pakistan confirms the suggestion of optimistic bias in program forecasts in case of political interests in a country. The indicator based on this channel therefore has a high overall validity.

The combined insights for the *channel of influence on program size* are promising. Overall, overall IMF policy trends strongly influenced the program sizes in the cases of Pakistan and Uruguay. Nevertheless, for the IMF program histories of both countries, the average program size relative to quota for Pakistan is twice that of Uruguay. For Uruguay, the program sizes appear largely in line with economic need. For Pakistan, there is a clear link between political interests and program size, in particular for the programs after September 11, 2001. Overall, an indicator based on this channel has a high validity.

The low validity of the *channel on the length of approval process* is confirmed by the case studies. On average, the length of approval was longer for Uruguay compared to Pakistan. What is more, the approval process was particularly short for the supposedly highly political program of 2001 in Pakistan, as well as very long for the 2001 program for Uruguay in context of clear economic need due to the banking crisis. Hence, the indicator on this channel has a low overall validity.

The case studies only partially confirm the theoretical validity of the *channel of influence on implementation*. Both countries had considerable implementation issues during their IMF program history. The average implementation ratio was almost similar, with 0.6 for Uruguay, and 0.7 for Pakistan. This is broadly comparable to the average implementation ratio for IMF programs for all countries. The indicator on the implementation ratio further suffers from the same data quality issues that affect the indicator on the number of conditions, on which the implementation ratio is based. It also shows that the state of implementation of a condition is subject to considerable interpretation, rendering this indicator far from objective. Anecdotal evidence for Uruguay shows that IMF staff interests influenced the perception of implementation towards more positive outcomes. In Pakistan's program history, a correlate of the increasing number of conditions over time, there is evidence for increasingly superficial implementation of conditions, which renders the implementation ratio meaningless. Hence, while this channel is indeed subject to influence of outside interests, considerable data issues and limited comparability between countries results in a mixed overall validity.

The combined insights on the *channel of influence on the program outcome* are promising. In addition to the theoretical validity of the channel, the difference between Uruguay and Pakistan is striking, with an average program outcome of 0.6 for Uruguay and zero for Pakistan. The indicator on this channel receives a high overall validity.

Finally, the validity of the *channel of influence on prior actions* is confirmed by the case studies. On average, Pakistan had almost three times the amount of prior actions of Uruguay. In the case of Pakistan, anecdotic evidence underscores that its IMF programs suffered from ownership issues. At the same time, ownership did never appear to be an issue for Uruguay. The indicator on this channel has a high overall validity.

1.7 Conclusion

In this study, I proposed a conceptual model of the IMF lending process. The model allows detecting entry points for influence of vested interests of the IMF's major shareholders. The model also offers a better understanding of how political interests of the major powers influence IMF lending decisions. To test the real-life relevance of the model, I applied its insights to two case studies of long-term IMF program countries, Pakistan and Uruguay, covering the period of 1950 to 2013. The case studies of IMF program history for Pakistan, as a "political" case of IMF lending, and IMF program history for Uruguay, as a "non-political case", overall confirm the relevance of the channels of influence predicted by the conceptual model.

The main finding is that conceptually valid dependent variables for future research on IMF lending are measures of program forecasts, outcome, and size. Mixed validity is found for variables measuring the signing of an IMF program, its implementation, and the number of prior actions in a program. Low conceptual validity is found for variables measuring conditionality. While the channel of influence on conditionality is conceptually appealing, the available indicators on the number and scope of conditions have a low validity based on the case studies and suffer from important data issues. Low validity is also found for the widely used variable measuring the use of IMF credit, and for a variable on the length of approval process.

The insights from the case studies on the various dependent variables proposed in earlier research also support the idea that the selection of a good dependent variable should be based on a conceptual approach, and not only on the availability of data. It will be interesting to see in further empirical research whether the proposed dependent variables will allow a clearer understanding of the effects on vested interests in the IMF lending process.

2 Influence of geopolitical interests on IMF lending: Insights from conceptually based dependent variables

2.1 Introduction

During the GFC, the IMF dramatically increased its lending volume, and extended its support to advanced economies – unseen since many years. Helped by a massive strengthening of its lending power (IMF, 2013), the IMF played a crucial role in the stabilization of the international financial and monetary system after the crisis. However, this renewed visibility of IMF lending once again brought forward the long-standing criticism that not only economic considerations drive lending decisions, but also vested interests of the IMF's most powerful member states. An example is the highly debated 2010 program for Greece, which was widely considered as influenced by vested interests to protect heavily exposed European and US financial sectors (Catan & Talley, 2013; IEO, 2016).

If vested interests by major powers dominate IMF lending decisions, this undermines the IMF's ability to fulfil its task of ensuring global macroeconomic stability. According to the IMF's Article of Agreements, the purpose of IMF lending is “to give confidence to members by making the general resources of the Fund temporarily available to [...] correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity” (IMF, 2011). However, if this clear-cut goal is diluted by major powers to protect their interests, this reduces the effectiveness and thus the credibility of IMF programs. It could also diminish the catalytic effect of IMF financing, which is the positive signaling effect of IMF programs that is supposed to improve the program country's access to capital markets.

Such criticism is not new. During the debt crisis in emerging markets in the 1980s and the Asian crisis in the late 1990s, it was argued that geopolitical interests influenced IMF

lending, particularly by the US. Many empirical studies have since analyzed the factors influencing IMF lending. Sturm et al. (2005) and Moser and Sturm (2011) give a comprehensive overview of empirical research on the matter. However, despite the anecdotal evidence, the empirical findings are contradicting, and the significance of variables capturing such vested interests is often low. Adding to this, there appears to be little consensus on suitable dependent variables for IMF lending decisions. I argue that this is due to the difficulty of choosing a good dependent variable in an opaque lending process. Hence, there is room for improving our understanding of the IMF lending process in general.

The aim of this paper is to propose dependent variables, which are conceptually backed. This allows measuring the influence of vested interests by major powers, such as geopolitics, on the IMF lending process. This has not yet been done in the literature (to my knowledge). To derive such conceptually based dependent variables, I first develop a conceptual model of the IMF lending process. The model builds on political economy considerations on the IMF lending process proposed by Copelovitch (2010) and Breen (2014). The major powers in this study are the IMF member countries with the biggest voting shares, the G5.

Nine dependent variables are derived in this manner. Most of these have been used in prior studies, such as the *use of IMF resources*, *signing of an IMF program*, *size of an IMF program*, *number of conditions*, *scope of conditions*, and *number of prior actions*. I also propose new dependent variables, such as the *implementation ratio* and variables measuring *bias GDP forecast* and *bias in fiscal balance forecast*.

In a second step, I investigate the dependent variables in more detail based on the IMF program history and descriptive data on Uruguay and Pakistan. Both are cases of continuous IMF lending, but they differ in respect to foreign influence. While there is little evidence for Uruguay's geopolitical importance, there is ample anecdotal evidence that Pakistan has been repeatedly at the center the US geopolitical considerations.

I test the empirical validity of the nine dependent variables using a panel data set of 189 countries covering the years 1993 to 2007, which is a relatively homogenous period between the cold war and the GFC. The variable of interest to capture geopolitical interests will be temporary membership in the UNSC. This builds on Dreher et al. (2015), who study the effect of UNSC temporary membership on conditionality in IMF programs. The UNSC variable has the advantage to be quasi-random, and hence addresses the potential endogeneity issues of other variables used in earlier research. To capture the IMF's bureaucratic interests and IMF policy trends affecting all dependent variables, I add year dummies to the models.

The main finding is that the only dependent variable, which is valid from a conceptual point of view, the case studies and the empirical model, is *bias in fiscal balance forecast*. I find mixed validity for the dependent variable *bias in GDP forecast* and for the *size of IMF programs*. Findings are also mixed for the variable on *signing of an IMF program*, but only for LICs. I also find mixed results found for the *scope of conditions*. While this variable has low validity based on the conceptual model and on the case studies, the empirical model finds the expected link and hence confirms earlier literature. I find a low validity based on the empirical model, but with more mixed insights based on conceptual model and case studies, for the variables *implementation ratio* and *number of prior actions*. Similarly, based on the conceptual model, the case studies, and the empirical model, validity is low for the dependent variables *use of IMF resources* and the *number of conditions*. In most findings, differentiating between richer and poorer countries matters.

This paper is structured as follows. Section 2.2 lays out the theoretical framework. Section 2.3 presents the data used in the empirical analysis. Section 2.4 offers a closer look at two specific cases, Uruguay and Pakistan. Section 2.5 lays out the empirical strategy. Section 2.6 presents the results. The last section concludes.

2.2 Theoretical framework

2.2.1 A closer look at the dependent variable

Past research on foreign vested interests in IMF lending decisions focused on the independent variables, and, to a lesser extent, on the choice of the econometric model. Many of the various dependent variables chosen in past research make intuitively sense or are appealing due to their numeric simplicity and data availability. However, when analyzed in more detail, the conceptual backing of these dependent variables is sometimes limited, as described below. This might be one of the causes for the conflicting results on the influence of political factors on IMF lending decisions, despite ample anecdotal evidence. As Cohen (1995) states, it is often the case that the dependent variable is treated as if it was given, or simply beyond doubt. According to Green-Pedersen (2007), who analyses the dependent variable problem in the study of welfare state retrenchment⁷, this is a problem of theoretical conceptualization. Only when it is exactly known what to measure it can be discussed what data fit best (p. 13).

⁷ The dependent variable problem is further addressed in the areas of climate change (Dupuis & Biesbroek, 2013), marital quality (Norton, 1983), and in the study of policy change more generally (Howlett & Cashore, 2007).

Based on the above considerations, the goal is to find dependent variables that are a good representation of IMF lending decisions based on a conceptual model of the lending process.⁸ This requires an in-depth understanding of the mechanisms of the IMF lending process. Following the approach by Green-Pedersen (2007, pp. 3-4), it needs to be clarified what, within the IMF lending process, actually constitutes a decision, which then may or may not be influenced by the independent variables that I want to test. Then, channels need to be identified through which decisions can be influenced by the supposed political interests, and it needs to be analyzed how these channels can be measured best. This allows detecting conceptually valid dependent variables to measure the influence of geopolitical interests in the IMF lending process.

2.2.2 A conceptual model of the IMF lending process

The rather obscure inner workings of the IMF decision making process, and therefore ultimately the question of who effectively rules IMF decisions, have given rise to several strings of interpretation from a political economy perspective.⁹ There have been a number of attempts in the literature to design a conceptual model of the IMF lending process, mostly using static economic equilibrium models.¹⁰ I propose a conceptual model of the IMF lending process (see Figure 2.1) which combines official information by the IMF on the lending process with political economy considerations. This model allows discerning channels of influence of vested interests along the process.

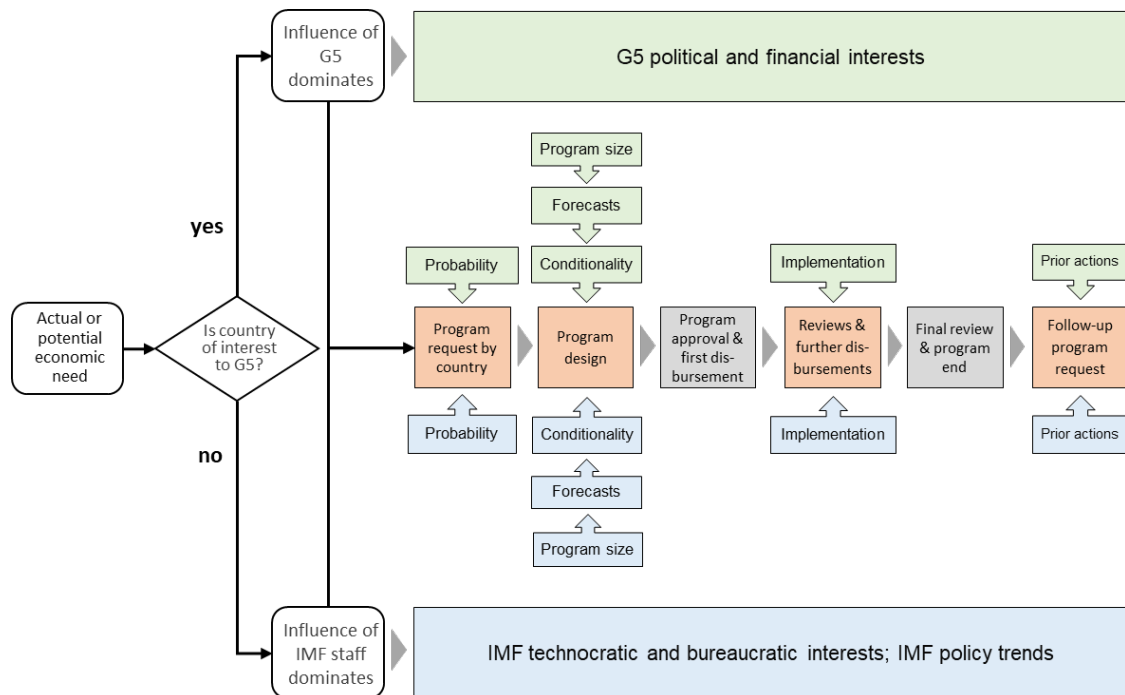
The starting point of the model is the actual or potential economic need of a country for an IMF program (left side of the model). Without economic need, is very unlikely that a country will recur to the IMF given the political costs attached to IMF loans due to the conditionality. Based on Copelovitch (2010), this results into a decision tree (depicted in the left part of the figure). Depending on the importance of a country to the major shareholders of the IMF, the G5, either their interests dominate or the bureaucratic interests of IMF staff dominate (pp. 13-14). If the G5 have vested interest in the country, their influence will dominate the IMF lending process, from the program request by the country until the final program review and a possible follow-up program request. However, if the G5 are not particularly interested in the country, then the bureaucratic interests of IMF staff and policy trends of the IMF will dominate along the lending process.

⁸ See also Vreeland (2006).

⁹ For a good overview of recent literature on these competing views, see Breen (2014).

¹⁰ For example, see Drazen (2002), Joyce (2003), Corsetti et al. (2003), and Vreeland (2003a).

Figure 2.1: Conceptual model of the IMF lending process



Notes: The starting point of the IMF lending process is the actual or potential need of a country for IMF funds, which results into a decision tree at the left of the chart. This results in the orange and grey flow chart in the middle, which depicts the official IMF lending process. In this, grey boxes are automatic steps, whereas orange boxes are steps that are subject to influence. The green and blue arrows on the top and bottom depict channels of influence based on political economy considerations. Green arrows channel interests by the major IMF shareholders, the G5, and blue arrows channel bureaucratic interests and policy trends by the IMF.

This results into two spheres of influence onto the official lending process. These are the vested interests of the G5 (depicted at the top, in green) and the IMF bureaucratic interests and policy trends (depicted at the bottom, in blue).

The staggered process in the middle of the model (orange and grey boxes with arrows between them) depicts the steps of the official IMF lending procedure for a standard IMF program¹¹ (IMF, 2020c). The start is a country's actual or potential economic need of IMF support, which leads to the program request. With this, the design phase starts, in which country authorities and IMF staff discuss program modalities such as its size, lending vehicle, program length, number of instalments, as well as the economic reform plans and the respective conditionality. The design phase results in a staff report laying out all details of the envisaged program, which are then presented to the IMF Executive Board for approval. While not automatic, this approval is quasi expected. After approval, the program implementation phase begins. The first disbursement takes place immediately after program approval. The subsequent disbursements take place after program reviews.

¹¹ This does not cover special facilities that allow once-time up-front access, such as the facilities designed for rapid support in case of natural disasters.

During these, the continued implementation of conditionality needs approval by the Executive Board to ensure that the program remains on track (Fritz-Krockow & Ramlogan, 2007, p. 21).

The steps in this staggered process are not all subject to the same level of outside influence. Hence, I differentiate between the steps of the lending process that can be influenced by vested interests (orange boxes), and those steps that take place largely automatically and on which influence is hence limited or not possible (grey boxes). This is based on the idea of channels of influence during the IMF lending process proposed by Dreher et al. (2014, pp. 7-8).

2.2.3 Channels of influence and possible dependent variables based on the conceptual model

Based on the model, several channels of influence can be derived along the process of IMF lending. Table 2.1 shows the channels of influence and possible dependent variables to capture them, including whether they were used in past research.

Table 2.1: Channels of influence in the IMF lending process and dependent variables

Channel	Dependent variable	Conceptual validity	Use in past research
Probability	Use of IMF resources	Low	yes
	Signing of IMF program	Mixed	yes
Conditionality	Number of conditions	Low	yes
	Scope of conditions	Low	yes
Forecasts	Bias in GDP forecast	High	no
	Bias in fiscal balance forecast	High	no
Program size	IMF program size	High	yes
Implementation	Implementation ratio	Mixed	no
Prior actions	Number of prior actions	Mixed	yes

Program request: channel of probability

In past research, the most widely used dependent variables for IMF lending decisions are *use of IMF resources* in a given year, and the *signing of a program* in a given year. Both variables can be attributed to the channel of the probability of a program, which relates to the first step in the process, the program request. The widespread use of these dummy variables is arguably based on conceptual simplicity and on data availability. From a conceptual perspective, dependent variables relating to the probability of a program are

based on the idea that major power interests make an IMF program and thus the use of IMF resources more likely, possibly as the program country expects that these interests render a program less costly, as the size of the program might be higher while its conditionality might be softer.

However, this rationale has caveats. First, a dependent variable on the *use of IMF resources* in a given year is likely low, as the payout of IMF programs is usually in tranches occurring every 3 to 6 months, leading to a very blurred variable. The dependent variable on *program signing* should hence be relatively more insightful. Second, and more fundamentally, IMF programs carry considerable stigma. They are always costly for a government, even if conditionality were lower or the size larger. It is therefore arguably rare that a country asks for an IMF program without the economic need to do so. If geopolitical interests in a country allow for a *less* costly program and thus increase its probability, this effect is likely small and difficult to detect. Similarly, for a given program request, a positive decision to lend the money is not more likely in the presence of vested interests. As the IMF accords virtually all program requests, it does not make a lot of sense to test whether vested interests render the occurrence of IMF programs in general more likely.

This is confirmed by Sturm et al. (2005) who find that while domestic political considerations may influence the precise timing of an IMF program request, geopolitical interests by large IMF member states hardly influence this.¹² They explain the lack of impact of political variables on the dependent variable use of IMF credit with the fact that disbursement decisions are usually based on economic factors (p. 194). Moser and Sturm (2011) confirm these findings (p. 17).

In conclusion, this first step in the process can be considered an automatic step, which is mostly the consequence of actual or potential economic need. Hence, from a conceptual perspective, the channel of probability has a mixed validity, with low validity for the use of IMF resources and mixed validity for the signing of an IMF program.

Program design phase: Channel of conditionality

The next step in the process is the program design phase, which is clearly subject to influence. As Copelovitch (2010) suggests, an IMF loan request is prepared by IMF staff “in the shadow” of a potential vote by the Executive Board. During the design phase, IMF staff constantly takes the interests of the G5 into account (p. 57). Hence, the effective decision-making process on IMF lending takes place before an IMF loan request is

¹² An exception would be if a country has the economic need but does not request a loan for some reason, which would probably be difficult to capture in the data, or if a country request is turned down, which is hardly ever the case.

approved by the IMF Executive Board. A first channel of influence in this phase is conditionality, which can be considered as the costs for a country that arise from asking for a loan from the IMF.

Several studies suggest that foreign political interests in a country receiving IMF loans undermine the credibility of program conditionality (Dreher et al., 2015, p. 7). Various studies have tried to capture a possible impact on program conditionality by counting the number of conditions in a given program. Breen (2014) finds clear evidence exposure of a country to major power interests through finance and trade links impact the *number of conditions* in IMF programs (p. 14). Dreher et al. (2015) find that geopolitical interests effectively influence the number of conditions, as temporary UNSC membership leads to less prior actions and performance criteria in a given program, but the link is weak.

From a conceptual point of view, however, simply counting conditions is problematic. In the 2011 review of conditionality by the IMF, it is argued that counting performance criteria is not useful, as the average number of conditions has evolved over time as a consequence of IMF policy adaptation. Obvious differences in the number of conditions for countries would also raise questions of even-handedness, which IMF staff would likely prefer to avoid. Hence, from a conceptual perspective, the validity of the number of conditions is rather low.

Another dependent variable related to measuring the impact of vested interests on program conditionality is the *scope of conditionality*. This variable was proposed by several newer studies, such as Stone (2008) and Dreher et al. (2015), simplified by the fact that related data has become available through the IMF MONA database. Stone (2008) finds that US geopolitical interests are linked to conditions in fewer areas, such as monetary policy, fiscal aspects, or financial stability – hence a more limited scope of conditions.

Dreher et al. (2015) argue that a broader scope of conditions, which implies more conditions covering more areas, increases the effective level of conditionality and thus the burden on the government. They find some evidence that geopolitical interests of major IMF shareholders, as measured by temporary UNSC membership, lead to reduced conditionality in crucial policy areas such as debt repayment, balance of payments, credit to the government, and domestic pricing (pp. 22-23).

However, this variable also has conceptual issues. First, as it is the case with all variables relating to program design, the scope of IMF conditionality has varied substantially over time because of IMF policy trends. Second, it is not straightforward that conditions in more areas of the economy automatically imply a greater burden on the countries' authorities. One condition that implies fundamental change in one crucial policy area may be costlier than several conditions implying small changes in many not very crucial areas of the economy. Third, a higher scope of conditions can also point to a

lower-quality program, in the sense that there is less focus on some key areas of reform, which is particularly important in crisis countries experiencing capacity constraints or reform fatigue. There are many reasons why a specific program may be of lower quality, such as less experienced IMF staff or a particularly messy negotiation between IMF staff and the authorities. In conclusion, the conceptual validity of the dependent variables measuring conditionality is limited.

Program design phase: Channel of forecasts

A second channel of influence in the program design phase are program forecasts. Program forecasts are often more an outcome of negotiations between the Fund and the country authorities than based on economic models. In addition, forecasts have the power to influence program outcomes (IEO, 2014, p. 42). Hence, influencing forecasts seems to be a valid channel for foreign interests.

It can be argued that geopolitical interests could lead to forecast bias, which could be both overly optimistic and pessimistic, depending on the goal. An overly optimistic forecast bias, which paints economic facts too rosy, could make it easier to get IMF Executive Board approval and induce credits supplementary to those of the IMF based on the IMF's catalytic effect. On the other hand, an overly pessimistic forecast bias, which presents the facts too bleak, makes it easier to meet program targets and puts less reform pressure on the government.

The IEO report finds that while forecast bias varies with the IMF lending vehicle, statistically significant biases exist for short-term GDP growth, which tends to be forecast below what later turns out to be the actual number. Pessimistic bias is significant for the fiscal balance, which leaves more room for maneuver to the governments. It is also found that the biases are particularly present at program start and tend to fade out within one year after program onset. Forecasts are often reduced or reversed at the first program review (IEO, 2014, pp. 42-43).

Bias in IMF forecasts has been analyzed in the past in the context of surveillance, as for example in Dreher et al. (2008), but the link between bias in forecasts and foreign interests in IMF lending has not yet been researched. Given the conceptual validity of dependent variables focusing on forecasts, I analyze the effect of geopolitical interests on two dependent variables, *bias in GDP forecast* and *bias in fiscal balance forecast*. Bias in the forecast is calculated based on the difference in forecasts at program proposals and at the first program review.

Program design phase: Channel of program size

A third channel of influence in the program design phase is the loan size agreed at the approval of a new IMF program. For such a dependent variable, data is relatively easy to obtain.¹³ Consequently, this variable has been widely used in past research.¹⁴ While the *program size* is supposed to be based on a country's quota and the depth and nature of its economic problems, it is suggested that vested interests can lead to a higher IMF program size than indicated by economic necessity.

In line with this, Oatley and Yackee (2004) find that IMF loan size is influenced by the amount of debt the country owes to US Banks, corresponding to US financial interests (p. 41). More recently, there is anecdotal evidence that some of the very large IMF programs, such as for Greece in context of the European debt crisis, were subject to considerable vested interests. Very high access levels are also mentioned in context of non-economic considerations in the IMF's review of conditionality of 2011 (IMF, 2012b). At the same time, the size of IMF programs has increased overall, and has varied substantially in the past decades as a consequence of IMF bureaucratic interests and policy trends. Arguably, these influences are not country-dependent and can be captured by adding time dummies in the empirical model. Hence, from a conceptual perspective, program size is an effective channel of influence within the IMF program design phase.

The next step in the lending process, program approval by the IMF Executive Board and the disbursement of the first tranche, can be considered automatic. Voting in the Executive Board does not appear to play a role, as there are very few instances in history where the Executive Board effectively turned down a loan request, or let alone modified it.¹⁵ The first disbursement after program approval, as described in the official documents on the IMF lending process, is again practically automatic.¹⁶

Program reviews: Channel of implementation

At the next step in the process, the program reviews, a channel of influence opens up that relates to *program implementation ratio*. This is the measure of how many conditions in an IMF program are actually implemented by the country. Dreher et al. (2014) mention the

¹³ Data on IMF program size is reported for all past programs on the IMF website, and for newer programs in the IMF MONA database.

¹⁴ For example, Oatley and Yackee (2004), Moser and Sturm (2011), and Dreher and Vreeland (2011).

¹⁵ Rejections of a program request are rare and limited to particular circumstances, such as arrears to the IMF or legal issues of fundamental nature. Recent examples of rejected program requests are Israel in 2014 (Goldmann, 2012), Zimbabwe in 2014 (Daily Nation, 2014), and Sri Lanka in 2015 (Gunadasa, 2015).

¹⁶ While also the subsequent disbursements are automatic after positive program reviews, it is less clear to what extent the program reviews themselves are subject to influence. Generally, there are few cases where a negative program review led to the stop of an IMF loan pay out, making dependent variables relating to channels of influence on program reviews difficult to interpret.

possibility of a link between political interests and lack of success of aid programs (pp. 7-8). In the IMF's review of conditionality of 2011, the impression is given that a program may go beyond economic considerations in case of implementation problems, such as delayed or cancelled reviews.

At the same time, more lenience towards conditionality could also imply that conditionality is more superficial and that staff is more likely to consider a specific target as met (IMF, 2012b). This would suggest that geopolitical interests lead to a higher implementation ratio. In conclusion, the validity of this channel is high, but the sign is not clear, which could blur the variable. Hence, the conceptual validity of the channel of implementation is mixed.

The next process step, the program end, is purely automatic. There have been no attempts in the literature to capture influences in this process step.

Successor program: Channel of prior actions

If a country receives a successor program after completing an IMF program, another channel of influence opens up, on the *number of prior actions* of a program. Prior actions are measures that need to be fulfilled before the first tranche of the arrangement is paid to the country. According to the IMF, prior actions are meant to ensure that the foundations are in place for a program to succeed, or are put in place between reviews to put a program back on track following deviations from it (IMF, 2013a). Prior actions are optional and they can be added to any program, not only successor programs. However, if they are added to successor programs or increased in number, this could be an indication that there is an issue with ownership. Hence, in Figure 2.1, the channel of prior actions is depicted to have its influence in-between programs.

In 2011 review of conditionality, the IMF argues that the number of prior actions in a program are an indicator for lack of ownership of the program by country authorities (IMF, 2012b, p. 19). Vested interests of major IMF shareholders in a program might reduce the program ownership by the country authorities, as the country is less inherently interested in a successful program outcome from an economic perspective. Hence, as programs are virtually always granted even if a country's track record of past programs is low and as reviews mostly pass no matter what, a high number of prior actions could be a signal that there are serious issues with a program.

Past research has not specifically tested the link between prior actions and vested interests. However, prior actions have been analyzed as a subset of the overall number of conditions in Dreher et al. (2015). While the authors find an overall weak link between the number of conditions and UNSC membership, they find that a significant *negative* link between UNSC membership and the number of prior actions (p. 16). Their interpretation

is that less burden is put on countries that are strategically important for the IMF's major shareholders. It could also be argued that with fewer prior actions, program payout starts faster. In addition, as with other aspects of program design, the number of prior actions in a program is influenced by IMF policy trends and has varied greatly over time. Further, the use of prior actions in program design is also influenced by IMF bureaucratic interests to ensure payback of outstanding IMF loans from earlier programs or already disbursed program tranches.

As a conclusion, prior actions appear to be a valid channel of foreign influence, but the effect of influence could go in both directions, as those interests could both increase and reduce the number of prior actions. Hence, it could be that the empirical results on this variable are blurred, leading to a mixed validity of the channel.

2.3 Data

Section 2.8.1 in the appendix gives an overview of the summary statistics of all variables. Section 2.8.2 offers details on the construction and source of the variables.

2.3.1 Dependent variables

I include nine conceptually based dependent variables in the data set. The dummy variable *use of IMF resources* measures the channel of the probability of an IMF program. The dummy variable *signing of IMF program* also captures the channel of probability of an IMF program. Whereas the use of IMF resources is one in all years in which a country draws on IMF funds (which can be during several years for a multi-year program), the second variable is 1 only in the year of signing the program.

The *number of conditions* measures the channel of influence of the conditionality inherent to an IMF program. This count variable measures only the binding and measurable "quantitative performance criteria" (QPC) of an IMF program. The *scope of conditions* is similarly a count variable, which measures in how many different areas of the economy reforms (measured by specific conditions) are demanded by the IMF in the program.

Bias in GDP forecast is a continuous variable, which captures the channel of influence of the forecasts on which an IMF program is based, specifically the change in the short-term forecast of real GDP growth from program approval to first review. It is a positive number if the forecast is adjusted upwards at the first review, which could suggest that there was a too pessimistic bias at program approval, all other factors being equal. If the number is negative, it implies downwards adjustment at program review, which suggests

that there was an optimistic bias. *Bias in fiscal balance forecast* is a second variable capturing the channel of influence of the forecasts. It focuses on the change in the short-term forecast of the fiscal balance from program approval to first review.

IMF program size is a positive continuous variable, which captures the channel of influence of the size of an IMF program. It is scaled to a country's GDP. *Implementation ratio* is a count variable, which captures the channel of influence of stringency of oversight at the review stage. It measures how many conditions in a program were met; a higher number indicates that more conditions were implemented. The *number of prior actions* is a count variable, which measures the channel of influence of ownership. It captures the amount of prior actions that are imposed on a country before it receives IMF resources.

2.3.2 Independent variables

The independent variables comprise the variable of interest and the control variables. The variable of interest in this study is a country's temporary membership in the UNSC, as proposed by Dreher and Vreeland (2011) and Dreher et al. (2015). Based on a seat allocation that varies for each region, membership appears to be largely idiosyncratic. Several studies have shown that the variable is a valid measure of geopolitical importance of a country (Dreher et al, 2015, p. 9). The variable is constructed as a binary variable, which takes the value of 1 if a country is a member of the UNSC in a given year, and the value 0 otherwise. The membership usually lasts for two years; as the effect is expected to be higher in anticipation of membership and in the first year, and should ebb off in the second year of membership, this variable enters with a one-period lead.

The control variables are based on the list of economic and political variables found to be the most robust determinants of IMF programs (signing and size) by Moser and Sturm (2011, p. 325). Newly available data on financial globalization based on the KOF globalization indicator are also added.

2.4 A closer look at the cases of Uruguay and Pakistan

To reduce the distance to the object of study, the conceptual model is substantiated by case studies of IMF lending history of two countries that have a history of continuous use of IMF resources. The approach followed for case selection is to find two critical cases of program countries as proposed by Flyvbjerg (2006). A critical case can be defined as a case that has strategic importance for the research question. In investigating whether a dependent variable may hold information on geopolitical interests in IMF lending

decisions, critical cases are the cases that are extreme along the dichotomy of being “highly influenced” or “not influenced at all” by geopolitical interests. The “non-influenced” case should be marked by the limited interference of vested interests.

Uruguay is a good candidate for the “non-influenced case”. A prolonged user of IMF resources, its geopolitical importance is low. It ranks low among the recipients of US aid flows and arguably is not in a strategically important location. Second, its international financial integration is limited, and it is not a LIC for which conditionality rules are different due to concessional lending. It is also not a small island state, which faces very particular economic circumstances.

For the “influenced case”, a good candidate that is also a prolonged user of IMF resources is Pakistan. The country is among the key recipient of US aid flows, and there is large literature on political influences in its IMF programs and other forms of aid flows, as described below.

2.4.1 Uruguay

Uruguay has a long history of IMF program use. From 1961 to 2006, Uruguay had 22 SBAs. Over this period, the Uruguayan economy witnessed two debt crises, but also three long periods of more or less stable economic growth. Nevertheless, with on average less than a year between programs, Uruguay almost continuously relied on IMF support. Many of Uruguay’s IMF programs were never drawn upon, and were hence of precautionary nature only. On the other hand, some programs that were originally intended as precautionary were effectively drawn upon.

The rationale for Uruguay’s recourse to IMF lending was based on economic considerations, but not necessarily always in the sense of “actual or potential economic need”. Uruguay’s rationale for the 1999 IMF program was particular, according to Vreeland (2003b), as their economic need, as calculated by the reserves relative to imports, was actually low. Also, the IMF’s 2005 account of Uruguay’s program history supports the perception that Uruguay often did not request IMF support out of economic necessity. According to the IMF, the precautionary SBAs for Uruguay in the 1990s were considered as a shield against contagion in a volatile environment, for a “generally responsible” country with strong fundamentals. Adding to this, IMF programs were aimed at supporting the authorities’ reform efforts. Finally, the programs were considered a seal of approval for the country’s policies to reassure international financial markets.

Interestingly, an exit from these precautionary programs was not considered, and prolonged use of IMF lending was rather seen as a sign of good performance and cooperation (IMF, 2005b, p. 20). Apart from economic motives, other interests also

mattered in Uruguay's IMF program history. Domestic political factors certainly were important, as many programs had the role of a seal of approval for the government's often unpopular reforms. Financial sector interests may have influenced the enormous size of the 2002 program. According to John B. Taylor, who was Treasury Undersecretary for International Affairs in the US administration in 2002, the Uruguayans actually asked to the US for help. This led the US not only to provide the bridge loan, but to actually convince the IMF to accord the program against its initial will.

It remains somewhat unclear why the US did this, beyond "helping a friend" (Taylor, 2007). Nevertheless, there is no indication for outright protection of US financial sector interests in this case. Adding to this, IMF bureaucratic interests may have played a role in Uruguay's programs. The rationale of the 2005 program for example was to allow Uruguay to regain access to capital markets, which would in turn ensure that the IMF would be paid back (IMF, 2008b, p. 3). At the same time, there is no indication that the US stance within the IMF towards Uruguay was influenced by geopolitical considerations.

2.4.2 Pakistan

There is widespread anecdotal evidence for strong geopolitical interests that influenced IMF lending to Pakistan. According to the IEO case study from 2002 on Pakistan, the poor track record of IMF programs in Pakistan was at least to some extent rooted in geopolitical considerations that weighed on decision-making. While the report states that there is no hard evidence, there appears to be ample anecdotal evidence, based on interviews with Pakistani authorities and IMF staff, that many programs primarily served political considerations. The report further states that there appeared to be a sense that due to geopolitical interests, the IMF would support Pakistan irrespective of program implementation or success. In this context, the report states, "the unrealistic macroeconomic assumptions as well as the pretense of toughness were merely a way of face-saving to justify continued lending to Pakistan" (IEO, 2002, p. 131). Ahmad and Mohammed (2012) also describe IMF lending to Pakistan as connected to the on and off political relations between the US and Pakistan.

At the core of US interests in Pakistan is the country's strategic location at the Persian Gulf. In the 1970s and 1980s, during the Cold War, Pakistan sided with the US, while India was closely linked to the Soviet Union. US-Pakistani relations were particularly close during the Afghan War in the 1980s, and became less close after this (pp. 2; 4-6). Anwar (2006) describes further anecdotal evidence for politically motivated aid flows by the US to Pakistan, citing the Pressler Amendment at the US senate in 1985, which clearly links US aid flows with the halt of nuclear arms development in Pakistan (p. 9). According to

Ahmad and Mohammed (2012), a decline in direct US assistance to Pakistan led to more US lobbying for IMF support to keep Pakistan somewhat supported. During these times of less US aid for Pakistan, the IMF also engaged in defensive lending to protect its earlier engagement (Ahmad & Mohammed, 2012, pp. 4-6).

US interests in Pakistan became particularly important after the attacks of 11 September 2001. This also relates to IMF lending. In the National Security Strategy of the United States of America from September 2002, the US commits itself of help emerging markets to access to larger capital flows at lower cost, with the goal to achieve political and economic stability in the countries in question. For this goal, it is further stated that the US would work actively with the IMF (Bush, 2002). Momani (2004) describes US involvement in IMF funding to Pakistan after the attacks of 11 September 2001 as a form of American economic statecraft, which is a tool to achieve foreign policy objectives via economic cooperation, such as providing foreign aid or investment to allies, or on the other side imposing sanctions or suspending foreign aid to foes (p. 42).

2.4.3 Implications of the case studies for the IMF lending process model

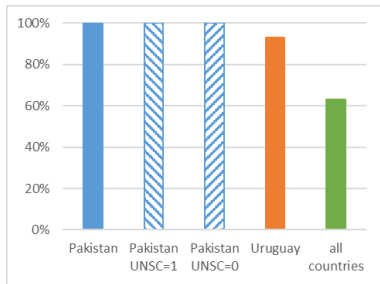
The IMF program history for Uruguay and Pakistan countries gives valuable insights on the workings of the channels of influence of foreign vested interests. Figure 2.2 offers descriptive evidence of the various channels of influence for both countries. For Uruguay, IMF lending appears to be hardly influenced by vested interests of the major IMF shareholders. At the same time, Uruguay's IMF programs appear to be heavily influenced by IMF interests, both by IMF policy trends and by the IMF's bureaucratic interests. For Pakistan, in stark contrast to Uruguay, there is ample evidence for geopolitical influences in IMF lending, but varying over time with changing relations to the US, leading to a complex program history.

Channel of influence: probability

Both countries have been quasi-constant users of IMF resources over decades (see Figure 2.2, chart a). Follow-up programs were largely considered as approved automatically. In Uruguay, the justification for program approval became a matter of routine according to the IMF over time (IMF, 2005b, p. 20). In Pakistan, the average years without program after a program ended is only 1.6. Accordingly, the probability of using IMF resources between 1993 and 2007 was 100% for Pakistan, and 93% for Uruguay. Hence, based on the case studies, the validity of a dependent variable on the *use of IMF resources* is low, which confirms the conceptual model.

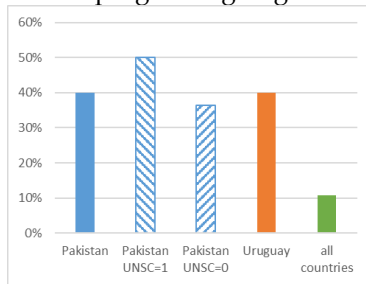
Figure 2.2: Descriptive evidence for Uruguay and Pakistan

Chart a: Probability using IMF resources



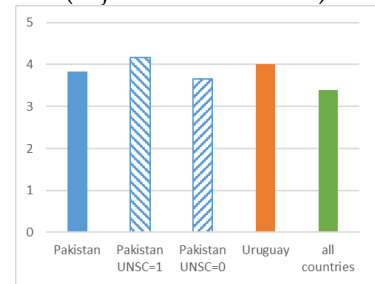
Pakistan and Uruguay offer little insight on this variable as they almost constantly had IMF programs.

Chart b: Probability of IMF program signing



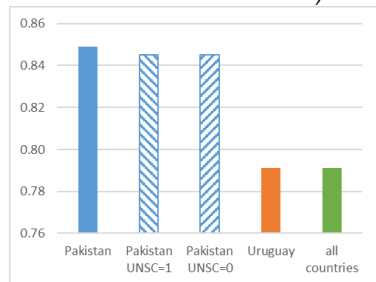
Pakistan and Uruguay had a similarly high probability of signing another arrangement – Pakistan even higher while UNSC member.

Chart c: Number of conditions (adjusted for duration)



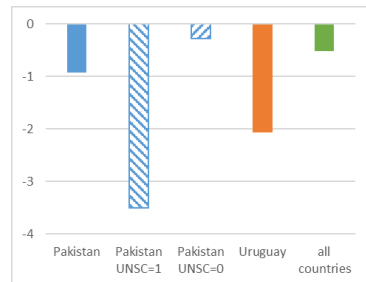
Pakistan and Uruguay had more conditions than other countries, and Pakistan even more while UNSC member.

Chart d: Scope of conditions (adjusted for duration and number of conditions)



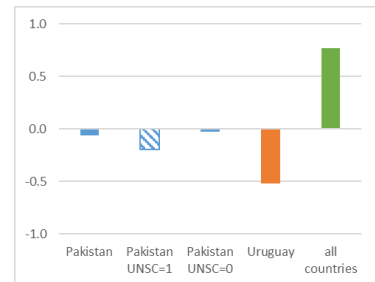
While average for Uruguay, Pakistan had a consistently high scope of conditions, independent of UNSC membership.

Chart e: Bias in GDP forecast



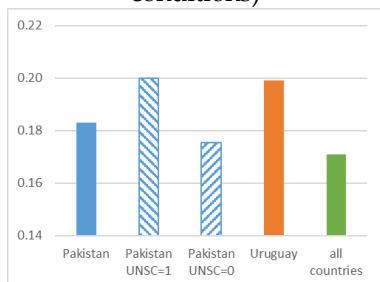
Uruguay and Pakistan both had relatively more optimistic bias in GDP forecasts, but Pakistan much more so while UNSC member.

Chart f: Bias in fiscal balance forecast



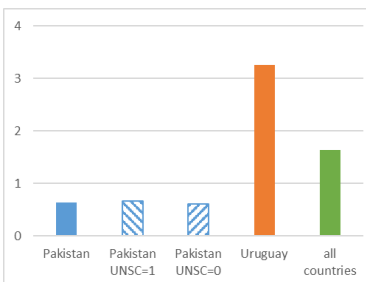
Contrary to the country mean, Uruguay's fiscal balance had an overestimation bias – Pakistan only while UNSC member.

Chart g: Implementation ratio (adjusted for number of conditions)



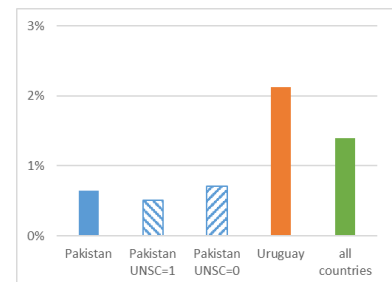
Uruguay and Pakistan both had high implementation ratios – Pakistan even more so while UNSC member.

Chart h: Number of prior actions (adjusted for duration)



Uruguay had many more prior actions than the country mean, while Pakistan had consistently few.

Chart i: IMF program size (relative to GDP)



Uruguay had particularly large programs relative to GDP, while Pakistan had relatively small programs.

Notes: Charts show the mean of the respective variable for Pakistan (blue), Uruguay (orange) and all 189 countries in the sample. The sample period is 1993-2007. For Pakistan, information on the impact of temporary membership in the United Nations Security Council (UNSC) is added.

The probability of *signing an IMF program* during the period was 40% per year for both countries, again reflecting the consecutive signing of IMF programs (see Figure 2.2, Chart b). Interestingly, the probability was higher for Pakistan during its time as a temporary UNSC member. As Pakistan was already constantly using IMF resources and hence signing one program immediately after the end of the last one, an explanation could be that UNSC membership led Pakistan to cancel current arrangements and enter new arrangements with better terms. This would be in line with theory. Hence, the case studies find that a dependent variable on the signing of IMF programs is valid.

Channel of influence: conditionality

In both countries, the *number of conditions* varied greatly over time and was strongly influenced by changing IMF policy trends. Adjusted for program duration, Uruguay had slightly more conditions on average than Pakistan (see Figure 2.2, Chart c). Furthermore, Pakistan's number of conditions increased in line with lack of program success. Hence, ownership issues trumped geopolitically motivated lenience. During times of UNSC membership, the number of conditions was even slightly higher.¹⁷ A closer look at the MONA database reveals important data quality issues with the number of conditions for Pakistan.

Pakistan had a consistently higher *scope of conditions* than Uruguay (see Figure 2.2, Chart d), independent of UNSC membership. Uruguay was comparable to the country average. This finding supports the idea that in Pakistan, a more difficult negotiation process between IMF staff and the authorities sometimes led to lower-quality programs given the complex government situation and vested interests. At the same time, the program negotiation process was probably more straightforward in Uruguay, as the authorities were possibly more interested in simply solving the economic challenges as fast as possible. In any case, the finding does not confirm the idea that geopolitical interests lead to a lower scope of conditions. Overall, the validity of the channel of conditionality is low based on the case studies.

Channel of influence: forecasts

During Uruguay's 2005 program, in context of the early cancellation of the program due to improved economic conditions, it was discussed that program projections on market access were rather too pessimistic (IMF, 2008b, p. 26). In the case of Pakistan, too optimistic projections and targets were a major problem in program design, particularly on GDP and

¹⁷ Such a pattern is also described in Stone (2008).

fiscal balance, which helped in an environment of strong pressure to agree on a program (IEO, 2002, pp. 122-124).

Looking at the data for *GDP forecast bias* (see Figure 2.2, Chart e), there is a slight optimistic bias for all countries. The forecast bias in GDP is considerably stronger for Uruguay, and a bit higher than average for Pakistan. Interestingly, in the years of Pakistan's temporary UNSC membership, there was a very strong optimistic bias in GDP forecasts. Hence, on average, the case studies support the conceptual perspective on GDP forecast bias, and suggest a negative link between geopolitical interests and GDP forecast bias: downward revisions become necessary, as there was an optimistic bias at the program request.

For *fiscal forecast bias* (see Figure 2.2, Chart f), the positive mean for all countries implies positive revisions of the fiscal balance, and hence there is a pessimistic forecast bias on average for the fiscal balance, which confirms the findings by the IEO 2014 report. This is however not true for Uruguay and Pakistan, which both have a negative and hence too optimistic average bias in fiscal forecasts. For Pakistan, this becomes only visible in the years were Pakistan was a temporary UNSC member. This finding confirms the theory: In years when Pakistan is a UNSC-member, it tends to get overly optimistic fiscal balance forecasts at the moment of program request, which might make it easier to get the program passed at the IMF Executive Board. However, the same optimistic bias is found for Uruguay, where I assume that no US geopolitical interests are at play – hence, other factors must have driven the result. Overall, the case studies suggest a somewhat mixed validity for the variable on bias in the fiscal balance forecast.

Channel of influence: implementation

In both countries, the variable *program implementation ratio* suffers from the same data quality issues that affect counting the number of conditions. In addition, the information on the implementation of a condition is often lacking or contradicting in the MONA database. Looking at the data (see Figure 2.2, Chart g), the implementation ratio, corrected by the number of conditions (as more conditions could imply more superficial conditionality and hence conditions that are easier to meet), was slightly higher than the average of countries for Uruguay, while it was average for Pakistan.

For Uruguay, anecdotal evidence suggests that its good relations with the IMF influenced the implementation ratio. Staff apparently accepted that Uruguayan authorities, particularly in precautionary programs, only implemented conditions that “would not generate excessive frictions in Uruguay's consensus-based polity” (IMF, 2005b, p. 14).

Pakistan's track record in program implementation was very weak (IEO, 2002, p. 122). This is hardly reflected in the data, which can be explained by increasingly superficial implementation. Missed targets were often simply reset at the next review, which made the program easier to implement (Ahmed, 2012, p. 8). Strikingly, during the years of UNSC membership, Pakistan's implementation ratio was even better than the country average. This suggests that in the presence of geopolitical interests, conditionality was less stringent or staff was more inclined to consider a target as met. Indirectly, this finding further underlines the limited usefulness of counting conditions. Overall, the case studies suggest that geopolitical interests are linked to a better implementation ratio, but the evidence could be blurred due to conflicting geopolitical and bureaucratic interests.

Channel of influence: prior actions

In the case of Pakistan, anecdotal evidence shows that IMF programs in Pakistan suffered from ownership issues. Therefore, the *number of prior actions* was increased over time (IEO, 2002, pp. 127-129; Ahmed, 2012, p. 4). There is no anecdotal evidence for ownership issues in Uruguay's programs. Looking at the data (see Figure 2.2, Chart h), Uruguay had a considerably higher number of prior actions than the average across countries, while Pakistan was well below average. This would underscore the idea that countries with geopolitical interests face less prior actions. Interestingly, however, during years of UNSC membership, Pakistan faced slightly more conditions, pointing to ownership issues.

Overall, while anecdotal evidence for Pakistan would suggest a positive link between geopolitical interests and the number of prior actions, the data give more support to the theory that there is a negative link. The validity based on the case studies is mixed as opposing mechanisms seem to be at play.

Channel of influence: program size

Until the 1990s, the average *program size* relative to quota for Pakistan is more than double the amount of Uruguay. However, after the banking crisis in 2002, Uruguay had very large IMF programs. In the case of the 2005 program, it was questioned whether the program had been too big in size (IMF, 2008b, p. 26). Overall, however, Uruguay's massive programs after 2002 appear to reflect the depth of the crisis, which would suggest that the program size could be explained by economic reasons.

The size of IMF programs for Pakistan increased strongly over time, and particularly after the 1980s. Similarly, the IMF quota of Pakistan increased by ten between 1950 and 1999. Anecdotal evidence suggests evidence for geopolitical interests affecting program size in Pakistan for the 2008 program. Many IMF Executive Board members were initially against the proposed program, which allowed very large access. In the end, this opposition

was overcome by intense US lobbying for Pakistan (Ahmad & Mohammed, 2012, pp. 18-19).

Looking at the data (see Figure 2.2, Chart i), the size of Pakistan's programs was actually below the average across all countries, with little change during UNSC member years, while Uruguay's programs were well above average. This would suggest a negative link between geopolitical programs and program size, which is contradictory to the anecdotal evidence. Overall, the case studies appear to confirm the conceptual idea that program size is mainly dominated by economic need, but that geopolitical interests can lead to higher program size.

2.5 Method of Analysis

2.5.1 Econometric model

The equation to be tested is:

$$Y_{it} = \alpha_i + \beta_1 GEO_{it} + \beta_2 Z_{it} + \delta_t + u_{it}, \quad (1)$$

where Y_{it} is the dependent variable, GEO_{it} are geopolitical interests as captured by the variable on UNSC membership. Z_{it} is a vector of economic and political controls. The impact of aggregate time trends is captured by a vector of year dummies δ_t . This is important to capture the IMF's bureaucratic interests and IMF policy trends, which affect all dependent variables, as described in the conceptual model. The beta vectors capture the effect of the independent variables on the dependent variable. Finally, α_i represent country fixed-effects, and u_{it} is the error term.

Panel OLS is used for all dependent variables for transparency and comparability. Depending on the variable characteristics, conditional logit and Poisson are the preferred models. Where OLS is the preferred model but heteroscedasticity is an issue, FGLS is added for comparison. However, sample properties for FGLS are unknown for small N, in view of the fact that N is 189 countries in the present data set (Wooldridge, 2010, p. 157). Robust standard errors to control for heteroscedasticity and autocorrelation are applied to all regressions.

2.5.2 Endogeneity and selection bias

Endogeneity

The variable of interest itself, UNSC temporary membership, is arguably quasi-random, as explained in detail in Dreher et al. (2015, p. 125). The ten temporary seats of the UNSC are not a random draw but they are allocated by region, with different regions following

different selection processes, mostly based on turn taking. While Africa has the strongest turn-taking, regional hegemons will dominate in other areas of the world. No strong pattern seems to exist for Eastern Europe. The nominations for temporary membership are agreed by the regions and then ratified by the United Nations General Assembly, with competitive elections by two-third majority of the Assembly taking place in about 20% of the cases. The term limit of two years reinforces the exogeneity of the selection process. Kuziemko and Werker (2006) were the first to underline the relevance of UNSC temporary membership as a measure of geopolitical importance in the context of aid. Since then, UNSC membership has been used in several studies to measure US geopolitical interests in a country.

Selection bias

A second methodological issue that needs to be addressed regarding the choice of the dependent variables in this study is the selection bias problem. As outlined by Heckman (1979), sample selection in the analyzed variables will result in biased estimates. The critical question is hence why data is missing in the sample. In this study, the sample generally includes all countries that are members of the IMF at this point in time. In the specific models, the choice of the dependent variable affects the sample. For the dummy variables *use of IMF resources* and *signing of IMF program*, the sample will be close to comprising all countries, depending on data availability of course.

For the other dependent variables, by design, the sample will be limited to countries that actually entered an IMF program at some point. For these variables, the question is why some countries having IMF programs receive different treatment compared to some other countries having IMF programs, the limitation to countries having had IMF programs is natural and should not introduce undue selection bias. This is the case for most dependent variables in this study. By design, every IMF program will have a financial amount (the *program size*), conditionality (with a *number* and *scope of conditions*), as well as *forecasts for GDP and fiscal balance* which are essential program parameters.

Not all countries that enter IMF programs will effectively draw on their programs and hence use IMF resources, as these IMF programs can also be purely precautionary. The dependent variable on the *use of IMF resources* could introduce a certain bias towards countries that did not enter purely precautionary programs. Some of the unobserved reasons for this could be addressed by country fixed effects could (Simmons and Hopkins (2005)), but arguably only to some extent. From a theoretical standpoint, it cannot be excluded that there is a link between precautionary IMF programs and geopolitical interests. For example, if geopolitical importance of a country implies funding with less strings attached, this should be mainly relevant for countries that actually draw on their

IMF programs and less those with only precautionary programs. Hence, only looking at non-precautionary program countries could imply an overestimation of geopolitical effects on IMF lending decisions.

Prior actions are by design an optional feature of IMF programs. Hence, a certain selection bias is likely with this dependent variable. The existence of prior actions introduces a selection of countries for which the IMF is less certain that it will be able to meet the program's conditions, which is why the IMF asks the country to take certain actions as a precondition for the pay-out of money. As mentioned above, this can be due to a number of observed and unobserved reasons. Country fixed effects should again account for some of the unobserved factors.

However, the issues possibly captured by this variable, such as ownership issues, also make this variable very interesting, as ownership issues could be positively linked to geopolitical importance of a country, as mentioned above. If that is the case, looking only at countries that faced prior actions in their IMF programs could lead to an upward bias of the effect. At the same time, theoretically, prior actions also make a program less burdensome, so geopolitical importance could imply lower prior actions due to US lobbying in this direction. This would lead to a downward bias in the effect. In conclusion, the dependent variable on prior actions likely suffers from selection bias, but the direction of the bias is unclear.

Finally, some program countries do not have an *implementation ratio*, as their program ends for some reason before the first review where the implementation of conditions could be tested. However, this is arguably a very small number of countries, so the introduced bias should be negligible.

2.6 Results

2.6.1 Overview of results

Section 2.8.3 in the appendix provides the detailed regression results for all dependent variables. Table 2.2 gives an overview of the main results. For each dependent variable, there are three sets of results, following the approach used in Dreher et al. (2015).

In a first set, I propose a general specification, which is a full model with all control variables, with the largest sample possible. However, depending on data availability, this leads to different sample sizes depending on the dependent variable used. In addition, the large number of controls implies a significant reduction in the degrees of freedom, which reduces the insight provided by the full model.

Table 2.2: Main results

Channel of influence	Dependent variable	Validity based on conceptual model	Validity based on case studies	Empirical validity	Overall validity of variable
Probability	Use of IMF resources	Low	Low	Low	Low
	Signing of IMF program	Mixed	High	Mixed	Mixed
Conditionality	Number of conditions	Low	Low	Low	Low
	Scope of conditions	Low	Low	High	Mixed
Forecasts	Bias in GDP forecast	High	High	Low	Mixed
	Bias in fiscal balance forecast	High	Mixed	High	High
Program size	Size of IMF program	High	High	Low	Mixed
Implementation	Implementation ratio	Mixed	Mixed	Low	Low
Prior actions	Number of prior actions	Mixed	Mixed	Low	Low

In a second set, a baseline model is given, which only covers the dependent variable and the variable of interest. This model is based on the largest sample possible, and with a limited sample to allow comparability between models. In a third set, a truncated model is given. For the truncated model, control variables without significance at conventional levels are sequentially dropped until the specific model is found for each variable. To allow comparability between models, the same sample selection is maintained for the truncated model.

The truncated model is considered the key model for the interpretation of results. For the variables *scope of conditionality* and *implementation ratio*, the number of conditions is included in the list of controls. Given the high correlation of these variables to the number of conditions (0.97 for the scope of conditions, and 0.67 for the implementation ratio), this ensures that the specific contribution of these variables is not dominated by the overall degree of conditionality in a program, as measured by the number of conditions. Program duration is added as a non-linear control variable for *number of conditions*, *scope of conditions*, *implementation ratio* and *number of prior actions*, as these variables could be influenced by the length of a program.

Robustness tests include using different but comparable sets of controls. Given the importance of differentiating between concessional and non-concessional programs, and

hence richer countries and LICs, all results are tested for the countries based on their eligibility for concessional financing (measured by being eligible for support PRGT and precursor trusts in a given year).

As Table 2.2 shows, the only dependent variable with high overall validity is *bias in fiscal balance forecast*, from a conceptual perspective and the empirical model, albeit with more mixed validity based on the case studies. Mixed validity is found for the dependent variable on *bias in GDP forecast*. It has a high conceptual validity and mixed validity based on the case studies, but the empirical model finds a non-significant effect close to zero. Similarly, the dependent variable on the *size of an IMF program* has mixed overall validity, as its validity is high based on the conceptual model and the case studies but the empirical model suggests that the coefficient is close to zero and not significant. Mixed validity is also found for the *scope of conditions*. While the validity of the variable is low based on the theoretical model and the case studies, the empirical model finds a significant link in the expected direction.

Low validity is found for the dependent variables on the *use of IMF resources*. The empirical model interestingly finds a significant negative link, suggesting that UNSC temporary membership is linked to a lower likelihood of using IMF resources. However, for poorer countries, the coefficient is no longer significant and close to zero. A similar pattern is found for the *signing of an IMF program*, for which a mixed overall validity is found. The most models find a negative link that is however not significant. However, for poorer countries, the link becomes positive and significant, with a rather large coefficient. Hence, it seems that temporary UNSC membership is linked to a higher likelihood of signing an IMF program, but only for LICs. For richer countries, it is possible that UNSC membership allows access to less burdensome forms of credit, rendering an IMF program less likely.

Low validity, in line with conceptual model and case studies, is found for the *number of conditions*, *implementation ratio*, and *number of prior actions*. For the latter two, the conceptual model was inconclusive about the direction of a possible link. For the *implementation ratio*, the empirical model finds a robust positive link to UNSC membership, which is however not significant. For *number of prior actions*, the empirical models find insignificant, conflicting results, which hover around zero.

2.6.2 Results by channel of influence

Channel of influence: probability

For both the *use of IMF resources* and the *signing of an IMF program*, conditional logit with robust standard errors is the model of choice given the presence of heteroscedasticity and

the limited nature of the variables. For the *use of IMF resources*, the models do not find a positive link, which confirms both the conceptual model and the case study insights, as well as the results by Sturm et al. (2005). On the contrary, the link is negative and significant for most models. This finding is robust to using different controls and to expanding the sample to 2016. However, this is not true for LICs, for which the coefficient is no longer significant and close to zero. Regarding controls, the *use of IMF resources* is less likely for poorer countries and for countries that have a high degree of de jure financial globalization. At the same time, it is more likely after parliamentary elections. Year dummies show an increasing likelihood of using IMF resources after 1999.

Similarly, for the *signing of an IMF program*, the logit model does not find a positive link to geopolitical interests, confirming the results found by Moser and Sturm (2011). The direction of the link is again negative, but no longer significant. This finding is robust to expanding the sample to 2016 and to using a different set of controls. Again, this is not true for LICs, for which the models find a large, positive and significant link. Regarding controls, the *signing of an IMF program* is less likely if there was an arrangement in the past 5 years, and less likely for liberal countries. It is more likely after parliamentary elections, as this allows for a more stable government. Year dummies show that in the relatively calm years before the GFC countries were less likely to sign IMF programs.

Channel of influence: conditionality.

As the distribution of the variables on the *number of conditions* and the *scope of conditions* resembles count data, the Poisson model is preferred. At the same time, OLS should also be fine as errors appear to be homoscedastic for both variables. Program duration is added as a non-linear control for both variables, as conditionality might be influenced by the length of a program.

Regarding the *number of conditions*, the model finds no link to geopolitical interests, confirming the conceptual model and the case study insights. The coefficient is insignificant and close to zero, which is confirmed by the OLS model and is robust to changing controls, differentiating between poor and rich countries, and for expanding the sample to 2016. The truncated model leaves no relevant controls, and there is no significant link to year dummies.

For the *scope of conditions*, the Poisson models find a significant negative effect, which is however close to zero. This is also found for the full OLS model. This confirms the findings by Dreher et al. (2015) that temporary UNSC membership is linked to a smaller scope of conditions and hence an “easier” program. The size and sign of the coefficient are robust to changing the set of controls, and the effect becomes even larger when expanding the sample to 2016. However, the effect vanishes for LICs and becomes insignificant and

close to zero. Regarding controls, the *scope of conditions* is significantly negatively linked to the debt level, so higher debt leads to less varied conditions, as this probably leads conditionality to focus on debt issues as primary problem. Year dummies show a reduction in the scope of conditions after 2002, which is consistent to the focus on parsimony in conditionality.

Channel of influence: forecasts.

For both forecast bias variables, errors appear to be homoscedastic so the OLS model should be fine. In both cases, the truncated model only includes currency crisis, to which the forecast bias variables have a strong negative link, suggesting that in times of currency crisis there seems to be a bias to overestimate future growth and fiscal adjustment.

For *bias in GDP forecast*, the OLS model finds a negligible link that is not significant. The full model shows a positive insignificant link, close to zero, which becomes negative but still close to zero in the truncated model. This finding is robust to using different controls and to expanding the sample length. For LICs, a larger positive link is found, but it remains insignificant, and again close to zero for a longer period sample. Some year dummies show significant systematic forecast bias, particularly during the debt crisis years in emerging markets around 1998.

For *bias in fiscal balance forecast*, the OLS model finds the significant negative link that would be expected based on the conceptual model and the case studies. Hence, geopolitical interests appear to be linked to a downward revision of the fiscal balance forecast at the time of the first program review, which implies an overestimation at program request. The link is not significant for the full model, but it is significant for the base and truncated models and robust to changing controls. However, the link becomes again insignificant when expanding the sample to 2016, and also for LICs only. Year dummies matter, with a significant overestimation of the fiscal balance in many years, particularly ahead of the 2000-2001 crisis.

Channel of influence: program size

For the *size of IMF programs*, FGLS is added to OLS for comparison as heteroscedasticity seems to be present. The OLS full and truncated models find a very small positive but not significant link between geopolitical interests and IMF program size.¹⁸ However, the base model finds a significant negative link, both for OLS and FGLS. The negative link is robust to changing controls and to expanding the sample to 2016, but it vanishes and becomes

¹⁸ The difference between the OLS and GLS truncated model for UNSC is puzzling. An explanation could be that the adjusted weighting in the GLS gives more room to some countries which strongly influence the results.

zero if the sample is limited to LICs. The mostly negative link confirms the descriptive evidence in the case studies. At the same time, the negative sign contradicts the theory brought forward in the conceptual model and the anecdotal evidence, as well as the significant positive link found by Dreher and Vreeland (2011).

An explanation for the negative link could be that geopolitical interests allow a country to access other sources of finance, which on balance reduces its interest in IMF programs, even if these would be more generous. Such conflicting incentives could also explain why Moser and Sturm (2011) find no significant link. Regarding controls that are valid in the truncated model, the IMF program size is lower for countries with lower growth and per capita GDP as well as if government quality is higher, while the program size is higher for more indebted and more financially globalized countries, which is in line with standard assumptions for need for IMF resources. Looking at year dummies, the models suggest systematically larger programs during the debt crisis around 1998.

Channel of influence: implementation

For the *implementation ratio*, the Poisson model is preferred given that the dependent variable is based on count data, but OLS should also be fine as errors seem to be homoscedastic. Program duration is included as a non-linear control as some negative relation between the program implementation and program duration can be assumed. The models find a consistent positive but insignificant link between program implementation and geopolitical interests, which is robust to expanding the sample to 2016 and to limiting the sample to LICs. The model confirms the positive link found by the case studies. This result is confirmed by the OLS model, and it is robust to changing the time frame, controls, and to limiting the sample to richer economies. Despite this consistent positive sign, the absence of significance confirms the mixed validity of the channel found in the conceptual model and the case studies.

Channel of influence: prior actions

For the dependent variable on *number of prior actions*, the Poisson model is preferred as the variable is count data, but OLS should also be fine as there seem to be no issues with heteroscedasticity. Program duration is included as a control as some positive relation between the number of prior actions and program duration can be assumed. For the full model, the Poisson model finds a slightly negative link close to zero that is not significant. The negative effect becomes larger in the base model and the truncated model, and if the sample is expanded to 2016. The OLS however finds a positive effect, which suggests that the result is strongly influenced by the sample used in the model. For LICs, the effect is again around zero but slightly positive.

The negative link is in line with the findings by Dreher et al. (2015). Regarding controls, GETS leaves no significant controls. Overall, the number of prior actions is higher for long-term program users and after legislative elections. R-squared is quite high at 0.5 for the truncated OLS model. Regarding year dummies, there is a consistent increase in prior actions from 2002 to 2007. Overall, it appears that contradicting effects are at work, which could explain the lack of significance and changing signs, despite the validity of the channel from a conceptual point of view. It also has to be kept in mind that selection bias is likely present when using this dependent variable.

2.7 Conclusion

The aim of this paper is to propose and test conceptually based dependent variables that allow researching how vested interests, such as geopolitics, influence the IMF lending process. Some of the large IMF programs in the context of the GFC have led to renewed criticism that IMF lending is not only based on economic need but also influenced by vested interests of the IMF's major stakeholders, the G5. However, despite ample anecdotal evidence, past research has led to mixed results. I have argued that this might be caused by the choice of the dependent variable.

To derive valid dependent variables, I have proposed a conceptual model of the IMF lending process, which allows to better understanding at which points during the opaque process vested interests could be at play. The lending process model is substantiated by two case studies of long-term IMF program countries, Uruguay and Pakistan. Based on the insights of the conceptual model and the case studies, I have proposed nine dependent variables, some of them widely used in past research and some of them new. In a next step, I have tested the empirical validity of the nine dependent variables using a panel data set of 189 countries for the years 1993 to 2007.

The only dependent variable with high overall validity, from a conceptual perspective, the case studies, and the empirical model is *bias in fiscal balance forecast*, which is a newly proposed variable. I find mixed validity for the dependent variable *bias in GDP forecast*, which is also newly proposed, and for the *size of IMF programs*. The insights are also mixed for the variable on *signing an IMF program*, but only for LICs. Finally, I also find a mixed validity for the *scope of conditions*. While this variable has low validity based on the conceptual model and on the case studies, the empirical model finds the expected link and hence confirms earlier literature. I find a low validity based on the empirical model, but with more mixed insights based on conceptual model and case studies, for the variables *implementation ratio* and *number of prior actions*. Validity is also low, based on the

conceptual model, the case studies, and the empirical model, for the dependent variables *use of IMF resources*, and the *number of conditions*.

For future research, it would be interesting to dive deeper into the dependent variables that are found to have high or at least mixed validity, which is beyond the scope of this paper given the high number of dependent variables tested. In particular, it would be interesting to further investigate the newly proposed dependent variables on *bias in GDP forecast* and *bias in fiscal balance forecast*. Furthermore, an obvious extension of this paper would be to use the promising dependent variables in panel data that goes beyond the onset of the GFC. A question in this regard would be whether the crisis changed something about the importance of vested interests, such as geopolitics. In addition, the GFC led to the perception that other types of vested interests might also be at play, such as the interests of major banks represented by their countries. A further avenue for research would be to see whether there is empirical evidence for such financial sector interests influencing IMF program decisions, similarly to geopolitical interests.

2.8 Appendix

2.8.1 Summary statistics

Table 2.3: Summary statistics of independent variables

Variable	N	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
UN Security Council	4553	0.06	0.23	0	1	3.89	16.13
GDP growth	4484	3.81	6.28	-62.08	149.97	4.63	109.19
GDP per capita (log)	4510	8.30	1.52	4.73	11.63	0.12	2.09
Reserves to imports (log)	3812	1.10	1.01	-6.21	4.37	-1.55	9.20
Debt to exports (log)	2635	2.26	1.21	-3.91	25.83	3.14	63.33
Short-term debt to total debt (log)	3109	2.11	1.51	-4.61	25.83	0.78	28.35
Currency crisis	4456	0.04	0.20	0	1	4.65	22.66
Under IMF arrangement	4675	0.44	0.50	0	1	0.25	1.06
Parliamentary Elections	4279	0.22	0.41	0	1	1.36	2.84
Presidential Elections	4189	0.12	0.32	0	1	2.39	6.70
Political instability	4353	0.00	1.14	-0.38	20.42	6.77	79.24
Social unrest	4353	0.00	1.43	-0.39	35.72	10.49	179.62
Freedom House Index	4599	3.41	1.95	1.00	7.00	0.29	1.75
Political globalization	4397	59.13	23.56	2.69	99.54	-0.20	2.07
Quality of government	3160	2.97	1.10	0.33	5.33	0.46	2.50
Financial globalization (de facto)	4118	58.51	19.71	3.20	99.99	-0.03	2.32
Financial globalization (de jure)	3882	47.46	25.14	1.00	96.06	-0.06	1.67

Table 2.4: Summary statistics of dependent variables

Variable	N	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
Use of IMF funds	4675	0.66	0.47	0	1	-0.66	1.43
Signing of IMF program	4675	0.10	0.30	0	1	2.63	7.89
Number of conditions	427	6.40	1.20	1.0	14.0	0.07	8.97
Scope of conditions	447	4.86	1.13	1.0	6.5	-0.76	2.79
Bias in GDP forecast (neglog)	363	-0.18	0.81	-2.88	2.12	-0.35	3.82
Bias in fiscal balance forecast (neglog)	323	0.26	0.84	-2.46	3.58	0.38	4.37
IMF program size (log)	448	-4.58	0.99	-7.64	-0.77	-0.15	3.24
Implementation ratio	447	0.94	0.59	0.0	2.0	0.11	2.11
Number of prior actions	337	4.79	6.73	1.0	54.0	3.11	17.03

2.8.2 Variables in detail

Dependent variables

Use of IMF resources. Based on IMF International Finance Statistics (IFS) data, this variable measures whether a country was using IMF resources (in US dollars) in a given year. This is a binary variable that takes the value of zero if no funds were used, which is the case for a considerable number of countries at any time, and the value of one otherwise.

Signing of IMF program. Based on IMF MONA data, this binary variable takes the value of one if a country enters an IMF program in a given year, and the value of zero otherwise.

Number of conditions. The variable is based on IMF MONA data. As suggested by Breen (2014) and Dreher et al. (2015), only the binding and measurable “quantitative performance criteria” (QPC) are counted, hence softer conditions such as indicative targets and structural benchmarks are left out. The number of conditions is given in the year a country signs an IMF program. For all other data points, the variable is a missing value.

Scope of conditions. The variable is calculated by counting the number of areas covered by conditionality in the year a country signs an IMF program. For all other data points, the variable is a missing value. The areas of conditions are the seven categories for QPC based on the IMF MONA database: credit ceilings and public sector position, BOP/reserve test, ceiling on external arrears, ceilings on medium/long-term debt, ceiling on short-term debt, external contingency mechanism, and other.

Bias in GDP forecast. This variable captures the change in the short-term forecast of real GDP growth from program approval to first review. It is based on the IMF MONA database. The variable is calculated as a continuous variable. It is a positive number if the forecast was adjusted upwards at the first review, which suggests that there was a pessimistic bias at program approval, all other factors being equal. If the number is negative, it implies downwards adjustment at program review, which suggests that there was an optimistic bias. The variable is given in the year a country signs an IMF program. For all other data points, the variable has a missing value. To improve the distributional characteristics of the variable, it is adjusted with the “neglog” transformation, which uses the transformation $-\ln(-x + 1)$ if $x \leq 0$, and $\ln(x + 1)$ if $x > 0$ (Cox, 2017).

Bias in fiscal balance forecast. This variable captures the change in the short-term forecast of the fiscal balance from program approval to first review. It is based on the IMF MONA database. The variable is a positive number if the forecast was adjusted upwards at the first review, suggesting a pessimistic bias at program approval, all other factors being equal. If the number is negative, it implies downwards adjustment at program review, suggesting an optimistic bias. The variable is given in the year a country signs an

IMF program, and missing value are recorded for all other data points. To improve the distributional characteristics of the variable, it is adjusted with the “neglog” transformation, which uses the transformation $-\ln(-x + 1)$ if $x \leq 0$, and $\ln(x + 1)$ if $x > 0$ (Cox, 2017).

IMF program size. Based on the IMF MONA database, this is a positive continuous variable. It is given in the year a country signs an IMF program, and a missing value is assigned to all other cases. The value is divided by the program country’s GDP. Taking logs improves the distributional characteristics of the variable.

Implementation ratio. Following the approach used by the IMF, this variable is constructed as an indicator between zero and two. It measures the average outcome of all QPC in a program. A higher number indicates that a higher percentage of QPC were implemented. The variable is based on the outcomes for QPC provided by IMF MONA database. If a QPC is recorded as fully met, it is given the value of two. A QPC recorded as partially met or waived is assigned the value of one. If the outcome of a QPC is recorded as not met, cancelled, outstanding at program end, modified, or no information is provided, the QPC is considered as not met and is assigned a zero. If a program end is beyond 2014, a missing value is assigned. The implementation ratio is given in the year of the signing of a program. All other data points are recorded as missing values.

Number of prior actions. Based on IMF MONA data, the variable is calculated as a count of prior actions per program, recorded in the year of program signing. All other data points are recorded as missing values.

Independent variables

United Nations Security Council (UNSC). The variable is constructed as a binary variable, which takes the value of one if a country is a temporary member of the UNSC in a given year, and the value of zero otherwise. The membership usually lasts for two years. As the effect is expected to be higher in anticipation of membership and in the first year, and should ebb off in the second year of membership, this variable enters with a one-period lead.

Under IMF program. This is a binary variable that indicates whether a country was under an IMF program in the past five years, in which case it takes the value of one, and the value of zero otherwise. Based on IMF MONA data, it reflects the observed persistence of a country’s dependence on IMF resources.

Reserves to imports. This variable measures total reserves in months of imports. A low level of reserves increases external pressures and thus increases the likelihood of a country having to ask the IMF for help. Based on data provided by the World Bank Development Indicators (WDI), the variable is calculated as total reserves including gold divided by

imports of goods and services, which itself is divided by 12. To improve the distributional characteristics of the variable, logs are taken.

GDP growth. This variable measures year-on-year real GDP growth at constant prices, based on the IMF World Economic Outlook (WEO) database. Weak economic growth implies a larger likelihood that a country asks for IMF credit. Given possible endogeneity problems, the variable enters with a one period lag.

GDP per capita. This variable measures year-on-year real GDP growth at constant prices, based on the IMF WEO database. Weak economic growth implies a larger likelihood that a country asks for IMF credit. Given possible endogeneity problems, the variable enters with a one period lag.

Debt to exports. This variable captures debt service scaled to exports. It is based on WDI data. A heavy debt burden relative to overall income increases the likelihood for need for external funds. To improve the distributional characteristics of the variable, logs are taken.

Short-term debt to total debt. This variable is based on WDI data: It captures short-term debt as a percentage to total external debt. A higher ratio of short-term debt increases capital outflows in the case of crisis and is hence linked to the need for IMF assistance. To improve the distributional characteristics of the variable, logs are taken.

Currency crisis. This variable is a dummy for currency crises, which is defined, following Moser and Sturm (2011), by a nominal depreciation of the currency of at least 30%, which is also at least a 10% increase in the rate of depreciation compared to the year before (p. 312). IMF programs are more likely in the context of currency crises. The variable is based predominantly on WDI data, and completed where necessary by Thomson Reuters spot rates.

Parliamentary and presidential elections. These two variables are dummies capturing the occurrence of legislative respectively executive elections in a year. The data is sourced from the Parline database on national parliaments (Inter-Parliamentary Union, 2017). The timing of entering IMF programs is often dependent on the timing of elections. The variables enter in a one-period lag.

Political instability. This variable measures political instability in a country. Following the suggestion by Moser and Sturm (2011), it is based on the first principal component of the number of political assassinations, revolutions, guerrilla problems, government crises and the instability provided by the CNTS data archive (Banks and Wilson, 2017).

Social unrest. Following the suggestion by Moser and Sturm (2011), this variable reflects the first principal component of demonstrations, strikes and riots provided by the CNTS data archive (Banks & Wilson, 2017). As this variable relies on news reports, its accuracy is limited, particularly for countries with limited freedom of press. This variable

enters as lead, as anticipated social unrest in a country, particular because of an unpopular IMF program, will likely enter into the government's calculation of costs and benefits of an IMF program.

Freedom House Index. Sourced from the Freedom House Index, this variable is the average of the political rights index and the civil liberties index. In a more liberal country, the public opposition against reforms under an IMF program could be higher.

Political globalization. This variable captures political globalization as measured by the KOF Index of Globalization. A country that is highly integrated in world politics is more likely to ask for IMF assistance.

Quality of government. This variable based on the mean value of the data provided on corruption, law and order, and bureaucracy quality provided by the ICRG. Higher corruption could imply lower IMF involvement.

Financial globalization (de facto). This variable is based on the KOF globalization indicator. A country that has a higher degree of financial globalization is more likely to have access to capital markets, reducing the need for IMF financial support. At the same time, higher financial integration could also imply higher exposure to changing investor sentiment.

Financial globalization (de jure). This variable is based on the KOF globalization indicator. Higher financial integration could imply better access to capital markets, but also higher exposure to changing investor sentiment. The de jure indicator is also likely to capture the views of national authorities and IMF staff on a country's financial integration.

2.8.3 Detailed regression results

Table 2.5: UNSC membership and the use of IMF resources

	Full model		Baseline model				Truncated model		Full model
	Largest sample (1) OLS	(2) Logit	Largest sample (3) OLS	(4) Logit	Restricted sample (5) OLS	(6) Logit	Restricted sample (7) OLS	(8) Logit	LICs ² (9) Logit
UN Security Council membership	-0.057*	-0.902 (0.032)	-0.040 (0.024)	-1.338*** (0.459)	-0.087 (0.075)	-1.229*** (0.409)	-0.075 (0.067)	-1.040*** (0.355)	-0.021 (2.242)
IMF arrangement in past 5 years	0.110** (0.054)	4.921* (2.730)							4.923* (2.586)
Reserves to imports (log)	-0.017 (0.017)	-2.623* (1.500)							-2.624* (1.432)
GDP growth (lag)	-0.003 (0.002)	0.050 (0.077)							0.050 (0.078)
GDP per capita (log)	0.069 (0.170)	-16.938*** (4.189)					-0.492*** (0.074)	-8.329*** (1.818)	-16.946*** (4.440)
Debt to exports (log)	-0.040 (0.034)	-1.687 (1.074)							-1.688 (1.103)
Short-term debt to total debt (log)	-0.027 (0.020)	-3.774 (2.892)							-3.774 (2.868)
Currency crisis	0.093*** (0.027)	6.314* (3.552)							6.312* (3.789)
Parliamentary Elections (lag)	0.015 (0.014)	2.195** (0.961)					0.060*** (0.022)	0.845*** (0.246)	2.197*** (0.826)
Presidential Elections (lag)	0.010 (0.020)	-1.324 (1.292)							-1.327 (1.449)
Political instability	-0.008 (0.012)	0.041 (0.191)							0.041 (0.196)
Social unrest (lead)	0.008 (0.010)	1.015* (0.567)							1.016* (0.533)
Freedom House Index	0.000 (0.024)	2.392* (1.442)							2.394* (1.337)
Political globalization	0.000 (0.003)	-0.029 (0.092)							-0.029 (0.092)
Quality of government	-0.042 (0.049)	-0.839 (1.069)							-0.839 (1.079)
Financial globalization (de facto)	0.001 (0.002)	0.109** (0.053)							0.109* (0.065)
Financial globalization (de jure)	0.002 (0.002)	-0.144*** (0.041)					-0.006 (0.004)	-0.101*** (0.036)	-0.144*** (0.029)
1994	0.009 (0.031)	3.472*** (1.139)	0.016 (0.012)	0.368 (0.285)	0.063 (0.050)	0.402 (0.318)	0.076 (0.048)	0.750* (0.385)	3.475*** (1.038)
1995	-0.020 (0.046)	3.301*** (1.245)	0.016 (0.016)	0.396 (0.388)	0.092 (0.069)	0.625 (0.452)	0.113* (0.064)	1.137** (0.506)	3.306** (1.491)
1996	-0.004 (0.043)	5.712*** (1.334)	0.038** (0.018)	0.848** (0.387)	0.174** (0.071)	1.104** (0.443)	0.194*** (0.065)	1.837*** (0.506)	5.714*** (1.333)
1997	-0.045 (0.059)	4.247*** (1.405)	0.022 (0.023)	0.430 (0.500)	0.106 (0.094)	0.660 (0.570)	0.166* (0.093)	1.739** (0.817)	4.247*** (1.400)
1998	-0.070 (0.055)	4.054** (1.627)	0.016 (0.025)	0.278 (0.558)	0.064 (0.101)	0.377 (0.620)	0.135 (0.099)	1.500* (0.841)	4.056** (1.649)
1999	0.169*** (0.059)	18.548*** (6.466)	0.214*** (0.033)	4.886*** (0.815)	0.649*** (0.086)	4.881*** (0.983)	0.732*** (0.081)	6.760*** (1.059)	18.556*** (5.895)
2000	0.157** (0.063)	17.088*** (6.332)	0.209*** (0.033)	4.575*** (0.863)	0.630*** (0.093)	4.453*** (0.999)	0.725*** (0.085)	6.687*** (0.990)	17.095*** (5.795)
2001	0.175** (0.068)	19.560*** (4.793)	0.214*** (0.033)	4.959*** (0.835)	0.651*** (0.087)	4.981*** (1.015)	0.778*** (0.077)	7.567*** (1.030)	19.568*** (4.168)
2002	0.126* (0.068)	16.142*** (3.944)	0.203*** (0.034)	4.282*** (0.865)	0.609*** (0.090)	4.098*** (0.866)	0.734*** (0.083)	7.062*** (1.174)	16.149*** (3.464)
2003	0.121* (0.072)	17.213*** (4.252)	0.198*** (0.034)	3.977*** (0.785)	0.608*** (0.090)	4.038*** (0.862)	0.759*** (0.083)	7.844*** (1.296)	17.218*** (3.849)
2004	0.137* (0.080)	20.257*** (5.374)	0.198*** (0.033)	3.913*** (0.801)	0.604*** (0.095)	3.959*** (0.907)	0.782*** (0.082)	8.612*** (1.425)	20.263*** (4.941)
2005	0.134 (0.085)	23.037*** (6.601)	0.198*** (0.033)	3.991*** (0.780)	0.606*** (0.093)	4.049*** (0.878)	0.818*** (0.084)	9.454*** (1.474)	23.044*** (6.121)
2006	0.130 (0.094)	23.933*** (5.364)	0.209*** (0.034)	4.569*** (1.055)	0.609*** (0.092)	4.070*** (0.873)	0.854*** (0.084)	10.018*** (1.573)	23.942*** (4.660)
2007	0.136 (0.103)	24.571*** (5.929)	0.225*** (0.033)	5.772*** (1.289)	0.674*** (0.078)	5.640*** (1.292)	0.944*** (0.079)	12.368*** (2.108)	24.574*** (5.794)
constant	0.364 (1.156)		0.508*** (0.023)		0.292*** (0.069)		4.464*** (0.618)		
Observations	1'068	316	2'730	885	715	715	715	715	316
Number of countries	91		182		48	48	48	48	
R-squared ¹	0.21		0.15		0.41		0.48		

Notes: UNSC is United Nations Security Council. T-statistics/z-statistics are in parentheses ($p < 0.01$ - ***, $p < 0.05$ - **, $p < 0.1$ - *). Logit is conditional logit grouped by countries, with robust standard errors. OLS is panel OLS, with fixed effects and clustered robust standard errors. ¹R-squared is R-squared within for OLS and Pseudo R-squared for logit. ²Calculated using an interaction term between UN Security Council membership and a dummy for LICs.

Table 2.6: UNSC membership and IMF program signing

	Full model		Baseline model				Truncated model		Full model
	Largest sample (1) OLS	(2) Logit	Largest sample (3) OLS	Restricted sample (4) Logit	(5) OLS	(6) Logit	Restricted sample (7) OLS	(8) Logit	LICs ² (9) Logit
UN Security Council membership	-0.042 (0.039)	-0.229 (0.353)	-0.034 (0.023)	-0.362 (0.290)	-0.061 (0.039)	-0.361 (0.290)	-0.064 (0.040)	-0.402 (0.301)	1.370** (0.673)
IMF arrangement in past 5 years	-0.101*** (0.036)	-0.783** (0.327)					-0.083*** (0.027)	-0.567*** (0.215)	-0.823** (0.341)
Reserves to imports (log)	0.045** (0.021)	0.343* (0.184)							0.315* (0.180)
GDP growth (lag)	-0.006* (0.003)	-0.037 (0.024)							-0.036 (0.024)
GDP per capita (log)	-0.204 (0.156)	-2.743* (1.596)							-2.669* (1.578)
Debt to exports (log)	0.013 (0.024)	0.272 (0.235)							0.262 (0.234)
Short-term debt to total debt (log)	-0.015 (0.016)	-0.047 (0.105)							-0.072 (0.103)
Currency crisis	0.142** (0.070)	0.588 (0.374)							0.638* (0.379)
Parliamentary Elections (lag)	0.113*** (0.038)	0.837*** (0.271)					0.137*** (0.032)	0.788*** (0.172)	0.833*** (0.269)
Presidential Elections (lag)	0.015 (0.042)	-0.001 (0.281)							0.007 (0.279)
Political instability	-0.001 (0.011)	-0.016 (0.095)							-0.032 (0.101)
Social unrest (lead)	0.043* (0.022)	0.302** (0.127)							0.295** (0.119)
Freedom House Index	-0.044** (0.017)	-0.327*** (0.121)					-0.048*** (0.014)	-0.301*** (0.087)	-0.339*** (0.120)
Political globalization	0.003 (0.003)	0.033 (0.028)							0.031 (0.029)
Quality of government	-0.014 (0.032)	-0.059 (0.267)							-0.105 (0.267)
Financial globalization (de facto)	0.003 (0.002)	0.021 (0.015)							0.017 (0.014)
Financial globalization (de jure)	-0.001 (0.001)	-0.006 (0.012)							-0.005 (0.012)
1994	0.108 (0.085)	0.719 (0.576)	0.055 (0.036)	0.490 (0.329)	0.101 (0.068)	0.495 (0.332)	0.099 (0.065)	0.506 (0.331)	0.723 (0.578)
1995	0.010 (0.068)	0.159 (0.511)	0.027 (0.034)	0.255 (0.319)	0.050 (0.062)	0.257 (0.321)	0.054 (0.060)	0.321 (0.324)	0.139 (0.516)
1996	0.061 (0.069)	0.491 (0.529)	0.038 (0.033)	0.352 (0.302)	0.071 (0.060)	0.355 (0.305)	0.073 (0.060)	0.409 (0.322)	0.463 (0.534)
1997	0.033 (0.075)	0.267 (0.601)	-0.022 (0.031)	-0.243 (0.339)	-0.041 (0.058)	-0.240 (0.342)	-0.026 (0.060)	-0.115 (0.371)	0.308 (0.595)
1998	-0.005 (0.076)	0.030 (0.608)	-0.011 (0.034)	-0.121 (0.359)	-0.032 (0.063)	-0.179 (0.363)	-0.026 (0.065)	-0.131 (0.400)	0.073 (0.601)
1999	-0.017 (0.081)	-0.025 (0.665)	-0.022 (0.033)	-0.247 (0.362)	-0.043 (0.062)	-0.249 (0.365)	-0.028 (0.065)	-0.113 (0.406)	-0.006 (0.660)
2000	0.023 (0.081)	0.233 (0.624)	-0.005 (0.032)	-0.066 (0.326)	-0.022 (0.058)	-0.126 (0.329)	-0.017 (0.058)	-0.061 (0.351)	0.255 (0.626)
2001	0.040 (0.085)	0.367 (0.669)	-0.016 (0.029)	-0.181 (0.307)	-0.032 (0.054)	-0.183 (0.309)	-0.021 (0.056)	-0.076 (0.346)	0.417 (0.667)
2002	-0.051 (0.085)	-0.283 (0.752)	-0.022 (0.034)	-0.242 (0.371)	-0.052 (0.063)	-0.310 (0.375)	-0.052 (0.063)	-0.288 (0.402)	-0.269 (0.761)
2003	-0.036 (0.092)	-0.106 (0.776)	-0.022 (0.033)	-0.237 (0.360)	-0.052 (0.061)	-0.305 (0.364)	-0.071 (0.064)	-0.410 (0.407)	-0.075 (0.783)
2004	-0.049 (0.093)	-0.239 (0.856)	-0.055* (0.032)	-0.682* (0.406)	-0.102* (0.059)	-0.685* (0.408)	-0.104* (0.061)	-0.663 (0.436)	-0.188 (0.864)
2005	-0.081 (0.096)	-0.512 (0.958)	-0.049 (0.031)	-0.603 (0.376)	-0.103* (0.056)	-0.692* (0.382)	-0.111* (0.058)	-0.736* (0.412)	-0.489 (0.966)
2006	-0.086 (0.096)	-0.556 (0.900)	-0.066** (0.030)	-0.879** (0.405)	-0.123** (0.055)	-0.883** (0.407)	-0.137** (0.057)	-0.946** (0.428)	-0.496 (0.896)
2007	-0.078 (0.100)	-0.565 (0.977)	-0.071** (0.029)	-0.982** (0.415)	-0.133** (0.054)	-0.986** (0.417)	-0.155*** (0.056)	-1.135** (0.444)	-0.547 (0.981)
constant	1.715 (1.175)		0.128*** (0.023)		0.239*** (0.042)		0.465*** (0.075)		
Observations	1'068	826	2'730	1'500	1'468	1'468	1'468	1'468	826
Number of countries	91		182		98		98		
R-squared ¹	0.09		0.02		0.03		0.06		

Notes: UNSC is United Nations Security Council. T-statistics/z-statistics are in parentheses (p<0.01 - ***; p<0.05 - **; p<0.1 - *). Logit is conditional logit grouped by countries, with robust standard errors. OLS is panel OLS, with fixed effects and clustered robust standard errors.¹R-squared is R-squared within for OLS and Pseudo R-squared for logit. ²Calculated using an interaction term between UN Security Council membership and a dummy for LICs.

Table 2.7: UNSC membership and the number of conditions

	Full model		Baseline model				Truncated model		Full model
	Largest sample		Largest sample		Restricted sample		Restricted sample		LICs ²
	(1) OLS	(2) Poisson	(3) OLS	(4) Poisson	(5) OLS	(6) Poisson	(7) OLS	(8) Poisson	(9) Poisson
UN Security Council membership	0.087 (0.392)	0.002 (0.049)	0.023 (0.235)	-0.000 (0.036)	0.023 (0.236)	-0.000 (0.036)	0.023 (0.236)	-0.000 (0.036)	0.006 (0.084)
Program duration	0.009 (0.026)	0.001 (0.003)	0.016 (0.011)	0.002 (0.002)	0.016 (0.011)	0.002 (0.002)	0.016 (0.011)	0.002 (0.002)	0.001 (0.003)
IMF arrangement in past 5 years	-0.034 (0.396)	-0.016 (0.053)							-0.016 (0.053)
Reserves to imports (log)	0.100 (0.146)	0.016 (0.020)							0.016 (0.020)
GDP growth (lag)	-0.050 (0.035)	-0.008* (0.005)							-0.008* (0.005)
GDP per capita (log)	0.332 (1.418)	0.034 (0.187)							0.034 (0.188)
Debt to exports (log)	-0.062 (0.249)	-0.007 (0.034)							-0.007 (0.033)
Short-term debt to total debt (log)	0.035 (0.120)	0.005 (0.016)							0.005 (0.016)
Currency crisis	-0.339 (0.417)	-0.058 (0.058)							-0.058 (0.060)
Parliamentary Elections (lag)	0.115 (0.270)	0.015 (0.036)							0.015 (0.036)
Presidential Elections (lag)	-0.079 (0.345)	-0.007 (0.046)							-0.007 (0.046)
Political instability	-0.035 (0.062)	-0.005 (0.009)							-0.005 (0.008)
Social unrest (lead)	-0.227 (0.217)	-0.028 (0.023)							-0.028 (0.024)
Freedom House Index	-0.135 (0.173)	-0.018 (0.020)							-0.018 (0.020)
Political globalization	0.027 (0.027)	0.004 (0.004)							0.004 (0.004)
Quality of government	0.115 (0.254)	0.019 (0.034)							0.019 (0.034)
Financial globalization (de facto)	-0.007 (0.020)	-0.001 (0.002)							-0.001 (0.002)
Financial globalization (de jure)	0.012 (0.020)	0.002 (0.003)							0.002 (0.003)
1994	-0.562 (0.532)	-0.081 (0.067)	-0.126 (0.163)	-0.020 (0.024)	-0.126 (0.163)	-0.020 (0.024)	-0.126 (0.163)	-0.020 (0.024)	-0.081 (0.067)
1995	-0.694 (0.501)	-0.104* (0.063)	0.192 (0.131)	0.029 (0.019)	0.192 (0.132)	0.029 (0.019)	0.192 (0.132)	0.029 (0.019)	-0.105 (0.064)
1996	0.133 (0.562)	0.025 (0.076)	0.335* (0.175)	0.051* (0.026)	0.335* (0.176)	0.051* (0.026)	0.335* (0.176)	0.051* (0.026)	0.024 (0.077)
1997	-0.480 (0.697)	-0.063 (0.082)	0.072 (0.243)	0.010 (0.035)	0.072 (0.244)	0.010 (0.035)	0.072 (0.244)	0.010 (0.035)	-0.063 (0.083)
1998	-1.082 (1.137)	-0.150 (0.128)	-0.168 (0.337)	-0.024 (0.047)	-0.168 (0.338)	-0.024 (0.047)	-0.168 (0.338)	-0.024 (0.047)	-0.150 (0.128)
1999	-0.567 (0.660)	-0.081 (0.085)	-0.037 (0.261)	-0.006 (0.039)	-0.037 (0.262)	-0.006 (0.039)	-0.037 (0.262)	-0.006 (0.039)	-0.081 (0.087)
2000	-0.180 (0.496)	-0.025 (0.067)	0.564 (0.356)	0.086* (0.051)	0.564 (0.357)	0.086* (0.051)	0.564 (0.357)	0.086* (0.051)	-0.025 (0.070)
2001	-0.635 (0.696)	-0.088 (0.087)	0.008 (0.187)	0.001 (0.027)	0.008 (0.188)	0.001 (0.027)	0.008 (0.188)	0.001 (0.027)	-0.089 (0.092)
2002	-0.253 (1.067)	-0.031 (0.134)	0.512 (0.552)	0.075 (0.076)	0.512 (0.554)	0.075 (0.076)	0.512 (0.554)	0.075 (0.076)	-0.032 (0.135)
2003	-0.812 (0.537)	-0.123* (0.070)	-0.037 (0.270)	-0.007 (0.042)	-0.037 (0.271)	-0.007 (0.042)	-0.037 (0.271)	-0.007 (0.042)	-0.124* (0.073)
2004	-0.745 (0.829)	-0.104 (0.109)	0.188 (0.399)	0.027 (0.059)	0.188 (0.400)	0.027 (0.059)	0.188 (0.400)	0.027 (0.059)	-0.104 (0.111)
2005	-0.731 (0.800)	-0.101 (0.105)	0.619 (0.386)	0.093* (0.055)	0.619 (0.387)	0.093* (0.055)	0.619 (0.387)	0.093* (0.055)	-0.101 (0.111)
2006	-1.190 (1.094)	-0.166 (0.140)	0.285 (0.250)	0.042 (0.035)	0.285 (0.251)	0.042 (0.035)	0.285 (0.251)	0.042 (0.035)	-0.167 (0.142)
2007	-0.752 (1.198)	-0.105 (0.160)	-0.247 (0.283)	-0.042 (0.045)	-0.247 (0.284)	-0.042 (0.045)	-0.247 (0.284)	-0.042 (0.045)	-0.106 (0.164)
constant	2.800 (9.952)		6.316*** (0.143)		6.323*** (0.143)		6.323*** (0.143)		
Observations	173	159	295	278	278	278	278	278	159
Number of countries	65	51	100	83	83	83	83	83	51
R-squared ¹	0.22		0.09		0.09		0.09		

Notes: UNSC is United Nations Security Council. T-statistics/z-statistics are in parentheses ($p < 0.01$ - ***; $p < 0.05$ - **; $p < 0.1$ - *). Logit is conditional logit grouped by countries, with robust standard errors. OLS is panel OLS, with fixed effects and clustered robust standard errors.¹R-squared is R-squared within for OLS and Pseudo R-squared for logit. ²Calculated using an interaction term between UN Security Council membership and a dummy for LICs.

Table 2.8: UNSC membership and the scope of conditions

	Full model		Baseline model				Truncated model		Full model
	Largest sample		Largest sample	Restricted sample			Restricted sample	LICs ²	
	(1) OLS	(2) Poisson	(3) OLS	(4) Poisson	(5) OLS	(6) Poisson	(7) OLS	(8) Poisson	(9) Poisson
UN Security Council membership	-0.386** (0.161)	-0.080** (0.033)	-0.323 (0.197)	-0.069* (0.040)	-0.347 (0.226)	-0.071 (0.045)	-0.364* (0.211)	-0.075* (0.042)	0.015 (0.064)
Program duration	-0.007 (0.013)	-0.002 (0.002)	0.005 (0.007)	0.001 (0.001)	0.001 (0.008)	0.000 (0.001)	0.002 (0.008)	0.000 (0.001)	-0.002 (0.003)
IMF arrangement in past 5 years	-0.492** (0.243)	-0.105** (0.048)							-0.106** (0.048)
Reserves to imports (log)	0.092 (0.070)	0.025* (0.014)							0.025* (0.014)
GDP growth (lag)	-0.022 (0.018)	-0.005 (0.003)							-0.005 (0.003)
GDP per capita (log)	0.936 (0.736)	0.215 (0.144)							0.216 (0.146)
Debt to exports (log)	-0.461*** (0.151)	-0.094*** (0.031)					-0.224*** (0.077)	-0.040*** (0.015)	-0.093*** (0.031)
Short-term debt to total debt (log)	-0.050 (0.062)	-0.009 (0.012)							-0.009 (0.013)
Currency crisis	-0.429 (0.313)	-0.093 (0.063)							-0.094 (0.064)
Parliamentary Elections (lag)	0.258 (0.173)	0.057 (0.035)							0.057 (0.035)
Presidential Elections (lag)	-0.191 (0.240)	-0.041 (0.049)							-0.041 (0.050)
Political instability	0.044 (0.031)	0.010* (0.006)							0.010* (0.006)
Social unrest (lead)	0.050 (0.078)	0.012 (0.014)							0.012 (0.014)
Freedom House Index	-0.076 (0.084)	-0.021 (0.017)							-0.021 (0.017)
Political globalization	0.012 (0.027)	0.002 (0.005)							0.002 (0.005)
Quality of government	0.187 (0.217)	0.042 (0.039)							0.041 (0.038)
Financial globalization (de facto)	0.020 (0.014)	0.004 (0.003)							0.004 (0.003)
Financial globalization (de jure)	-0.014 (0.009)	-0.003 (0.002)							-0.003 (0.002)
1994	0.052 (0.337)	0.004 (0.062)	-0.004 (0.173)	-0.002 (0.032)	-0.073 (0.178)	-0.017 (0.033)	0.054 (0.168)	0.006 (0.031)	0.003 (0.061)
1995	-0.153 (0.368)	-0.034 (0.071)	0.194 (0.138)	0.033 (0.025)	0.001 (0.136)	-0.004 (0.025)	0.073 (0.142)	0.010 (0.027)	-0.035 (0.071)
1996	0.359 (0.406)	0.067 (0.077)	0.294* (0.166)	0.055* (0.031)	0.177 (0.159)	0.031 (0.030)	0.306* (0.168)	0.055* (0.032)	0.064 (0.080)
1997	0.370 (0.337)	0.065 (0.066)	0.286* (0.144)	0.047* (0.026)	0.217 (0.140)	0.033 (0.026)	0.356** (0.143)	0.059** (0.027)	0.064 (0.067)
1998	-0.109 (0.337)	-0.036 (0.063)	0.076 (0.183)	0.009 (0.034)	0.010 (0.182)	-0.004 (0.034)	0.165 (0.167)	0.025 (0.031)	-0.037 (0.063)
1999	-0.095 (0.388)	-0.021 (0.073)	-0.081 (0.182)	-0.017 (0.034)	-0.145 (0.204)	-0.032 (0.039)	0.023 (0.212)	-0.000 (0.041)	-0.023 (0.073)
2000	-0.048 (0.447)	-0.006 (0.084)	0.169 (0.213)	0.031 (0.039)	0.100 (0.212)	0.017 (0.039)	0.255 (0.216)	0.046 (0.041)	-0.008 (0.086)
2001	-0.245 (0.430)	-0.058 (0.083)	-0.000 (0.170)	-0.002 (0.030)	-0.095 (0.167)	-0.022 (0.030)	0.093 (0.173)	0.013 (0.032)	-0.061 (0.087)
2002	-1.340*** (0.497)	-0.284*** (0.099)	-0.990*** (0.360)	-0.202*** (0.073)	-1.017** (0.386)	-0.207*** (0.078)	-0.923** (0.356)	-0.190*** (0.072)	-0.285*** (0.100)
2003	-1.699*** (0.401)	-0.363*** (0.082)	-1.126*** (0.244)	-0.240*** (0.056)	-1.185*** (0.236)	-0.252*** (0.055)	-1.078*** (0.224)	-0.231*** (0.053)	-0.365*** (0.082)
2004	-1.744*** (0.527)	-0.366*** (0.101)	-1.040*** (0.245)	-0.212*** (0.050)	-1.106*** (0.226)	-0.227*** (0.047)	-1.080*** (0.206)	-0.221*** (0.043)	-0.367*** (0.100)
2005	-1.640*** (0.547)	-0.351*** (0.108)	-1.104*** (0.269)	-0.231*** (0.059)	-1.218*** (0.271)	-0.256*** (0.060)	-1.081*** (0.269)	-0.229*** (0.060)	-0.353*** (0.109)
2006	-1.860*** (0.607)	-0.390*** (0.114)	-1.170*** (0.253)	-0.241*** (0.054)	-1.210*** (0.294)	-0.243*** (0.060)	-1.261*** (0.273)	-0.252*** (0.056)	-0.392*** (0.115)
2007	-2.213*** (0.783)	-0.485*** (0.164)	-1.355*** (0.355)	-0.299*** (0.085)	-1.285*** (0.442)	-0.279*** (0.102)	-1.389*** (0.402)	-0.298*** (0.093)	-0.487*** (0.164)
constant	-0.920 (5.136)		5.389*** (0.126)		5.504*** (0.113)		5.963*** (0.207)		
Observations	173	159	295	278	242	242	242	242	159
Number of countries	65	51	100		72	72	72	72	51
R-squared ¹	0.60		0.50		0.48		0.51		

Notes: UNSC is United Nations Security Council. T-statistics/z-statistics are in parentheses (p<0.01 - ***, p<0.05 - **, p<0.1 - *). Logit is conditional logit grouped by countries, with robust standard errors. OLS is panel OLS, with fixed effects and clustered robust standard errors.¹R-squared is R-squared within for OLS and Pseudo R-squared for logit. ²Calculated using an interaction term between UN Security Council membership and a dummy for LICs.

Table 2.9: UNSC membership and GDP forecast bias

	Full model	Baseline model		Truncated model	Full model
	Largest sample (1) OLS	Largest sample (2) OLS	Restricted sample (3) OLS	Restricted sample (4) OLS	LICs ² (5) OLS
UN Security Council membership	0.117 (0.303)	0.096 (0.249)	0.075 (0.243)	-0.046 (0.236)	-0.322 (0.505)
IMF arrangement in past 5 years	0.283 (0.241)				0.293 (0.241)
Reserves to imports (log)	0.126 (0.098)				0.113 (0.100)
GDP growth (lag)	-0.006 (0.019)				-0.007 (0.019)
GDP per capita (log)	-0.328 (1.070)				-0.342 (1.065)
Debt to exports (log)	-0.065 (0.199)				-0.070 (0.201)
Short-term debt to total debt (log)	-0.096 (0.141)				-0.090 (0.140)
Currency crisis	-0.809** (0.354)			-0.650*** (0.222)	-0.795** (0.361)
Parliamentary Elections (lag)	-0.264 (0.272)				-0.281 (0.273)
Presidential Elections (lag)	-0.376 (0.322)				-0.366 (0.320)
Political instability	-0.000 (0.038)				0.002 (0.038)
Social unrest (lead)	-0.014 (0.070)				-0.012 (0.070)
Freedom House Index	-0.023 (0.120)				-0.023 (0.119)
Political globalization	0.015 (0.026)				0.016 (0.026)
Quality of government	0.368 (0.270)				0.371 (0.264)
Financial globalization (de facto)	0.009 (0.010)				0.009 (0.010)
Financial globalization (de jure)	-0.009 (0.007)				-0.009 (0.008)
1994	-0.159 (0.376)	-0.504* (0.263)	-0.443* (0.225)	-0.373 (0.245)	-0.133 (0.379)
1995	-0.013 (0.490)	-0.406 (0.283)	-0.472* (0.263)	-0.532** (0.264)	0.008 (0.495)
1996	-0.363 (0.418)	-0.377 (0.249)	-0.463** (0.186)	-0.550*** (0.200)	-0.351 (0.422)
1997	-0.105 (0.399)	-0.052 (0.322)	-0.155 (0.261)	-0.178 (0.246)	-0.095 (0.399)
1998	-1.069** (0.535)	-0.706* (0.367)	-0.679** (0.284)	-0.646** (0.264)	-1.062* (0.535)
1999	-0.703* (0.409)	-0.272 (0.279)	-0.395 (0.279)	-0.466 (0.292)	-0.666 (0.417)
2000	-0.677 (0.539)	-0.473* (0.264)	-0.534** (0.227)	-0.622** (0.246)	-0.654 (0.541)
2001	-0.171 (0.531)	0.123 (0.282)	-0.026 (0.187)	-0.112 (0.211)	-0.122 (0.547)
2002	-0.423 (0.624)	-0.558 (0.386)	-0.579* (0.331)	-0.583** (0.285)	-0.409 (0.631)
2003	-0.212 (0.515)	-0.078 (0.247)	-0.143 (0.183)	-0.195 (0.181)	-0.193 (0.519)
2004	-0.648 (0.633)	-0.128 (0.360)	-0.267 (0.314)	-0.378 (0.338)	-0.638 (0.641)
2005	-0.017 (0.652)	0.179 (0.289)	-0.010 (0.302)	-0.087 (0.299)	0.020 (0.654)
2006	-0.844 (0.815)	-0.705* (0.357)	-0.584* (0.340)	-0.602* (0.347)	-0.839 (0.819)
2007	-0.475 (0.668)	-0.563* (0.317)	-0.608** (0.270)	-0.668** (0.272)	-0.450 (0.677)
constant	1.185 (8.068)	0.109 (0.200)	0.210 (0.129)	0.310*** (0.148)	1.200 (7.989)
Observations	153	255	214	214	153
Number of countries	64	97	71	71	64
R-squared ¹	0.43	0.12	0.09	0.15	

Notes: UNSC is United Nations Security Council. T-statistics/z-statistics are in parentheses (p<0.01 - ***, p<0.05 - **, p<0.1 - *). Logit is conditional logit grouped by countries, with robust standard errors. OLS is panel OLS, with fixed effects and clustered robust standard errors.¹R-squared is R-squared within for OLS and Pseudo R-squared for logit. ²Calculated using an interaction term between UN Security Council membership and a dummy for LICs.

Table 2.10: UNSC membership and bias in fiscal balance forecast

	Full model	Baseline model		Truncated model	Full model
	Largest sample (1) OLS	Largest sample (2) OLS	Restricted sample (3) OLS	Restricted sample (4) OLS	LICs ² (5) OLS
UN Security Council membership	-0.253 (0.357)	-0.448** (0.196)	-0.414** (0.204)	-0.512** (0.211)	-0.155 (0.606)
IMF arrangement in past 5 years	0.139 (0.240)				0.144 (0.239)
Reserves to imports (log)	0.197 (0.133)				0.189 (0.132)
GDP growth (lag)	-0.005 (0.024)				-0.006 (0.025)
GDP per capita (log)	-1.972 (1.763)				-1.975 (1.766)
Debt to exports (log)	-0.050 (0.184)				-0.052 (0.187)
Short-term debt to total debt (log)	-0.054 (0.134)				-0.050 (0.132)
Currency crisis	-0.666** (0.257)			-0.570** (0.222)	-0.660** (0.267)
Parliamentary Elections (lag)	-0.386 (0.260)				-0.395 (0.263)
Presidential Elections (lag)	-0.073 (0.334)				-0.068 (0.334)
Political instability	0.040 (0.034)				0.042 (0.035)
Social unrest (lead)	-0.139* (0.081)				-0.139* (0.081)
Freedom House Index	-0.262* (0.145)				-0.262* (0.145)
Political globalization	0.008 (0.022)				0.009 (0.023)
Quality of government	-0.155 (0.261)				-0.153 (0.262)
Financial globalization (de facto)	0.017 (0.012)				0.017 (0.012)
Financial globalization (de jure)	0.000 (0.011)				0.000 (0.011)
1994	0.034 (0.498)	-0.298 (0.266)	-0.086 (0.287)	-0.031 (0.266)	0.047 (0.501)
1995	0.239 (0.565)	-0.281 (0.231)	-0.152 (0.277)	-0.220 (0.272)	0.250 (0.572)
1996	-0.067 (0.531)	-0.386 (0.265)	-0.127 (0.315)	-0.203 (0.314)	-0.061 (0.536)
1997	-0.544 (0.624)	-0.688*** (0.238)	-0.483 (0.317)	-0.498 (0.305)	-0.539 (0.630)
1998	-0.307 (0.678)	-0.623* (0.352)	-0.511 (0.392)	-0.481 (0.384)	-0.304 (0.679)
1999	-0.602 (0.549)	-0.823*** (0.281)	-0.587* (0.297)	-0.653** (0.295)	-0.584 (0.576)
2000	-1.058* (0.626)	-0.803*** (0.259)	-0.679** (0.288)	-0.761** (0.291)	-1.045 (0.634)
2001	-0.486 (0.669)	-0.171 (0.205)	-0.048 (0.255)	-0.132 (0.271)	-0.460 (0.694)
2002	-0.042 (0.775)	-0.190 (0.394)	-0.013 (0.426)	-0.013 (0.399)	-0.035 (0.780)
2003	-0.225 (0.577)	-0.121 (0.348)	0.093 (0.354)	0.063 (0.333)	-0.217 (0.584)
2004	-0.243 (0.827)	-0.235 (0.371)	-0.119 (0.380)	-0.226 (0.358)	-0.236 (0.832)
2005	0.076 (0.920)	-0.093 (0.252)	0.093 (0.253)	0.015 (0.246)	0.094 (0.940)
2006	0.713 (1.174)	0.470 (0.644)	0.217 (0.762)	0.208 (0.760)	0.718 (1.183)
2007	0.573 (1.048)	-0.202 (0.335)	-0.039 (0.353)	-0.069 (0.346)	0.583 (1.058)
constant	15.506 (13.037)	0.607*** (0.169)	0.429* (0.217)	0.521** (0.209)	15.488 (13.059)
Observations	146	242	202	202	146
Number of countries	63	93	69	69	63
R-squared ¹	0.49	0.17	0.15	0.18	

Notes: UNSC is United Nations Security Council. T-statistics/z-statistics are in parentheses (p<0.01 - ***, p<0.05 - **, p<0.1 - *). Logit is conditional logit grouped by countries, with robust standard errors. OLS is panel OLS, with fixed effects and clustered robust standard errors.¹R-squared is R-squared within for OLS and Pseudo R-squared for logit. ²Calculated using an interaction term between UN Security Council membership and a dummy for LICs.

Table 2.11: UNSC membership and the size of IMF programs

	Full model		Baseline model				Truncated model		Full model
	Largest sample		Largest sample		Restricted sample		Restricted sample		LICs ²
	(1) OLS	(2) GLS	(3) OLS	(4) GLS	(5) OLS	(6) GLS	(7) OLS	(8) GLS	(9) OLS
UN Security Council membership	0.029 (0.192)	-0.170 (0.152)	-0.305** (0.136)	-0.475*** (0.104)	-0.245 (0.159)	-0.465*** (0.097)	0.037 (0.165)	-0.209*** (0.077)	0.036 (0.346)
IMF arrangement in past 5 years	-0.140 (0.261)	-0.121 (0.120)							-0.141 (0.261)
Reserves to imports (log)	-0.170 (0.121)	-0.132* (0.080)							-0.169 (0.122)
GDP growth (lag)	-0.044*** (0.016)	-0.038*** (0.010)					-0.039*** (0.013)	-0.045*** (0.006)	-0.044*** (0.016)
GDP per capita (log)	-3.570*** (1.127)	-3.930*** (0.434)					-2.108*** (0.712)	-1.978*** (0.217)	-3.568*** (1.129)
Debt to exports (log)	0.510*** (0.154)	0.413*** (0.071)					0.481*** (0.166)	0.461*** (0.055)	0.511*** (0.155)
Short-term debt to total debt (log)	-0.045 (0.070)	-0.015 (0.035)							-0.045 (0.070)
Currency crisis	-0.132 (0.203)	-0.189* (0.098)							-0.134 (0.206)
Parliamentary Elections (lag)	0.031 (0.148)	-0.021 (0.114)							0.031 (0.147)
Presidential Elections (lag)	-0.017 (0.167)	0.233 (0.143)							-0.016 (0.169)
Political instability	0.051 (0.031)	0.028** (0.014)							0.051 (0.031)
Social unrest (lead)	0.093 (0.062)	0.164*** (0.036)							0.092 (0.064)
Freedom House Index	0.030 (0.094)	0.071 (0.050)							0.029 (0.095)
Political globalization	-0.017 (0.018)	-0.034*** (0.010)							-0.017 (0.018)
Quality of government	-0.285 (0.213)	-0.257*** (0.092)							-0.286 (0.213)
Financial globalization (de facto)	0.021* (0.011)	0.023*** (0.005)							0.021* (0.011)
Financial globalization (de jure)	-0.004 (0.010)	-0.000 (0.004)							-0.004 (0.010)
1994	0.135 (0.338)	0.308** (0.143)	-0.084 (0.339)	-0.204*** (0.055)	-0.378 (0.330)	-0.510*** (0.094)	-0.235 (0.298)	-0.275*** (0.090)	0.131 (0.355)
1995	0.674* (0.368)	0.667*** (0.136)	0.070 (0.357)	-0.065 (0.087)	-0.199 (0.303)	-0.318*** (0.105)	-0.067 (0.267)	-0.207*** (0.080)	0.670* (0.382)
1996	0.427 (0.343)	0.408** (0.182)	0.082 (0.323)	-0.070 (0.082)	-0.252 (0.339)	-0.325*** (0.094)	-0.062 (0.263)	-0.162** (0.078)	0.421 (0.369)
1997	0.959** (0.365)	1.072*** (0.145)	0.173 (0.331)	0.047 (0.094)	-0.131 (0.323)	-0.259*** (0.084)	0.262 (0.297)	0.074 (0.088)	0.955** (0.382)
1998	0.900** (0.424)	1.095*** (0.155)	0.256 (0.344)	0.158** (0.065)	-0.039 (0.343)	-0.113 (0.095)	0.297 (0.312)	0.189 (0.124)	0.899** (0.430)
1999	0.556 (0.387)	0.520** (0.213)	0.069 (0.347)	-0.158* (0.092)	-0.302 (0.350)	-0.484*** (0.106)	0.047 (0.277)	0.026 (0.141)	0.550 (0.405)
2000	0.763* (0.410)	0.999*** (0.173)	0.218 (0.330)	0.234** (0.102)	-0.126 (0.321)	-0.100 (0.110)	0.152 (0.287)	0.060 (0.095)	0.758* (0.427)
2001	0.816* (0.469)	0.998*** (0.180)	0.028 (0.349)	-0.104 (0.083)	-0.269 (0.355)	-0.328*** (0.047)	0.256 (0.322)	0.247*** (0.086)	0.809 (0.497)
2002	1.068* (0.592)	1.243*** (0.236)	-0.002 (0.448)	-0.140** (0.065)	-0.294 (0.474)	-0.678*** (0.149)	0.269 (0.436)	0.035 (0.139)	1.064* (0.599)
2003	0.680 (0.466)	0.935*** (0.198)	-0.372 (0.418)	-0.523*** (0.094)	-0.589 (0.430)	-0.774*** (0.118)	-0.025 (0.399)	-0.323*** (0.102)	0.675 (0.479)
2004	0.346 (0.520)	0.522** (0.247)	-1.184*** (0.344)	-1.295*** (0.115)	-1.504*** (0.338)	-1.415*** (0.117)	-0.394 (0.413)	-0.405** (0.162)	0.342 (0.530)
2005	0.927 (0.791)	1.299*** (0.313)	-0.910** (0.458)	-1.007*** (0.153)	-1.184** (0.521)	-1.444*** (0.187)	-0.355 (0.583)	-0.616*** (0.201)	0.921 (0.806)
2006	1.066 (0.732)	1.445*** (0.341)	-0.879* (0.444)	-1.085*** (0.098)	-1.613*** (0.381)	-1.805*** (0.134)	-0.224 (0.489)	-0.423*** (0.131)	1.061 (0.743)
2007	0.958 (0.763)	1.146*** (0.318)	-1.022*** (0.343)	-1.251*** (0.130)	-1.310*** (0.334)	-1.439*** (0.172)	0.166 (0.490)	-0.197 (0.156)	0.952 (0.781)
constant	21.724*** (7.929)	31.846*** (3.977)	-4.550*** (0.295)	-4.651*** (0.551)	-4.313*** (0.287)	-3.443*** (0.366)	9.820* (4.964)	12.166*** (1.855)	21.723*** (7.956)
Observations	175	161	294	277	229	229	229	229	175
Number of countries	66		100		71	71	71	71	66
R-squared ¹	0.55		0.29		0.33		0.46		

Notes: UNSC is United Nations Security Council. T-statistics/z-statistics are in parentheses (p<0.01 - ***, p<0.05 - **, p<0.1 - *). Logit is conditional logit grouped by countries, with robust standard errors. OLS is panel OLS, with fixed effects and clustered robust standard errors.¹R-squared is R-squared within for OLS and Pseudo R-squared for logit. ²Calculated using an interaction term between UN Security Council membership and a dummy for LICs.

Table 2.12: UNSC membership and program implementation ratio

	Full model		Baseline model				Truncated model		Full model
	Largest sample	Restricted sample	Largest sample	Restricted sample	Largest sample	Restricted sample	Largest sample	Restricted sample	LICs ²
	(1) OLS	(2) Poisson	(3) OLS	(4) Poisson	(5) OLS	(6) Poisson	(7) OLS	(8) Poisson	(9) Poisson
UN Security Council membership	0.310 (0.362)	0.267 (0.295)	0.207 (0.202)	0.221 (0.173)	0.207 (0.202)	0.221 (0.173)	0.207 (0.202)	0.221 (0.173)	0.531 (0.554)
Program duration	-0.007 (0.015)	-0.008 (0.014)	0.006 (0.009)	0.004 (0.007)	0.006 (0.009)	0.004 (0.007)	0.006 (0.009)	0.004 (0.007)	-0.009 (0.015)
IMF arrangement in past 5 years	-0.214 (0.257)	-0.355 (0.226)							-0.369* (0.220)
Reserves to imports (log)	0.118 (0.073)	0.101* (0.060)							0.116* (0.066)
GDP growth (lag)	0.009 (0.018)	0.006 (0.017)							0.008 (0.017)
GDP per capita (log)	-0.403 (0.776)	-0.373 (0.768)							-0.330 (0.777)
Debt to exports (log)	-0.307** (0.123)	-0.251** (0.112)							-0.255** (0.112)
Short-term debt to total debt (log)	-0.040 (0.086)	-0.018 (0.117)							-0.024 (0.117)
Currency crisis	-0.205 (0.213)	-0.296 (0.203)							-0.328 (0.209)
Parliamentary Elections (lag)	0.029 (0.181)	-0.073 (0.170)							-0.041 (0.171)
Presidential Elections (lag)	0.245 (0.194)	0.360* (0.212)							0.347* (0.210)
Political instability	-0.033 (0.030)	-0.038 (0.037)							-0.041 (0.037)
Social unrest (lead)	0.008 (0.084)	0.068 (0.093)							0.049 (0.095)
Freedom House Index	0.048 (0.102)	0.065 (0.090)							0.055 (0.093)
Political globalization	-0.036** (0.015)	-0.037*** (0.012)							-0.038*** (0.012)
Quality of government	-0.334* (0.200)	-0.293* (0.172)							-0.316* (0.171)
Financial globalization (de facto)	0.004 (0.010)	0.005 (0.009)							0.006 (0.009)
Financial globalization (de jure)	-0.012** (0.006)	-0.016*** (0.006)							-0.016*** (0.006)
1994	-0.173 (0.278)	-0.001 (0.237)	-0.244 (0.181)	-0.171 (0.136)	-0.244 (0.181)	-0.171 (0.136)	-0.244 (0.181)	-0.171 (0.136)	-0.047 (0.251)
1995	0.121 (0.283)	0.192 (0.251)	0.163 (0.153)	0.168 (0.113)	0.163 (0.153)	0.168 (0.113)	0.163 (0.153)	0.168 (0.113)	0.153 (0.255)
1996	-0.266 (0.292)	-0.155 (0.246)	-0.142 (0.169)	-0.094 (0.120)	-0.142 (0.169)	-0.094 (0.120)	-0.142 (0.169)	-0.094 (0.120)	-0.217 (0.246)
1997	0.288 (0.250)	0.450* (0.237)	-0.105 (0.177)	-0.031 (0.131)	-0.105 (0.177)	-0.031 (0.131)	-0.105 (0.177)	-0.031 (0.131)	0.406 (0.254)
1998	-0.122 (0.385)	0.160 (0.384)	-0.299 (0.204)	-0.210 (0.169)	-0.299 (0.204)	-0.210 (0.169)	-0.299 (0.204)	-0.210 (0.169)	0.144 (0.384)
1999	-0.337 (0.319)	-0.118 (0.289)	-0.273 (0.185)	-0.184 (0.149)	-0.273 (0.185)	-0.184 (0.149)	-0.273 (0.185)	-0.184 (0.149)	-0.200 (0.304)
2000	-0.420 (0.336)	-0.221 (0.307)	-0.540** (0.210)	-0.456** (0.195)	-0.540** (0.210)	-0.456** (0.195)	-0.540** (0.210)	-0.456** (0.195)	-0.284 (0.319)
2001	-0.105 (0.328)	0.085 (0.321)	-0.137 (0.229)	-0.068 (0.176)	-0.137 (0.229)	-0.068 (0.176)	-0.137 (0.229)	-0.068 (0.176)	-0.016 (0.321)
2002	-0.568 (0.485)	-0.334 (0.467)	-0.739*** (0.228)	-0.685*** (0.244)	-0.739*** (0.228)	-0.685*** (0.244)	-0.739*** (0.228)	-0.685*** (0.244)	-0.373 (0.478)
2003	-0.973*** (0.341)	-0.789** (0.307)	-0.868*** (0.196)	-0.851*** (0.196)	-0.868*** (0.196)	-0.851*** (0.196)	-0.868*** (0.196)	-0.851*** (0.196)	-0.879*** (0.322)
2004	-0.733* (0.391)	-0.461 (0.367)	-0.739*** (0.213)	-0.705*** (0.229)	-0.739*** (0.213)	-0.705*** (0.229)	-0.739*** (0.213)	-0.705*** (0.229)	-0.532 (0.383)
2005	-0.618 (0.423)	-0.425 (0.387)	-0.675*** (0.180)	-0.616*** (0.170)	-0.675*** (0.180)	-0.616*** (0.170)	-0.675*** (0.180)	-0.616*** (0.170)	-0.522 (0.402)
2006	-0.258 (0.554)	0.041 (0.478)	-0.665*** (0.203)	-0.578*** (0.183)	-0.665*** (0.203)	-0.578*** (0.183)	-0.665*** (0.203)	-0.578*** (0.183)	-0.031 (0.490)
2007	-0.024 (0.474)	0.204 (0.440)	-0.401** (0.170)	-0.314** (0.135)	-0.401** (0.170)	-0.314** (0.135)	-0.401** (0.170)	-0.314** (0.135)	0.104 (0.461)
constant	8.823 (5.666)		1.357*** (0.142)		1.357*** (0.142)		1.357*** (0.142)		
Observations	173	159	295	276	295	276	295	276	159
Number of countries	65		100		100		100		51
R-squared ¹	0.39		0.24		0.24		0.24		

Notes: UNSC is United Nations Security Council. T-statistics/z-statistics are in parentheses (p<0.01 - ***, p<0.05 - **, p<0.1 - *). Logit is conditional logit grouped by countries, with robust standard errors. OLS is panel OLS, with fixed effects and clustered robust standard errors.¹R-squared is R-squared within for OLS and Pseudo R-squared for logit. ²Calculated using an interaction term between UN Security Council membership and a dummy for LICs.

Table 2.13: UNSC membership and the number of prior actions

	Full model		Baseline model				Truncated model		Full model
	Largest sample		Largest sample		Restricted sample		Restricted sample		LICs ²
	(1) OLS	(2) Poisson	(3) OLS	(4) Poisson	(5) OLS	(6) Poisson	(7) OLS	(8) Poisson	(9) Poisson
UN Security Council membership	3.126 (3.407)	-0.018 (0.300)	0.579 (2.895)	-0.113 (0.483)	0.579 (2.895)	-0.113 (0.483)	0.579 (2.895)	-0.113 (0.483)	0.016 (0.538)
Program duration	0.135 (0.124)	0.007 (0.013)	-0.036 (0.035)	-0.016 (0.012)	-0.036 (0.035)	-0.016 (0.012)	-0.036 (0.035)	-0.016 (0.012)	0.007 (0.013)
IMF arrangement in past 5 years	6.345*** (1.943)	1.069*** (0.250)							1.068*** (0.250)
Reserves to imports (log)	-1.044 (1.300)	-0.099 (0.217)							-0.101 (0.222)
GDP growth (lag)	0.034 (0.186)	0.043 (0.031)							0.043 (0.031)
GDP per capita (log)	5.189 (8.279)	1.882* (1.007)							1.875* (1.015)
Debt to exports (log)	2.347 (1.536)	0.278* (0.152)							0.279* (0.164)
Short-term debt to total debt (log)	0.664 (1.402)	0.096 (0.158)							0.097 (0.145)
Currency crisis	1.854 (2.234)	0.919*** (0.277)							0.916*** (0.298)
Parliamentary Elections (lag)	-5.074** (2.367)	-0.737*** (0.244)							-0.737*** (0.247)
Presidential Elections (lag)	5.206** (2.399)	0.719* (0.396)							0.721* (0.410)
Political instability	0.028 (0.474)	0.000 (0.059)							0.000 (0.057)
Social unrest (lead)	-0.974* (0.540)	-0.127* (0.074)							-0.128* (0.074)
Freedom House Index	-1.134 (1.038)	-0.054 (0.110)							-0.055 (0.110)
Political globalization	0.171 (0.148)	-0.021 (0.023)							-0.021 (0.023)
Quality of government	2.262 (1.828)	0.086 (0.338)							0.086 (0.338)
Financial globalization (de facto)	-0.148* (0.085)	-0.035*** (0.011)							-0.035*** (0.011)
Financial globalization (de jure)	0.148 (0.097)	0.013 (0.011)							0.014 (0.011)
1994	-2.112 (2.879)	-0.332 (0.438)	-0.465 (0.778)	-0.046 (0.225)	-0.465 (0.778)	-0.046 (0.225)	-0.465 (0.778)	-0.046 (0.225)	-0.335 (0.488)
1995	-3.031 (3.289)	0.143 (0.509)	0.843* (0.493)	0.231 (0.180)	0.843* (0.493)	0.231 (0.180)	0.843* (0.493)	0.231 (0.180)	0.140 (0.529)
1996	-2.597 (3.154)	0.097 (0.401)	0.983* (0.499)	0.236 (0.147)	0.983* (0.499)	0.236 (0.147)	0.983* (0.499)	0.236 (0.147)	0.092 (0.463)
1997	-6.029** (2.784)	-0.664* (0.387)	0.296 (0.486)	0.195 (0.171)	0.296 (0.486)	0.195 (0.171)	0.296 (0.486)	0.195 (0.171)	-0.668 (0.441)
1998	-6.052 (4.075)	-0.621 (0.701)	-0.291 (0.737)	0.097 (0.250)	-0.291 (0.737)	0.097 (0.250)	-0.291 (0.737)	0.097 (0.250)	-0.623 (0.720)
1999	-3.238 (4.129)	-0.049 (0.478)	0.987 (0.940)	0.248 (0.234)	0.987 (0.940)	0.248 (0.234)	0.987 (0.940)	0.248 (0.234)	-0.053 (0.530)
2000	-2.332 (2.915)	0.207 (0.507)	0.265 (0.741)	0.080 (0.151)	0.265 (0.741)	0.080 (0.151)	0.265 (0.741)	0.080 (0.151)	0.206 (0.509)
2001	-2.723 (3.513)	0.356 (0.388)	1.311 (1.833)	1.034** (0.504)	1.311 (1.833)	1.034** (0.504)	1.311 (1.833)	1.034** (0.504)	0.350 (0.500)
2002	4.429 (4.313)	1.976*** (0.440)	8.353*** (2.468)	2.351*** (0.342)	8.353*** (2.468)	2.351*** (0.342)	8.353*** (2.468)	2.351*** (0.342)	1.974*** (0.462)
2003	6.468* (3.676)	2.616*** (0.356)	7.604*** (2.362)	2.236*** (0.256)	7.604*** (2.362)	2.236*** (0.256)	7.604*** (2.362)	2.236*** (0.256)	2.614*** (0.387)
2004	9.251*** (3.465)	3.088*** (0.510)	9.335*** (2.023)	2.646*** (0.337)	9.335*** (2.023)	2.646*** (0.337)	9.335*** (2.023)	2.646*** (0.337)	3.086*** (0.529)
2005	6.956 (4.410)	2.184*** (0.601)	8.707*** (3.218)	2.643*** (0.385)	8.707*** (3.218)	2.643*** (0.385)	8.707*** (3.218)	2.643*** (0.385)	2.181*** (0.657)
2006	-1.206 (4.157)	1.210** (0.487)	5.706*** (1.856)	1.571*** (0.334)	5.706*** (1.856)	1.571*** (0.334)	5.706*** (1.856)	1.571*** (0.334)	1.209** (0.496)
2007	1.731 (3.642)	0.957* (0.490)	6.845*** (1.016)	2.150*** (0.252)	6.845*** (1.016)	2.150*** (0.252)	6.845*** (1.016)	2.150*** (0.252)	0.956* (0.501)
constant	-60.270 (63.182)	107	1.335*** (0.503)	202	1.335*** (0.503)	202	1.335*** (0.503)	202	
Observations	129		228		228		228		107
Number of countries	59		96		96		96		37
R-squared ¹	0.66		0.51		0.51		0.51		

Notes: UNSC is United Nations Security Council. T-statistics/z-statistics are in parentheses (p<0.01 - ***, p<0.05 - **, p<0.1 - *). Logit is conditional logit grouped by countries, with robust standard errors. OLS is panel OLS, with fixed effects and clustered robust standard errors. ¹R-squared is R-squared within for OLS and Pseudo R-squared for logit. ²Calculated using an interaction term between UN Security Council membership and a dummy for LICs.

3 Impressing financial markets: IMF lending since the global financial crisis

3.1 Introduction

The aim of this paper is to analyze how the influence of financial corporate interests of major IMF shareholders on IMF lending has changed with GFC of 2007-2008. In this regard, the crisis constitutes another structural change in the history of IMF lending. Since the end of the cold war, there have been at least two structural changes in IMF lending: the end of the Latin American debt crisis in the late 1980s, and the inclusion of the countries of the former soviet bloc in the early 1990s (Moser & Sturm, 2011, p. 2). With the GFC, IMF lending changed again. The IMF dramatically increased its lending volume, and extended its support from developing to advanced economies, unseen since many years. Helped by a massive strengthening of its lending power (IMF, 2013), the IMF played a crucial role in the stabilization of the international financial and monetary system. However, with this renewed visibility of IMF lending, criticism refaced that not only economic considerations drive lending decisions – but also the interests of the IMF’s most powerful member states. An example is the highly debated 2010 program for Greece, which was widely considered as influenced by the interest to protect heavily exposed European and US financial corporations (Catan & Talley, 2013; IEO, 2016).

This raises the question how financial corporations influence IMF lending decisions, and whether this has changed with the GFC. I argue that financial corporate interests influence IMF lending in a similar way as geopolitics, which has been intensely researched.¹⁹ The countries that have leverage on IMF policy design based on their voting power – the major IMF shareholders – influence IMF lending to serve their various interests. This includes protecting their banks in case of heavy exposure to a country asking for an IMF program. With the GFC, the influence of financial corporations on IMF

¹⁹ See for example Dreher et al. (2015).

lending has increased. During the era of the “great moderation” before the GFC, the low-risk environment and an increasing search for yields led to a considerable build-up of exposure by banks to countries that later slid into crisis. In the GFC, the major IMF shareholders increased their influence on IMF lending with the goal to protect these banks, both through the indirect channel of state interest in preserving financial stability, and through the direct channel of lobbying by financial corporations.

To test the hypothesis, I analyze a panel dataset of 189 countries covering the years 1993 to 2016, using OLS and Poisson models. I test the effect of financial corporate interests on two aspects of IMF program design, the size of IMF programs and the number of conditions. I further add interaction terms using a dummy variable on the GFC years. The size of IMF programs and the number of conditions are dependent variables used in past research on the subject, which allows some comparability. Finally, I add a model using legal origin as instrumental variable (IV) as robustness check to account for possible endogeneity issues of the measure of financial corporate interests.

The main finding is that the GFC constitutes another structural change in IMF lending, as the importance of financial corporations in IMF lending decisions has risen. Major IMF shareholders protect the exposure of their banks, which increased strongly in the years before the GFC. To impress markets, they influence program design in the country to which their banks have exposure, towards larger lending amounts and more conditions. This serves to keep the program country’s market access and avoid default. While financial corporate interests are associated with a larger program size for all countries, the positive link with more conditions is only present for countries for which market access matters. For countries with limited market access, IMF staff’s technocratic interests in parsimonious conditionality dominates.

This study builds on the original findings by Oatley and Yackee (2004) and Broz and Hawes (2006), who have researched the link between IMF lending and financial sector interests by large IMF shareholders in the time before the GFC. Following Breen (2014), the empirical design uses *claims of financial corporations* as variable of interest, based on data by the Bank for International Settlements (BIS). I add to the earlier research by investigating whether the GFC constitutes a structural change in how financial corporations influence IMF lending, which is novel (to my knowledge). In addition, given that access to financial markets does not matter to all countries to the same extent, I differentiate between richer and poorer countries.

This paper is structured as follows. Section 3.2 lays out the theoretical underpinnings of the influence of financial corporations on IMF lending. It describes how financial corporations influence IMF lending decisions, what past research has found on the topic, and whether the influence of financial corporations has increased with the GFC. Section

3.3 lays out the research design and the hypotheses. Section 3.4 describes the method of analysis to test the hypotheses. Section 3.5 describes the regression results. The last section concludes.

3.2 Influence of financial corporations on IMF lending and the global financial crisis

3.2.1 Can financial corporations influence IMF lending decisions?

Based on the IMF's design as laid out in the IMF Article of Agreements, two main actors shape IMF policy, and specifically IMF lending decisions. These are the IMF shareholders – the states – and IMF staff, the employees working at the Fund. Both actors have two main channels through which their interests are shaped.²⁰

For IMF staff, there are two main types of interests to influence IMF policy design, such as in the case of IMF lending decisions. IMF staff acts out of bureaucratic interest when they serve the interest of the institution that employs them. A key interest in this regard is the financial survival of the institution, which in case of the IMF is guaranteed by the interest earned on programs, subject to program size. Therefore, IMF staff might act out of the bureaucratic interest to make programs larger in size than strictly necessary from an economic perspective. IMF staff can also serve technocratic interest, such as when they base their decision-making on beliefs about economic principles and concerns about global financial stability (Copelovitch, 2010, p. 50).

States can also act out of two types of interests when shaping IMF policy. The underlying assumption is that state actors can use their power to influence the multilateral organizations such as the IMF. This assumption is quite straight forward, as the members of the IMF are states and their power to influence everyday decisions of the IMF via the Executive Board is enshrined in the IMF's Articles of Agreement. Most obviously, governments asking for IMF lending may be driven by domestic interest in their negotiations with IMF staff. They can for example try to limit the reform needs in a program, with the goal to limit public protests in the country against unpopular reforms. States can also try to influence IMF lending decisions out of geopolitical interest. There is

²⁰ See Copelovitch (2010) for a detailed overview of the various types of actors and their interests in IMF policy design.

plenty of research on the role of geopolitical interests, most notably of the US, in IMF lending decisions.²¹

It appears that financial corporate interests influence IMF lending decisions in a similar way as geopolitics. However, the mechanism is less straightforward. While geopolitical interests are inherently interests of the state itself, this is not the same for the interests of financial corporations. Financial corporations are not state actors, and they do not have a formal say on IMF decisions. For their interests to matter, it needs to be assumed that channels exist through which the interests of corporations can influence states, such that the government will take the corporations' interests into account when negotiating IMF programs and effectively negotiate on their behalf.

In this context, a first question is what the goal of financial corporations' influence on IMF lending could be. The literature describes two goals. Gould (2003) describes a first aspect. She has researched how the fact that financial corporations act as supplementary financiers to IMF programs influences conditionality. She finds that if supplementary financing by the private sector is a key factor for an IMF program, the program's conditionality tends to contain more aspects that are beneficial for the banking sector. A second goal is protecting the interests of financial corporations with exposure to the country asking for an IMF program. This second goal is the focus of this study, as it is closer to the anecdotal evidence observed in the IMF programs for Euro Area countries after the GFC, as described above.

A second question is through which channels financial corporate interests influence IMF lending decisions. This relates to the more general question of how financial corporations influence policy-making by states. According to Young (2018), they do so through three channels: through their normal business activity, through organized advocacy (lobbying), and through their enmeshment in elite networks (p. 386). In that sense, their influence can be both passive and active: If countries act out of fear of a negative financial market reaction, the power of financial corporations appears passive. However, if financial corporations actively influence state behavior through lobbying or enmeshment in elite networks, their power becomes strategic.

In the context of financial corporate interests influencing IMF lending decisions, both the active and the passive channels are possible. If the banks of a particular state, say France, are heavily exposed to a struggling economy, say Greece, it is possible that French banks will lobby the French government in order to influence an IMF program in a way that is beneficial for French banks. It is however also possible that the French government

²¹ See for example Dreher et al. (2015). For a good overview of earlier research, see Moser and Sturm (2011).

is afraid of the negative effect on the French economy if French banks crashed, hence acting in the same way without explicit lobbying (Breen, 2014, p. 5).

3.2.2 Literature on financial corporations and IMF lending

As Vreeland (2005) argues, whereas in geopolitics IMF programs are used “to reward friends”, when banks are exposed, IMF programs are used by major IMF shareholders to protect them. Looking at the findings of past research (see Table 3.1), the protection of financial corporations indeed leads to IMF programs with larger loan sizes and softer conditionality, while there seems to be no effect on the probability of signing an IMF program.

Table 3.1: Literature on the effect of financial corporate interests on IMF lending

Study	Time frame	Channel	Observed effect
Oatley and Yackee (2004)	1986 to 1998	Conditionality	Fewer conditions
		Loan size	Larger loan size
Broz and Hawes (2006)	1983 to 2002	IMF program signing	Inconclusive
		Loan size	Larger loan size
Presbitero and Zazzaro (2012)	January 2008 to June 2010	IMF program signing	No effect
		Loan size	Larger loan size
Breen (2014)	1997 to 2006	Conditionality	Fewer conditions

Oatley and Yackee (2004) have found that the size of IMF programs is not only defined by the economic need of the country in question, but also by the amount of debt, which the country owes to US Banks. Analyzing IMF programs between 1986 and 1998, they argue that as IMF programs facilitate continued debt service, exposed commercial banks have an interest to pressure US policymakers to represent their interests in the IMF (p. 418). They find that exposure of US banks to a country asking for an IMF program leads to a larger loan size, as well as less conditions. Softer conditionality implies that IMF Executive Board reviews are easier to pass, so the payout of the next tranche of the loan on time is more likely.

Broz and Hawes (2006) focus their research on the link of the exposure of banks from the US, Great Britain, France, Germany, and Japan on 369 IMF lending decisions during 1983-2002. They find a positive link between the size of an IMF program and the degree of foreign bank exposure in the program country.

Presbitero and Zazzaro (2012) also find a link between US financial corporate interests on IMF program size. They analyze 118 countries participating in 45 IMF programs between January 2008 and June 2010. At the same time, they do not find a link between the probability of signing an IMF arrangement and bank exposure. They argue that countries with considerable bank exposure are likely to be less risky for investors as they have more stable economic fundamentals, and hence are less likely to need an IMF program.

Breen (2014) finds that IMF programs have fewer binding conditions when financial corporations of major IMF shareholders are at stake. He argues that if IMF member states aim to protect their exposed banks in a country requesting IMF assistance, they have an interest that the IMF lending process is as smooth as possible, which implies softer conditionality. This ensures that the borrowing country serves its external debt without defaulting or debt restructuring, and gives the implicated foreign banks time to reduce their exposure.

3.2.3 Has the influence of financial corporations increased with the global financial crisis?

During the era of the great moderation – after the end of the cold war and before the GFC – the low-risk environment and an increasing search for yields contributed to increasing financial inter-connectedness and a higher exposure of banks in countries outside their domestic markets. When the GFC hit and eventually evolved into the European debt crisis, protecting banks that had built up heavy exposure to the now struggling countries such as Greece and Ireland became a major driving force of policy-making by IMF member states.

The importance of preserving financial stability became more acute for both governments and the IMF. At the same time, exposed banks likely increased their lobbying, leading to stronger state-corporation relations. Hence, it appears that the influence of financial corporate interests on IMF policy-making increased with the GFC, both through the direct channel of lobbying and closer state-corporation relations and through the indirect channel of state interest in preserving financial stability.

The importance of protecting exposed banks is striking in the case of the first IMF program for Greece, and there is a large amount of literature criticizing the role of protecting financial corporate interests in the program.²² In spring 2010, Greece became the first country of the Euro Area to receive an IMF program of 30 billion euro. In his account of the negotiations around the IMF program, Blustein (2015) describes how the

²² See IEO (2016), p. 4, for a good overview.

program was widely perceived as a means to pay European banks with considerable exposure to Greece. Struggling German and French banks were among the biggest holders of Greek bonds – and because of the IMF program, they received payment in full and on time of their outstanding investments (p. 1). Blustein also describes how the fear of a debt restructuring in Greece, which would become necessary without the proposed IMF deal, could become a Lehman-like event in which investors would pull-out their money from all over Europe (p. 11).

The case is similarly compelling for Ireland, which received a 22.5 billion euro IMF program in 2010. In his analysis of the program, Breen (2012) finds strong support for economic and financial interests influencing the IMF program for Ireland. He describes how during the negotiations on the program design between the Irish authorities and IMF staff, there was initial agreement that some form of haircut should be imposed on senior bondholders of Irish Banks. However, the European Central Bank and other IMF shareholders intervened to ensure that all senior bondholders had their losses covered. Breen assumes that France and Germany acted in this way to avoid the exposure of weaknesses in their banks, which had considerable exposure to Ireland and other struggling European economies (p. 9).

3.3 Research Design

I argue that with the GFC, the importance of financial corporations in IMF lending decisions has risen – not necessarily through direct lobbying of financial corporations with their respective governments, but rather indirectly. The governments of the IMF shareholders where major banks of domiciled try to protect their exposed banks to avoid a meltdown of their domestic financial system. These countries are also known as the G5 (Copelovitch, 2010).

In order to protect their banks, the G5 will influence IMF program design in the affected country with the goal to keep the country's market access. For this, they want the debtor country to try to impress financial markets with its eagerness to reform, to show its determination to overcome its economic challenges. This interest to impress markets rises with the country's exposure to claims by major banks from G5. To signal reform eagerness to financial markets, the program should appear especially tough, which high number of conditions achieves easily.

This interest by the G5 to impress markets leading to more conditions in the presence of exposure to financial corporations differs past research by Oatley and Yackee (2004) and Breen (2014), which found the opposite effect. They argued that fewer conditions imply a smoother lending process and faster payout of IMF loans. However, they analyzed the

time before the GFC (1986-1998 and 1997-2006). As the exposure of G5 banks and global financial interconnectedness has risen considerably in the run up of the GFC, I argue that the interest to impress markets has come to dominate the interest in a smooth lending process – particularly as if the G5 acts together, they easily dominate the IMF Executive Board’s majority-based decision approach.

Furthermore, by influencing program design towards more conditions, the G5 overrule technocratic interests of IMF staff, who increasingly tended towards parsimony in applying conditionality, based on IMF-internal research from 2005 and 2008 that less and more focused conditionality is linked to better program outcomes.²³

In conclusion, the first hypothesis of this study is therefore:

H1: Since the GFC, the number of conditions in IMF programs is positively associated with the exposure to G5 banks in countries, for which market access matters.

However, this interest to “impress financial markets” is only true for countries for which access to global financial markets plays a major role in their external financing. For countries with limited or no market access, there is little interest in impressing banks as their external financing is mostly ensured by development aid, concessional lending by multilateral institutions, and bilateral credit by other countries. Such countries, which are mostly LICs, have access to the IMF’s concessional lending facility, the PRGT. For the governments of these countries, impressing financial markets does not matter in case they have to negotiate an IMF program. Hence, in these countries, the technocratic interests of IMF staff to focus on parsimonious conditionality dominates program design. Therefore, around the time of the GFC, the number of conditions in IMF programs declined in countries with limited market access and in which IMF staff has the power to dominate program design.

The timing around the GFC might seem as a coincidence, but I would argue that it is a consequence of the “great moderation” before the GFC. During that time of unusual global economic stability, there was relatively limited demand of IMF lending and hence more time for IMF staff to focus on research and analysis of past activity. The in-depth

²³ In the years before the GFC, several major reviews took place on how IMF staff should apply conditionality: the 2005 IMF review of conditionality guidelines, the 2008 IEO evaluation of structural conditionality in IMF-supported programs, and the 2008 implementation plan for IMF staff of the aforementioned IEO report (IMF, 2005, IEO 2007, and IMF 2008). A crucial aspect in these papers is the principle of parsimony in conditionality, which stipulates that fewer, more focused conditions are linked to better program outcomes. A repeated finding was that this principle, which originates from the 2002 IMF’s conditionality guidelines, had not been sufficiently implemented and should receive renewed impetus.

analysis of past lending and its lessons were among the results of this relatively quiet time. This leads us to the second hypothesis of this study:

H2: In countries for which market access does not matter, the time around the GFC is associated with fewer conditions.

Finally, the GFC also strengthens the link between exposure to financial corporations and IMF program size. Governments have an interest to influence programs towards larger programs. Governments of the G5 countries will do so because it allows more room to bailout exposed banks. Governments asking for IMF lending will do so also to impress markets out of domestic interest – more money implies more room to manoeuvre for governments in their reform efforts, and less painful reduction of fiscal spending which could negatively affect the hoped-for economic recovery. This is in line with the findings of past research, which finds a consistent positive link between IMF program size and exposure to financial corporations.

At the same time, IMF staff has no specific interest to lobby against his. From the perspective of technocratic interests, the size of IMF programs has not been a particularly focus of analysis by IMF staff compared to conditionality. A possible reason is that program size is less subject to controversy compared to burdensome conditionality. Hence, IMF staff is less in a need to defend its views. At the same time, IMF staff has a clear bureaucratic interest in larger programs, as this implies more interest payments to the IMF, which is the IMF's main source of income. Hence, the bottom line is that both governments and IMF staff have an interest in large programs. This also implies that there is no reason for differentiating between countries that have market access and countries that do not, as it does not matter for the size of IMF programs. In line with findings of past research on bank exposure and the size of IMF programs, this leads to the third and final hypothesis of this study:

H3: Since the GFC, the size of IMF programs is positively associated with the exposure of G5 banks.

3.4 Method of Analysis

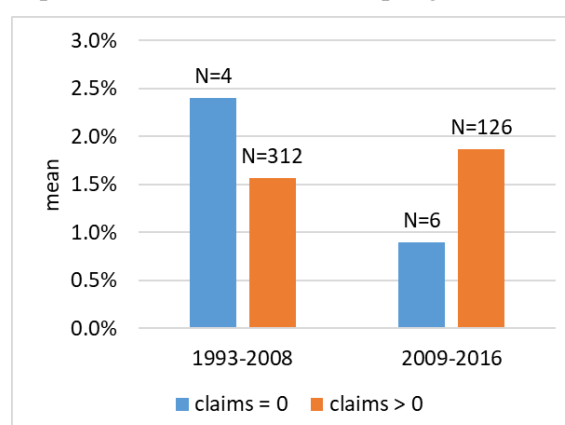
3.4.1 Descriptive evidence

Before advancing to the detailed analysis of data, this section offers some descriptive evidence on the key variables to be analyzed, the *size of IMF programs* and the *number of*

conditions in a program. In the period we analyze, 1993-2016, the average size of IMF programs in all cases has increased slightly over time, from about 1.6% of the receiving country's GDP before the GFC (1993-2008) to about 1.8% thereafter (2009-2016). This increase is entirely driven by countries that are not LICs. For these, the average program size increased from 1.2% before the crisis to 2.6% after the crisis. During the same period, the average number of conditions per program decreased slightly from 6.6 before the GFC to 5.8 thereafter, driven by a much stronger decrease for countries that are not LICs from 6.3 to 4.9 conditions.

Descriptive evidence suggests that in the presence of financial corporate interests, this pattern of bigger size of programs with fewer conditions is even more pronounced. Figure 3.1 and Figure 3.2 show the means of the variables, in absence and in presence of claims of financial corporations, before and after the GFC. The IMF program size shows an interesting pattern. Before the GFC, the program size appears to be lower in the presence of claims, which contradicts the findings of past research. However, the means are not statistically different from each other.

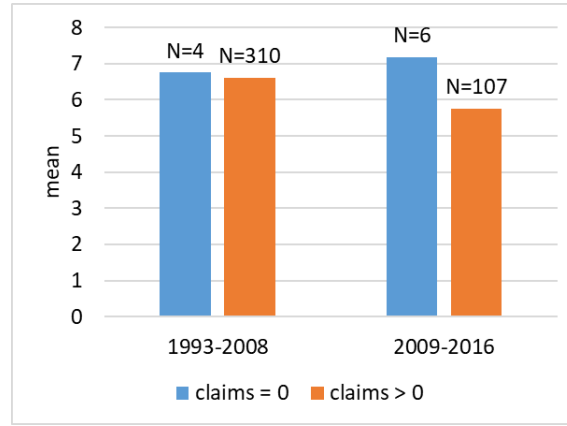
Figure 3.1: Descriptive evidence for the IMF program size (relative to GDP)



Notes: The figure shows the mean of IMF program size (relative to GDP in percent, for the periods 1993-2008 and 2009-2016. The blue bar shows the mean in the absence of claims of foreign banks, whereas the yellow bar shows the mean in the presence of such claims. Above the bars, the number of observations are shown.

With the GFC, the pattern changes, and the presence of claims of financial corporations is associated with larger programs, hence closer to the link suggested by past research. Here, the difference in means becomes statistically significant. For the number of conditions, the mean seems to be lower in the presence of claims of financial corporations before the GFC, which is in line with past research. Again, the means are not statistically different from each other. With the GFC, this link becomes somewhat more pronounced, and the difference in means turns statistically significant. A caveat of these findings is that the observations for the cases without claims are very few.

Figure 3.2: Descriptive evidence for the number of conditions in an IMF program



Notes: The figure shows the mean of the number of conditions in an IMF program, for the periods 1993-2008 and 2009-2016. The blue bar shows the mean if there were claims of foreign banks, whereas the yellow bar shows the mean in the presence of such claims. Above the bars, the number of observations are shown.

3.4.2 Main regressions

To test the three hypotheses, I analyze a panel data set of yearly data from 1993 to 2016 for 189 IMF member countries. The dependent variables are the *size of an IMF program* (relative to GDP) and the *number of conditions* of a program. The variable of interest in this study is *claims of financial corporations* of the major IMF shareholders, the G5. This follows the approach used in Breen (2014). This data stems from the Bank for International Settlements (BIS) statistics on consolidated foreign claims of G5 banks. The control variables are largely based on the list of economic and political variables found to be the most robust determinants of IMF programs by Moser and Sturm (2011, p. 325). Section 3.7.1 in the appendix presents the summary statistics of variables. Section 3.7.3 in the appendix provides details about the variables.

For the dependent variable *number of conditions*, panel Poisson is the preferred model as the variable is count data. I apply robust standard errors to control for heteroskedasticity and autocorrelation to all regressions. For the dependent variable *IMF program size*, panel OLS is the main method as the variable is continuous. I add FGLS for comparison given the non-normality of the error distribution of the variable.

The equation to be tested is:

$$Y_{it} = \alpha_i + \beta_1 FIN_{it} + \beta_2 FIN_{it} * LIC_{it} + \beta_3 FIN_{it} * GFC_t + \beta_4 FIN_{it} * GFC_t * LIC_{it} + \beta_5 GFC_t * LIC_{it} + \beta_6 LIC_{it} + \beta_7 Z_{it} + \delta_t + u_{it}, \quad (1)$$

where Y_{it} is the dependent variable. FIN_{it} are financial sector interests as captured by the variable *claims of financial corporations*.

Several interaction terms with dummies are included in the equation. The first interaction term $FIN_{it} * LIC_{it}$ accounts for the possibility that the importance of claims

may differ for poorer and richer countries. For this, a dummy LIC is introduced, which takes the value of one for LICs, based on their eligibility for support through the IMF's PRGT and precursor trusts in a given year, and zero otherwise. Note that the PRGT-eligibility of a country can change over time.

A second interaction term $FIN_{it} * GFC_t$ captures whether the results regarding claims change with the onset of the GFC. For this, I introduce a dummy on the GFC that is zero until 2009 and takes the value of one thereafter, as the IMF programs for countries affected by the GFC roughly began in 2010. While 2007-2008 is often the start date of the GFC, this dummy will cover the years 2010 to 2016, as the IMF programs for countries affected by the GFC, such as Greece and Ireland, roughly began in 2010 given the time lag of economic downturn and the time needed for program negotiation.

A third interaction term $FIN_{it} * GFC_t * LIC_{it}$ combines the effect of LIC and GFC in the presence of claims. The remaining interaction terms cover all remaining combination possibilities.

Note that β_1 only refers to the effect of *claims of financial corporations* on the dependent variables when the dummies GFC and LIC are both zero, hence to the years before 2010 and only for countries that are not LICs. Similarly, β_5 measures the interaction effect of the two dummies on the dependent variable if *claims of financial corporations* are zero. Finally, β_6 measures the effect of the respective dummy on the dependent variable if *claims of financial corporations* and the other variable are zero.

The impact of aggregate time trends is captured by a vector of year dummies δ_t . Z_{it} is a vector of economic and political controls. Finally, α_i represent country fixed-effects, and u_{it} is the error term.

3.4.3 Robustness checks

I add several regressions to ensure the robustness of results. First, to see if results hold across model specifications, I start with a base model without controls, then add important controls, and finally proceed to a full model. Second, the regressions will be repeated while dropping countries with major IMF programs at the onset of the GFC, specifically Greece, Portugal, and Cyprus. Third, I change the date of the onset of the GFC to 2010 and 2011.

It cannot be excluded that endogeneity is an issue with *claims of financial corporations*. It is possible that there are unobserved effects that both affect the design of an IMF program to a country and the amount of *claims of financial corporations* to the same country, which may not be adequately captured by the control variables. An example could be a strong ability to implement reforms by the country's authorities. Knowledge about this particularity of the country in question could lead to softer conditionality because staff

would assume ownership of a program as high. It could also lead to more investment by foreign banks. In addition, it can be argued that the stock of claims in a given year are based on past decisions, which would imply that claims are predetermined, but not 5-6 years before as would be needed (Hansen & Tarp, 2001).

To account for potential endogeneity issues with the variable *claims of financial corporations*, an IV approach is applied. For this, in a third set of regressions, the equation is redone using a legal origin dummy as IV. The data on legal origin is sourced from La Porta et al. (2008). *Legal origin* is a dummy variable that takes the value of one if a country has a common law legal tradition based on UK law, and the value of zero otherwise. Widely used in past research, this dummy variable is based on the idea that the legal rules that protect outside investors vary systematically between countries based on their legal traditions or origins. In particular, legal rules based on UK common law are considered more protective than civil law, such as the French, German, Scandinavian and Socialist legal traditions (p. 285).

Acemoglu and Johnson (2005) have suggested using legal origin dummies as IV in the context of financial relations between countries. In this study, *legal origin* appears to be an appropriate IV as foreign banks are likely to take the relative legal protection of their foreign investments into account in their investment decisions. Hence, *claims of financial corporations* to a country should be higher if the country has a legal tradition based on UK law. At the same time, the legal origin of many emerging and developing countries, and hence the majority of IMF member countries asking for IMF programs can be considered as exogenous, given that they mostly were colonized in the past and their legal system was imposed by colonial powers (p. 961).

3.5 Results

Section 3.7.2 in the appendix provides the detailed regression results. For both dependent variables, there are two sets of results. The first set includes the main regressions, which is panel OLS model for *IMF program size* and panel Poisson for *number of conditions*, each of them with robust standard errors and a general specification for the years 1993-2016. The set includes three regressions: a base model with only the variable of interest as a control, which maximizes the number of observations; a truncated model for which a few key control variables with significance at conventional levels are added; and a full model with a complete set of controls that are considered as relevant in similar regressions in past research. The second set of regressions covers robustness checks based on different start dates for the GFC, exclusion of countries with major IMF programs during the European debt crisis, and an IV model to account for endogeneity.

For the *number of conditions*, I find that after the GFC and if limited to non-LIC countries, exposure to claims of financial corporations is linked to a higher number of conditions. This is the case for the full first set of regressions, hence the base, truncated and full model. This finding is robust to using UK legal origin as IV. It is also robust to excluding Greece, Portugal and Cyprus. The finding is however somewhat sensitive to choosing the GFC start date; while it is robust to changing the start date to 2011, the coefficient becomes insignificant (but of similar size) for 2010. Overall, the findings confirm the first hypothesis, which states, *“Since the GFC, the number of conditions in IMF programs is positively linked to the exposure to G5 banks in countries for which market access matter.”*

For LICs, however, there a significant and relatively robust negative link between exposure to claims and the number of conditions after the GFC. This is in line with the second hypothesis, which states, *“In countries for which market access does not matter, the time around the GFC is linked to fewer conditions.”* An explanation for this finding could be that in the absence of financial market interests, there is more room for IMF staff to design “better” programs, and hence apply new policy guidelines such as parsimony in conditionality more consistently, which coincides with the time of the GFC.

For the *IMF program size*, I find that after the GFC, there is a significant positive linked with claims of financial corporations. This is the case for the full first set of regressions, hence the base, truncated, and full model. This finding is robust to applying FGLS, changing the GFC start date to 2010 and 2011, and when excluding Greece, Portugal, and Cyprus. The IV model does however not confirm it, as the size of the coefficient and the sign changes. When differentiating between poorer and richer countries, the effect vanishes. Overall, these results confirm the third hypothesis of this study, which states, *“Since the GFC, the size of IMF programs is positively linked to the exposure of G5 banks.”*

3.6 Conclusion

In this paper, I argue that the GFC constitutes another structural change in IMF lending, after the Latin American debt crisis and the end of the cold war. I show that with the GFC, the importance of financial corporations in IMF lending decisions has risen. Major IMF shareholders, the G5, protect the exposure of their banks, which increased strongly in the years before the GFC. To impress markets, they influence program design towards larger lending amounts and more conditions. This serves to keep the program country’s market access and avoid default. While financial corporate interests are associated with a larger programs for all countries, the positive link with more conditions is only found for countries for which market access matters. For countries with limited market access, IMF staff’s technocratic interests in parsimonious conditionality dominates.

Based on a panel set of 189 countries covering the years 1993 to 2016, the effect of financial corporate interests on two aspects of IMF program design was tested. The *size of IMF programs* and the *number of conditions* are dependent variables used in past research on the subject, which allows some comparability. To account for possible endogeneity of the variable of interest, claims of financial corporations, I added an IV model using legal origin in the UK law tradition.

For future research, it would be interesting to go beyond the interests of the major IMF shareholders, the G5, and account for the changing global order by capturing the interests of emerging global powers such as China. This would allow to see if and how Chinese financial corporate interests affect IMF lending. Furthermore, given that China has become a key global creditor, the role of Chinese sovereign and corporate debt in addition to financial interests could be of interest in IMF program design for exposed countries.

3.7 Appendix

3.7.1 Summary statistics

Table 3.2: Summary statistics of variables

Variable	N	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
IMF program size (log)	448	-4.58	0.99	-7.64	-0.77	-0.15	3.24
Number of conditions	427	6.40	1.20	1.00	14.00	0.07	8.97
Claims (log)	4089	6.97	3.22	0.00	14.87	0.08	2.43
UN Security Council	4553	0.06	0.23	0.00	1.00	3.89	16.13
GDP growth	4484	3.81	6.28	-62.08	149.97	4.63	109.19
GDP per capita (log)	4510	8.30	1.52	4.73	11.63	0.12	2.09
Reserves to imports (log)	3812	1.10	1.01	-6.21	4.37	-1.55	9.20
Debt to exports (log)	2635	2.26	1.21	-3.91	25.83	3.14	63.33
Short-term debt to total debt (log)	3109	2.11	1.51	-4.61	25.83	0.78	28.35
Currency crisis	4456	0.04	0.20	0.00	1.00	4.65	22.66
Under IMF arrangement	4675	0.44	0.50	0.00	1.00	0.25	1.06
Parliamentary Elections	4279	0.22	0.41	0.00	1.00	1.36	2.84
Presidential Elections	4189	0.12	0.32	0.00	1.00	2.39	6.70
Political instability	4353	0.00	1.14	-0.38	20.42	6.77	79.24
Social unrest	4353	0.00	1.43	-0.39	35.72	10.49	179.62
Freedom House Index	4599	3.41	1.95	1.00	7.00	0.29	1.75
Political globalization	4397	59.13	23.56	2.69	99.54	-0.20	2.07
Financial globalization	3882	47.46	25.14	1.00	96.06	-0.06	1.67
Trade share (log)	4391	-7.70	2.47	-16.53	-1.82	0.02	2.67

3.7.2 Regression results

Table 3.3: *Financial corporate exposure and IMF program size*

	Set 1 - Panel OLS			Set 2 - Robustness checks				
	(1) Base model	(2) Truncated model	(3) Full model	(4) FGLS	(5) IV (UK legal origin for claims, pooled cross-section)	(6) GFC = 2010	(7) GFC = 2011	(8) Exclude Greece, Portugal, Cyprus
Financial corporate exposure, before GFC	-0.046* (0.068)	0.038* (0.064)	0.167** (0.077)	-0.128** (0.017)	0.431* (0.147)	-0.043 (0.070)	-0.017* (0.067)	-0.045* (0.068)
Financial corporate exposure, since GFC	0.237** (0.052)	0.208* (0.075)	0.177** (0.057)	0.257** (0.031)	-0.495 (0.245)	0.209* (0.052)	0.182** (0.049)	0.237** (0.051)
IMF program duration		0.057* (0.011)	0.058 (0.010)					
UN Security Council membership			-0.105 (0.200)					
IMF arrangement in past 5 years		-0.412 (0.137)	-0.314* (0.137)					
Reserves to imports			-0.183 (0.136)					
GDP growth			-0.031 (0.012)					
GDP per capita		-0.521 (0.462)	-2.258* (0.608)					
Debt to exports			0.434 (0.094)					
Short-term debt to total debt			-0.008 (0.066)					
Currency crisis			0.193 (0.190)					
Parliamentary Elections			0.017 (0.108)					
Presidential Elections			-0.036 (0.125)					
Political instability			0.064 (0.034)					
Social unrest			-0.011 (0.027)					
Freedom House Index			0.004 (0.075)					
Political globalization			-0.021 (0.014)					
Financial globalization		0.000 (0.008)	0.002 (0.009)					
Trade share of imports of G5		-0.260 (0.202)	-0.194 (0.246)					
Constant	-4.434*** (0.440)	-3.248 (3.952)	9.402* (4.832)	-4.072*** (0.159)	-4.965*** (0.277)	-4.458*** (0.459)	-4.592*** (0.455)	-4.445*** (0.438)
Observations	433	371	274	416	448	433	433	429
Number of countries	115	111	92	98		115	115	112

Notes: T-statistics/z-statistics are in parentheses ($p < 0.01$ - ***; $p < 0.05$ - **; $p < 0.1$ - *). OLS, Poisson and FGLS models are adjusted for panel data, with fixed effects and clustered robust standard errors. Year dummies are omitted for better visualization.

Table 3.4: *Financial corporate exposure and number of conditions*

	Set 1 - Panel Poisson			Set 2 - Robustness checks			
	(1) Base model	(2) Truncated model	(3) Full model	(4) IV (UK legal origin for claims, pooled cross-section)	(5) GFC = 2010	(6) GFC = 2011	(7) Exclude Greece, Portugal, Cyprus
Financial corporate exposure, since GFC, non-LIC	0.047* (0.026)	0.065* (0.035)	0.102** (0.044)	0.189* (0.115)	0.041 (0.029)	0.060* (0.032)	0.050* (0.027)
Financial corporate exposure, since GFC, LIC	-0.062** (0.030)	-0.070* (0.037)	-0.111** (0.044)	-0.185 (0.122)	-0.056* (0.033)	-0.075** (0.035)	-0.064** (0.031)
IMF program duration		0.003* (0.002)	0.002 (0.002)				
UN Security Council membership			0.027 (0.043)				
IMF arrangement in past 5 years		-0.016 (0.021)	-0.048* (0.026)				
Reserves to imports			-0.004 (0.017)				
GDP growth			-0.003 (0.003)				
GDP per capita		-0.111 (0.074)	-0.273* (0.150)				
Debt to exports			-0.005 (0.019)				
Short-term debt to total debt			0.000 (0.010)				
Currency crisis			-0.031 (0.043)				
Parliamentary Elections			-0.025 (0.031)				
Presidential Elections			0.023 (0.031)				
Political instability			0.001 (0.007)				
Social unrest			-0.016 (0.012)				
Freedom House Index			-0.030 (0.019)				
Political globalization			0.001 (0.002)				
Financial globalization		-0.001 (0.001)	0.001 (0.001)				
Trade share of imports of G5		-0.023 (0.032)	-0.018 (0.040)				
Constant				1.850*** (0.025)			
Observations	398	370	269	427	398	398	396
Number of countries	99	95	77		99	99	98

Notes: T-statistics/z-statistics are in parentheses ($p < 0.01$ - ***; $p < 0.05$ - **; $p < 0.1$ - *). OLS, Poisson and FGLS models are adjusted for panel data, with fixed effects and clustered robust standard errors. Year dummies are omitted for better visualization.

3.7.3 Variables in detail

IMF program size. Based on the MONA database, this is a positive continuous variable which is given in the year a country signs an IMF program, and a missing value is assigned to all other cases. The value is divided by the receiving country's GDP. Taking logs improves the distributional characteristics of the variable.

Number of conditions. The variable measures the conditionality inherent to an IMF program, and specifically the number of conditions. It is based on the IMF MONA data set. As suggested by Breen (2014) and Dreher et al. (2015), only the binding and measurable quantitative performance criteria (QPC) are used, and hence softer conditions such as indicative targets and structural benchmarks are left out. The number of conditions is given in the year a country signs an IMF program. For all other data points, the variable is a missing value.

Claims of financial corporations. Following Breen (2014), this variable is sourced from the data provided by the BIS on consolidated foreign claims of reporting banks for the G5. The variable is constructed by cumulating the claims by the G5 financial corporations in millions of US dollars, ranges from zero to positive values. The variable is strongly skewed to zero, as there are no claims for most countries, while the amounts become very large for some countries. To improve the distributional character of the claims variable, logs are taken.

United Nations Security Council (UNSC). Following Dreher et al. (2015), this variable reflects the temporary membership of a country to the UNSC. This membership is based on a seat allocation that varies for each region, so it appears to be largely idiosyncratic. The variable is constructed as a binary variable, which takes the value of one if a country is a temporary member of the UNSC in a given year, and the value zero otherwise. The membership usually lasts for two years, as the effect is expected to be higher in anticipation of membership and in the first year, and should ebb off in the second year of membership. This variable enters with a one-period lead.

Under IMF program. This is a binary variable that indicates whether a country was under an IMF program in the past five years, in which case it takes the value of one and the value zero otherwise. Based on IMF MONA data, it reflects the observed persistence of a country's dependence on IMF resources, contrary to the aim of the IMF to offer temporary assistance.

Reserves to imports. This variable measures total reserves in months of imports. A low level of reserves increases external pressures and thus increases the likelihood of a country having to ask the IMF for help. Based on data provided by the World Bank Development Indicators (WDI), the variable is calculated as total reserves including gold divided by

imports of goods and services, which itself is divided by 12. To improve the distributional characteristics of the variable, logs are taken.

GDP growth. This variable measures year-on-year real GDP growth at constant prices, based on the IMF WEO database. Weak economic growth might lead to a larger likelihood that a country will ask for IMF credit. Given possible endogeneity problems, the variable enters with a one period lag.

GDP per capita. This variable captures real GDP per capita in constant US dollars. Poorer countries are more likely to need IMF financial assistance. The variable is based on WDI data. To improve the distributional characteristics of the variable, logs are taken.

Debt to exports. This variable captures debt service scaled to exports and is based on WDI data. A heavy debt burden relative to overall income increases likelihood for need for external funds. To improve the distributional characteristics of the variable, logs are taken.

Short-term debt to total debt. This variable is based on WDI data and captures short-term debt as a percentage to total external debt. A higher ratio of short-term debt increases capital outflows in the case of crisis and is hence linked to the need for IMF assistance. To improve the distributional characteristics of the variable, logs are taken.

Currency crisis. This variable is a dummy for currency crises, which is defined, following Moser and Sturm (2011), by a nominal depreciation of the currency of at least 30%, which is also at least a 10% increase in the rate of depreciation compared to the year before (p. 312). The variable is based predominantly on WDI data, and completed where necessary by Thomson Reuters spot rates. IMF programs are more likely in the context of currency crises.

Parliamentary and presidential elections. These two variables are dummies capturing the occurrence of legislative respectively executive elections in a year. The data is sourced from the Parline database on national parliaments (Inter-Parliamentary Union, 2017). The timing of entering IMF programs is often dependent on the timing of elections. The variables enter in a one-period lag.

Political instability. This variable measures political instability in a country. Following the suggestion by Moser and Sturm (2011), it is based on the first principal component of the number of political assassinations, revolutions, guerrilla problems, government crises and the instability provided by the CNTS data archive (Banks & Wilson, 2017).

Social unrest. Following the suggestion by Moser and Sturm (2011), this variable reflects the first principal component of demonstrations, strikes and riots provided by the CNTS data archive (Banks & Wilson, 2017). As this variable relies on news reports, its accuracy is limited, particularly for countries with limited freedom of press. This variable enters as lead, as anticipated social unrest in a country, particular because of an unpopular

IMF program, will likely enter into the government's calculation of costs and benefits of an IMF program.

Freedom House Index. Sourced from the Freedom House Index, this variable is the average of the political rights index and the civil liberties index. In a more liberal country, the public opposition against reforms under an IMF program could be higher.

Political globalization. This variable captures political globalization as measured by the KOF Index of Globalization. A country that is highly integrated in world politics is more likely to ask for IMF assistance.

Financial globalization. This variable is based on the KOF globalization indicator. Higher financial integration could imply better access to capital markets, but also higher exposure to changing investor sentiment. The de jure indicator is also likely to capture the views of national authorities and IMF staff on a country's financial integration.

Trade share. The trade share is calculated based on the IMF's Direction of Trade Statistics, which capture exports from the main IMF shareholders to other countries in millions of US dollars. The average of a country's trade share from the G5 is taken, weighted by the shareholder's total exposure to the world. To improve the distributional characteristics of the variable, logs are taken.

4 Do geopolitical interests affect how financial markets react to IMF programs?

4.1 Introduction

We study the effect of geopolitics on the short-term financial market reaction to IMF program approvals. There is considerable anecdotal evidence that geopolitics influence IMF lending. This is particularly true for geopolitical interests by the US, the largest IMF shareholder based on voting rights. A stark example is Pakistan.²⁴ According to a 2002 report of IEO, US geopolitical interests strongly influenced repeated IMF lending to Pakistan. In interviews conducted by the IEO among IMF staff, and Pakistani authorities, the US were perceived as supporting IMF lending for Pakistan irrespective of implementation of the program's reforms or success. The report further states that "the unrealistic macroeconomic assumptions as well as the pretense of toughness were merely a way of face-saving to justify continued lending to Pakistan" (IEO, 2002, p. 131). Indeed, we find a negative reaction by financial market participants to an IMF program in 2013, a time when Pakistan was particularly exposed to US geopolitical interest. There are however also cases that do not fit this pattern, such as the IMF program for Peru in 2007, for which we find no meaningful market reaction despite US geopolitical exposure.

Why does it matter whether geopolitical interests affected the financial market reaction to IMF programs? If IMF lending decisions are politically driven, IMF programs may be less successful in stabilizing the country in question. The reason is that geopolitical decisions could undermine the signaling, or catalytic, effect of IMF lending to a country for financial markets. According to the IMF, the catalytic effect is a major goal of its lending, as "IMF programs can help unlock other financing, acting as a catalyst for other lenders. This is because the program can serve as a signal that the country has adopted sound policies, reinforcing policy credibility and increasing investors' confidence" (IMF,

²⁴ For further examples, see Stone (2004) and Dreher et al. (2015, pp. 127-129).

2020c). Given the considerable evidence for geopolitics affecting lending, we analyze whether such interests also affect the impact of IMF lending on financial markets.

To test whether geopolitical interests affect financial market reactions to IMF programs, we use a monthly panel data set from January 1993 to December 2019 for about 100 IMF member countries, depending on the sample. We only include those countries that are not eligible for concessional financing by the IMF at the time of program approval. This excludes LICs, for which market access matters less, as they primarily rely on foreign aid as a source of external finance.

We measure geopolitical interests with a variable on temporary membership in the UNSC, following the approach used in Dreher et al. (2015). Temporary UNSC membership makes a country exposed to US geopolitical interest, as the US can incentivize the country to vote in line with the US on the Security Council. Given the strong influence of the US on IMF policy making, it can for example reward the country by ensuring softer IMF lending conditions, which reduces the political cost of IMF lending for the country in question.

Using OLS, we analyze the effect of a new IMF program while being temporary member of the UNSC on four different financial market variables: sovereign bond yields, yields of short-term government bills, domestic stock prices, and exchange rate movements against the US dollar.

We find that geopolitical interest in a country that receives an IMF program tend to increase risk aversion of financial markets in the short-term, or investors selling the country's assets, compared to countries that are not in the focus of geopolitics. This reduces a potential catalytic effect of IMF programs, which might render IMF programs less effective. Specifically, our finding is that for temporary UNSC members, a new IMF program is consistently associated with a negative reaction by financial market participants for four financial market variables. For government bonds and short-term bills, a new IMF program during temporary UNSC membership is associated with a sizeable increase in yields, indicating that investors sell bonds and bills. At the same time, domestic stock prices fall as investors sell them, and the domestic exchange rate to the US dollar depreciates as investors sell domestic currency. We do not find such a consistent negative reaction by financial market participants for program approvals for countries that are not temporary UNSC members. While many of these results cannot be estimated very precisely, they overall suggest that geopolitics reduce the catalytic effect of IMF programs, making them less effective.

We add to the existing literature by analyzing the role of geopolitics on the IMF catalytic effect using temporary membership in the UNSC. This builds on Dreher et al. (2015), who study the effect of UNSC temporary membership on conditionality in IMF

programs. The UNSC variable has the advantage to be quasi-random, and hence addresses the potential endogeneity issues of other variables used in earlier research. Our empirical approach builds on Chapman et al. (2015), who analyze the effect of IMF lending announcements on government bonds in the context of geopolitical interests. However, instead of yearly data, we are the first (to our knowledge) to use a large monthly dataset. This allows a much more precise, albeit short-term, study of the reaction of financial markets. We further extend the literature by enlarging the variables measuring the financial market reaction to include not only bonds, but also short-term bills, stock prices, and exchange rates.

This paper is structured as follows. Section 4.2 lays out the theoretical framework. Section 4.3 presents the data used in the empirical analysis and presents some descriptive evidence. Section 4.4 offers a closer look at two specific cases, Pakistan and Peru. Section 4.5 lays out the empirical strategy. Section 4.6 presents the results.

4.2 Theoretical Framework

4.2.1 Geopolitics and IMF lending

Many empirical studies have analyzed how geopolitics influence IMF lending. Sturm et al. (2005) and Moser and Sturm (2011) review earlier empirical research on the matter. A key question in this empirical research is how to measure geopolitical interest empirically. In this study, we will follow the approach by Deher et al. (2009) to focus on temporary membership in the UNSC.²⁵ Temporary member states of the UNSC may trade their UNSC votes to the US for better accessibility of IMF loans, which they value higher than their UNSC voting power. UNSC voting behavior thus appears to be a good measure for US geopolitical interests. The variable has the benefit of being close to exogenous, which we explain in more detail in section 4.5.2.

Deher et al. (2009) find that UNSC membership makes an IMF program more likely. In 2015, Dreher et al. add evidence that links UNSC temporary membership to fewer conditions in crucial areas of the economy, such as debt repayment, balance of payments, credit to the government, and domestic pricing.

These observations relate to the more general question whether political interests in official financial support leads to inferior outcomes. Dreher et al. (2014) find that politically motivated aid is insignificant or even harmful to growth [1, p. 32]. It seems that if political

²⁵ Kuziemko and Werker (2006) were the first to underline the relevance of UNSC temporary membership as a measure of geopolitical importance in the context of aid. Since then, several studies have used UNSC membership to measure US geopolitical interests in a country.

considerations become too important in the IMF's efforts in stabilizing countries via its lending activities, this would question the IMF's ability to fulfil its task of ensuring global macroeconomic stability (IEO, 2002).

4.2.2 Do geopolitical interests affect the financial market reaction to IMF programs?

The more politically driven IMF lending decisions appear to be, the less credible the IMF programs are from the perspective of achieving economic stabilization in the country in question. This could negatively affect the signaling effect of IMF lending to a country for financial markets, also called the catalytic effect of IMF lending.

According to the IMF, the catalytic effect of is a major goal of its lending, as "IMF programs can help unlock other financing, acting as a catalyst for other lenders. This is because the program can serve as a signal that the country has adopted sound policies, reinforcing policy credibility and increasing investors' confidence" (IMF, 2020c).

There is broad literature on the effect of IMF lending on financial markets, dubbed the catalytic effect of IMF lending, with generally mixed results.²⁶ Many studies find mixed evidence, such as Bird and Rowlands (2002), Bird and Rowlands (2008), Edwards (2006), and Eichengreen et al. (2008). At the same time, Mody and Saraiva (2003) find evidence for the existence of an IMF catalytic effect, but only in cases where financial market participants perceived the planned reforms under the arrangement as credible. Based on newer data, Krahnke (2020) finds further evidence of the existence of an IMF catalytic effect, but only up to a certain IMF program size.

Chapman et al. (2015) were the first (to our knowledge) to argue that geopolitical motivations affect the catalytic effect of an IMF program. Building on their research design, our key contribution is that we address possible endogeneity issues by using a quasi-exogenous variable to measure geopolitical influence. Following Dreher et al. (2015) we use temporary membership in the UNSC as a measure of US geopolitical interest. Our second major contribution is that we are the first (to our knowledge) use a monthly instead yearly dataset. The use of higher frequency data, allows a much more precise, albeit shorter-run, measurement of the impact of a new IMF program on financial markets. Furthermore, compared to prior research, we use a considerably longer data period spanning 26 years, and expand country coverage by including about 100 IMF member countries. We use more variables to measure the reaction by financial markets, by including bills, stocks, and exchange rates. We also expand the data coverage on bonds by

²⁶ Krahnke (2020) gives a good overview of recent theoretical and empirical literature on the IMF catalytic effect, while Giannini and Cottarelli (2003) cover earlier studies.

including JPM emerging market bond indices. Finally, we expand the set of controls. In addition to an interacted year-country dummies, which should capture most country-level factors changing on a yearly level, we add monthly controls, such as stocks and inflation. We also include monthly dummies that capture aggregate time trends.

4.3 Data and descriptive statistics

4.3.1 Dataset

We analyze a panel data set of country-level monthly data from January 1993 to December 2019, for about 100 IMF member countries, depending on the sample. The time period is defined by the IMF MONA database, which is available from 1993 on. While we start by including all IMF member countries, we use a dummy to ensure that only countries enter the sample that are not eligible for concessional financing by the IMF at the time of program approval. The reason is that countries eligible for concessional financing by the PRGT are poorer countries, or LICs, which largely rely on official aid flows as a main source of external financing and usually have no real access to global capital markets.

Therefore, the financial market indicators, such as the exchange rate, are dominated other by drivers than in the case of mid- and high-income emerging markets. In contrast to the literature, we use a monthly periodicity and thereby allow the study of short-term financial market reactions. This is not possible when using annual data as done in most other studies on IMF lending. We abstain from using a daily dataset, as we do not consider changes at a daily horizon to be very relevant for policy decisions. Furthermore, data is likely to become rather noisy, reducing the likelihood for us to pick up the actual and more persistent signals of financial markets.

4.3.2 Variables

Section 4.7.1 in the appendix provides the summary statistics of variables.

Dependent variables

As dependent variables, we study four financial market variables that are widely used for emerging market economies on a monthly basis: sovereign bond yields, short-term bill yields, domestic stock prices in local currency, and the exchange rate to the US dollar. For

all of these variables, there is an established reaction if investor sentiment turns positive or negative to the country in question.²⁷

Sovereign bonds of emerging markets are generally considered relatively risky compared to bonds of advanced economies, which is reflected in overall higher yields. In a negative reaction, investors will sell emerging market bonds, leading to lower bond prices and higher bond yields. The variable on bonds in this study reflects the yields (in percent) of sovereign bond yields of the country in question. The variable is based on the JPM EMBI bond index, complemented by the IMF IFS database in case of gaps. To improve distributional characteristics, the variable is transformed by $100 \cdot x / (x + 100)$ and subsequently winsorized.

For government short-term bills, the pattern of financial markets reaction is similar to bonds, if more pronounced. If investors sell bills (in a negative financial market reaction), the price of bills will fall and yields will increase. The variable on bills in this study reflects the yield (in percent) of short-term treasury bills of the country in question, based on the IMF IFS database. To improve distributional characteristics, the variable is transformed by $100 \cdot x / (x + 100)$ and subsequently winsorized.

Emerging market stocks are considered a high-risk investment. If investor sentiment turns negative, investors will sell emerging market equities, which leads to lower stock prices. The variable on stocks is the monthly stock price index in local currency of the country in question, based on MSCI country indices. To improve distributional characteristics, growth rates are taken and the variable is subsequently winsorized.

Finally, the domestic exchange rate to the US dollar is likely one of the most quickly reacting financial assets in case of changing investor sentiment. However, this is only the case if the exchange rate is floating, which means that the central bank of the country does not intervene heavily in the exchange rate. Hence, we only focus on cases where the exchange rate regime in the given month is considered “floating” by the IMF in its Annual Report on Exchange Rate Arrangements and Exchange Restrictions (AREAER) (IMF, 2020a). Exchange rate data is based on the IMF IFS database. To improve distributional characteristics, growth rates are taken and subsequently winsorized.

Variable of interest

The variable of interest in this study is the interaction term between a dummy on a new IMF program and a dummy on UNSC temporary membership.

²⁷ See McCauley (2012) for an overview of findings regarding the link between emerging markets assets and global capital flows.

The dummy on a new IMF program is constructed to take the value of one in the month when a new IMF program is approved by the IMF Executive Board, and zero in all other cases. The source is the IMF MONA database.

The dummy variable on UNSC takes the value of one during election and serving time of a country as non-permanent member of the UNSC, and zero otherwise. The variable becomes positive in the month of election (usually October) to the UNSC starting in the following year. The variable remains one throughout the time the country serves on the UNSC, which is usually two years.

Controls

Very few economic variables for emerging markets are widely available on a monthly basis. As described in the empirical strategy in Section 4.4, we address this issue by including monthly dummies to cover global developments that affect all countries, and year-country interaction dummies to cover country-level developments changing on a yearly level.²⁸ Hence, we concentrate on the within-country, within-year variation.

In addition, we add country-level inflation data, which is the only macroeconomic indicator available on a monthly basis for a large group of countries. Changes in inflation are associated with a country's financial market variables, such as higher bond and bill yields, lower stock prices, and exchange rate depreciation. We base this variable on the monthly country-level consumer price index (CPI) as year-over-year percentage change, based on national sources. To improve distributional characteristics, the variable is transformed by $100 * x / (x + 100)$ and subsequently winsorized.

4.3.3 Descriptive Evidence

Before advancing to the econometric analysis of the data, we offer some descriptive evidence on the key variables we analyze. In a first step, we shed light on the two key dummies on a new IMF program and on UNSC election separately. In a second step, we look at the cases in which the two dummies interact, i.e., when an IMF program approval for a country coincides with temporary membership in the UNSC.

First-order effects

New IMF program

There are 233 observations of new IMF program approvals in the dataset. The variable on a new IMF program is a dummy that takes the value of one in the month of the IMF

²⁸ To check this assumption, we include as a robustness check a regression with variables on yearly GDP data, global stock prices, US bonds and US bills (see appendix).

Executive Board approval of the program, and zero in all other cases. Based on the dataset, the short-term reaction of financial markets to a new IMF program is limited (see Table 4.1, first row). All effects are statistically insignificant at conventional confidence levels. The effect on yields of bonds and bills is around zero. Rising stock prices and exchange rate appreciation suggest a positive catalytic effect of an IMF program on financial markets.

Table 4.1: Financial market reaction to new IMF program and election into UNSC

	Bonds yields	Bill yields	Stock prices	Exchange rate to US dollar*
New IMF program	0.0982 (0.804)	-0.111 (-0.527)	1.324 (1.439)	-0.359 (-1.251)
UNSC election month	-0.0534 (-0.801)	-0.234 (-0.674)	-0.566 (-0.724)	0.105 (0.304)
UNSC election period (election month until last month of serving on the UNSC)	-0.173 (-1.290)	0.0173 (0.0644)	-0.0261 (-0.0367)	0.0543 (0.167)

Note: UNSC is United Nations Security Council. Stars indicate significant p-values (***) $p < 0.01$, (**) $p < 0.05$, (*) $p < 0.1$. *For the exchange rate, an increase implies a depreciation to the US dollar.

UNSC temporary membership

There are 109 cases in the dataset where a country is elected into the UNSC as non-permanent member in a given month. Mostly, the election takes place in autumn of a given year, and the time of serving on the council starts in January of the following year. A non-permanent member usually serves for two years, but shorter periods are possible. The dummy used in this study takes the value of one in the election month and remains one until the end of the serving time, so about 26-27 months in total. Hence, we cover the entire period in which a country is, or known to become soon, a temporary member of the UNSC.

Table 4.1 (second row) shows the short-term market reaction on the election as non-permanent UNSC member. For the election month itself, the market reaction is close to zero and not statistically significant at conventional levels of confidence. For the entire election and serving time on the UNSC (the variable used in this study, see third row), the picture changes somewhat. While the effect remains zero for most variables, there is a negative link for bonds. This implies that declining yields, or a positive reaction of financial markets as investors buy the country's bonds. Overall, we conclude that the short-term market reaction to temporary UNSC membership is rather limited, if anything slightly positive (based on the decline in bond yields).

Second-order effects: simultaneous new IMF program and UNSC temporary membership

In the dataset, there are 14 cases in which a country receives an IMF program at the same time of being elected to serve or serving as a temporary member on the UNSC (see Table 4.2). The date of election to the UNSC is mostly in October/November of a given year, and the serving time on the council usually starts in January of the following year, lasting two years in most cases.

Table 4.2: IMF program approvals for temporary UNSC members

Country	IMF program approval	UNSC election	UNSC serving time
Korea	December 1997	November 1995	January 1996 – December 1997
Brazil	December 1998	October 1997	January 1998 – December 1999
Argentina	March 2000	October 1998	January 1999 – December 2000
Bulgaria	February 2002	October 2001	January 2002– December 2003
Romania	July 2004	November 2003	January 2004 – December 2005
Peru	January 2007	October 2005	January 2006 – December 2007
Costa Rica	April 2009	November 2007	January 2008 – December 2009
Mexico	April 2009	November 2008	January 2009– December 2010
Mexico	March 2010	November 2008	January 2009– December 2010
Colombia	May 2011	October 2010	January 2011 – December 2012
Portugal	May 2011	October 2010	January 2011 – December 2012
Morocco	August 2012	November 2011	January 2012 – December 2013
Pakistan	September 2013	November 2011	January 2012 – December 2013
Egypt	November 2016	October 2015	January 2016 – December 2017

Note: UNSC is United Nations Security Council.

We describe two cases in detail, Pakistan and Peru, in the next Section. The remaining 12 cases are described in the appendix (Section 4.7.3). Overall, for seven out of 14 cases, we find a negative reaction by financial markets (investors selling the country's assets) to an IMF program approval while being temporary UNSC member: Korea, Brazil, Argentina, Costa Rica, Portugal, Pakistan, and Egypt. We find no clear pattern in the financial market reaction for Romania, Colombia, and Morocco. We find a neutral or positive (investors buying the country's assets) financial market reaction for Bulgaria, Peru, and the two IMF programs for Mexico.

4.4 A closer look at Pakistan and Peru

Based on the empirical findings, we take a closer look at two emblematic cases of IMF program approval for countries that were temporary UNSC member at the time, Pakistan and Peru. In the case of Pakistan, the data suggest a clear negative reaction of financial markets to the IMF program approved in 2013. This supports our hypothesis that geopolitics reduce the IMF catalytic effect. However, in the case of the IMF program for Peru in 2007, no such link is visible from the data.

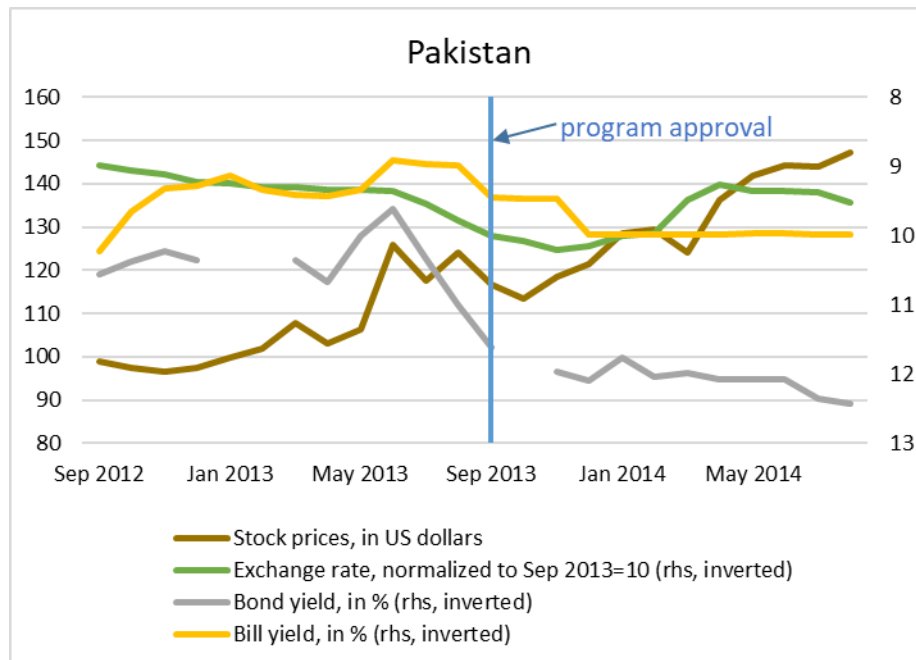
4.4.1 Pakistan

There is ample anecdotal evidence that US geopolitical considerations strongly influenced Pakistan's many IMF programs over the last decades – not only in the case of the IMF program for 2013, which we focus on in this study. IMF lending to Pakistan is connected to the on and off political relations between the US and Pakistan (Ahmad & Mohammed, 2012). At the core of US interests in Pakistan is the country's strategic location at the Persian Gulf, which is key in the US war on terror. According to a 2002 report of IEO, there is ample anecdotal evidence, based on interviews with Pakistani authorities and IMF staff, that many programs primarily served political considerations. There appeared to be a sense that due to geopolitical interests, the IMF would support Pakistan irrespective of program implementation or success (IEO, 2002, p. 131).

The IMF lending to Pakistan that is interesting for this study is the program of 2013. Pakistan was elected to the UNSC as temporary member in October 2011. It served on the council from January 2012 until December 2013. In September 2013, Pakistan received a three-year program under the IMF's EFF. The aim of IMF program was to support Pakistan's economy in the context of Taliban violence and deep-rooted corruption. The program should also support the reform efforts of the newly elected Prime Minister at the time, Nawaz Sharif, by providing some economic stability (Walsh & Masood, 2013).

The financial markets reacted negatively to the new program, with rising bond yields, falling stock prices, and exchange rate depreciation (see Figure 4.1). In fact, the yields of bonds and bills started to increase already a few weeks before the program approval. The same is true for the exchange rate, which slowly depreciated over the summer months. Indeed, the IMF published information about the ongoing program negotiations in July (Walsh & Masood, 2013). In the months after the program approval, bills and bond yields stayed at an elevated level, while the exchange rate and stock prices eventually recovered.

Figure 4.1: Pakistan: Negative short-term reaction of financial markets to IMF program approval while being UNSC temporary member



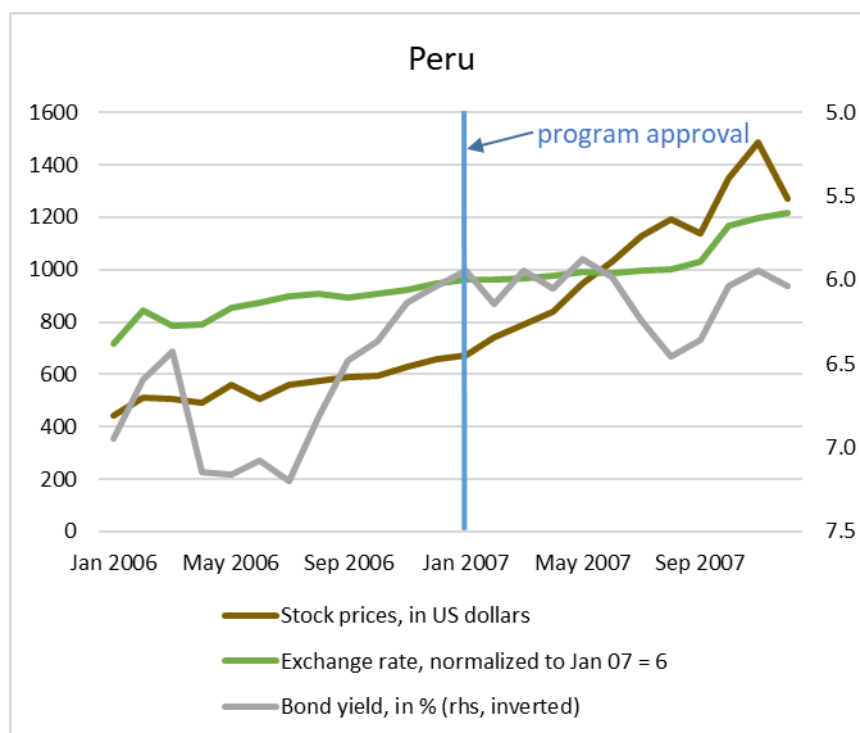
Note: UNSC is United Nations Security Council. Chart shows the short-term reaction of financial market indicators to a new IMF program (vertical blue line) for countries that are temporary UNSC members. The time range shown is IMF program approval months plus/minus 12 months. The chart is constructed so that a falling line shows a negative reaction by financial markets. Exchange rate is to US dollars; rhs = right-hand scale.

To our knowledge, there is no direct evidence of a link between the IMF program approval and Pakistan serving on the UNSC. However, there is ample evidence for strong US geopolitical interest in Pakistan during the period in question, mainly in context of US war efforts in Afghanistan. In 2009, the US officially adopted a policy approach to Pakistan that would support its strategic ties by ample, economic aid (Kronstadt, 2015). In 2011, relations temporarily soured in the context of the US killing of Osama bin Laden in Pakistan. Relations improved again in 2012, when both sides agreed to renew their cooperation in the interest of stability in the region, which was vital for US interests in Afghanistan. These renewed relations were supported by resumption of considerable US aid flows to Pakistan, which had been set on hold in 2011. The US welcomed the election of Nawaz Sharif in 2013, and a few months later, the two countries formally announced their interest to deepen their partnership (Rafique, 2015). Hence, while Pakistan had been in the focus of US geopolitical interests already before 2013, as described above, the 2013 IMF program nevertheless falls into a special time of US-Pakistani relations from a geopolitical perspective.

4.4.2 Peru

Peru was elected to the UNSC as temporary member in October 2005. It served on the council from January 2006 until December 2007. In January 2007, Peru received a two-year SBA for 270 Million US dollars. This program was purely precautionary, and Peru never actually drew the money. Importantly, this was not a “one-off” program to fight a specific economic crisis. Instead, it was the last of seven consecutive IMF programs, with program length varying between one to three years, which Peru received between 1993 and 2009. After 1999, Peru stopped drawing on the programs, and they became purely precautionary. The SBA of 2007 was relatively small compared to earlier programs. It can thus be argued that this program was considered an insurance-like program for Peru. Investors likely perceived the rolling over of Peru’s IMF programs as established routine. Given that Peru had received so many IMF programs before 2007, it seems unlikely that financial markets would think that the 2007 program was only due Pakistan’s UNSC membership at the time. Hence, it is questionable whether there was any meaningful financial market reaction to the IMF program approval in January 2007.

Figure 4.2: Peru: Positive short-term reaction of financial markets to IMF program approval while being UNSC temporary member



Notes: UNSC is United Nations Security Council. Chart shows the short-term reaction of financial market indicators to a new IMF program (vertical blue line) for countries that are temporary UNSC members. The time range shown is IMF program approval months plus/minus 12 months. The chart is constructed so that a falling line shows a negative reaction by financial markets. Exchange rate is to US dollars; rhs = right-hand scale.

Looking at the financial market indicators around the IMF program approval (see Figure 4.2), the exchange rate continued to appreciate slightly. Stock prices in US dollars continued their upward trend, but at an even faster pace after the program approval. Bond yields however do not show a clear trend. Overall, the financial market reaction seems neutral or slightly positive, but rather muted.

From a geopolitical perspective, Peru and the US enjoyed close relations during the time in question, with a special cooperation in the area of counternarcotic and security matters (Jasper & Ribando Seelke, 2008). The US was also the key trading partner of Peru at the time, and the two countries signed a Trade Promotion Agreement in April 2006 (Taft-Morales, 2009).

Overall, despite close relations to the US, in view of Peru's long history of IMF programs it is hard to argue that the SBA of 2007 was a particular reward for voting in line with the US in the Security Council. Rather, the 2007 program seems to be a logical continuation of a historical pattern of consecutive IMF programs for Peru, and on which the Peru's temporary UNSC security membership did not have a major influence.

4.5 Empirical strategy

4.5.1 Estimation strategy

Our hypothesis is that a new IMF program while being temporary UNSC member is overall associated with a negative reaction of financial market participants. For simplicity and transparency, we use an OLS linear regression model with robust standard errors. We thus test

$$Y_{it} = \beta_1 IMFNEW_{it} UNSC_{it} + \beta_2 IMFNEW_{it} + \beta_3 UNSC_{it} + \beta_4 CPI_{it} + \beta_5 \delta_{year} \delta_i + \beta_6 \delta_t + u_{it}, \quad (1)$$

where Y_{it} is the dependent variable. This is, alternatively, the sovereign bond yield, short-term bill yield, the growth rate of domestic stock price in US dollars, or the growth rate of the domestic exchange rate against the US dollar (provided it is considered "floating" by the IMF at that point in time) for country i in month t .

The variable of interest is $IMFNEW_{it} UNSC_{it}$, which is the interaction term between a dummy for a new IMF program approval and a dummy on temporary UNSC membership for country i in month t . Based on our hypothesis, we expect a positive sign for bonds and bills (indicating an increase in yields), a negative sign for stocks (indicating falling prices), and a positive sign for the exchange rate (indicating depreciation). The coefficients of $IMFNEW_{it}$ and $UNSC_{it}$ cover their effects on the dependent variable when these do not occur simultaneously.

CPI_{it} is inflation for country i in month t . An interaction term $\delta_{year}\delta_i$ of country and year dummies captures country-specific factors subject to yearly changes, such as domestic economic and political conditions. δ_t is a monthly dummy that captures global developments on a monthly level that affect all countries, such as the GFC. The β vectors capture the effects of these variables. Finally, u_{it} is the error term.

4.5.2 Endogeneity issues

The ideal experiment would be to assign to each country an IMF program randomly, and to assign to the country some geopolitical interest, measured by UNSC temporary membership, in an equally random manner. The variable on UNSC temporary membership, which we use to measure geopolitical interest, is quasi-random, as explained in detail in Dreher et al. (2015, p. 125). The ten temporary seats of the UNSC are not a random draw but they are allocated by region, with different regions following different selection processes, mostly based on turn taking. While Africa has the strongest turn-taking, regional hegemony will dominate in other areas of the world. No strong pattern seems to exist for Eastern Europe. The nominations for temporary membership are agreed by the regions, and then ratified by the United Nations General Assembly. Competitive elections by two-third majority of the Assembly take place in about 20% of the cases. The term limit of two years reinforces the exogeneity of the selection process.

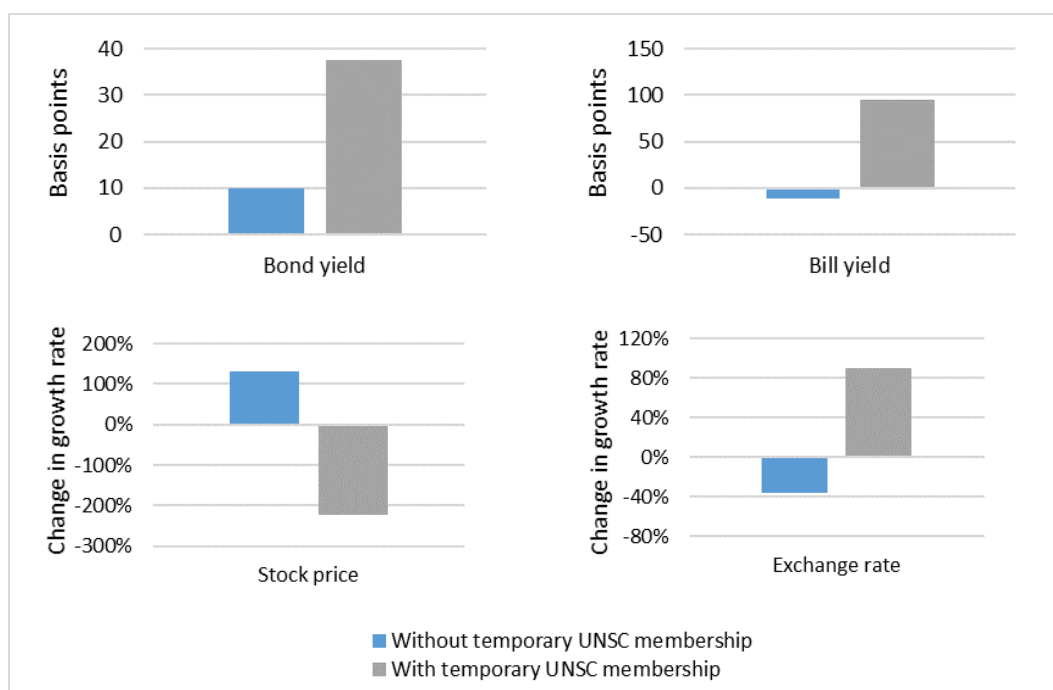
A new IMF program is not random, but related to a multitude of economic and political factors, most obviously economic crisis. We try to capture a majority of them by applying not only a control on inflation, but also an interaction term of year and country dummies, as described above. At the same time, a new IMF program is likely unrelated to UNSC temporary membership given the quasi-random nature of that variable.

4.6 Results

4.6.1 Main regression results

Figure 4.3 provides a visualization of the results. The key finding is that a new IMF program is consistently associated with a negative reaction of financial market variables if the country also is a temporary UNSC member (grey bars). This is not the case for new IMF program approvals when a country is not a temporary UNSC member (blue bars). Table 4.3 offers details on the main regression results.

Figure 4.3: Financial market reaction to a new IMF program depending on temporary UNSC membership



Notes: UNSC is United Nations Security Council. Grey bars show the coefficients of an interaction term between a dummy for a new IMF program and a dummy on temporary UNSC membership in a given month on yields of bonds and bills, growth in domestic stock prices (in local currency), and growth in the exchange rate to US dollars (if considered floating). Blue bars show the coefficients for the dummy on new IMF program without UNSC temporary membership. Coefficients are based on OLS with robust standard errors.

For *bonds*, we find that a new IMF program coincides with an increase of about 38 basis points in the bond yield if the country is also UNSC member at the time. If the country is not UNSC member, a new IMF program is linked to an increase of only about ten basis points in the bond yield. An increase in bonds yields implies a negative financial market reaction as it is the result of investors selling bonds. This result is not statistically significant at conventional confidence levels.

For short-term *bills*, we find that a new IMF program is linked to an increase of about 95 basis points for UNSC members in yields. This finding is statistically significant at a 5%-confidence level. It compares to an 11 basis points-decrease in the bill yield for an IMF program for non-UNSC members. As with bonds, higher bill yields imply a negative financial market reaction as it is the result of investors selling bills.

For *stocks*, we find that a new IMF program for UNSC members is linked to a decrease in the growth rate of stock prices (in local currency) by about 2.2 percentage points. Lower stock prices indicate a negative financial market reaction as investors sell stocks. If the country is not a UNSC member, a new IMF program is associated with an increase of roughly 1.3 percentage points in the growth rate of stock prices. In simpler terms, this implies that if a country's stock prices would grow by 5% under normal circumstances,

they would grow by about 6.3% in case of a new IMF program. However, if the IMF program coincided with UNSC membership, stock prices would only increase by about 4.1%. The relation we find is not significant at conventional levels. Given the rather limited data on stock markets, only 64 countries enter this regression, compared to close to 100 countries for the other regression.

Table 4.3: Main regression results

	(1) Bond yield	(2) Bill yield	(3) Stock prices (growth rate, local currency)	(4) Exchange rate (growth rate, to US dollar)
New IMF program during UNSC temporary membership (interaction term)	0.375 (1.098)	0.953* (1.750)	-2.222 (-0.817)	0.897 (0.786)
New IMF program (dummy)	0.0982 (0.804)	-0.111 (-0.527)	1.324 (1.439)	-0.359 (-1.251)
UNSC temporary membership (dummy)	-0.0577 (-0.608)	-0.0188 (-0.0883)	-0.0265 (-0.0577)	0.0399 (0.162)
Inflation	0.0845** (2.050)	0.114*** (3.252)	0.195 (1.659)	0.456*** (6.432)
F-test: New IMF program and interaction term (p-value in brackets)	1.53 (0.22)	1.76 (0.18)	1.03 (0.36)	0.89 (0.42)
F-test: UNSC and interaction term (p-value in brackets)	1.66 (0.19)	0.02 (0.98)	0.35 (0.70)	0.34 (0.71)
Adjusted R-squared	0.958	0.970	0.361	0.341
Number of Observations	19038	14833	15417	14022
Number of Countries	108	94	64	96
Number of Years	27	27	27	25
Number of Periods	324	324	323	299

Note: UNSC is United Nations Security Council. Coefficients are based on OLS with robust standard errors. Robust t-statistics in parentheses. Stars indicate significant p-values (** p<0.05, * p<0.1). The variable of interest is the interaction term between a new IMF program and UNSC membership. For readability, only a selection of controls is shown. Time (month) dummies, country dummies, and year-country interaction terms are omitted from the table. The regression with the exchange rate as dependent variable is limited to cases where the exchange rate regime is considered floating at the point in time. Inflation is monthly changes in the CPI index compared to the previous year. UNSC election period starts with the election month and ends at the end of election period.

Finally, for the *exchange rate*, we find that a new IMF program for UNSC members is linked to an increase of the growth rate in the exchange rate by about 0.9 percentage points. An increase in the exchange rate to the US dollar (depreciation) implies a negative financial market reaction as investors are selling the domestic currency. For non-UNSC members, a new IMF program is associated with a reduction by 0.36 percentage points in the growth rate of the exchange rate. In simpler terms, this implies that with a stable exchange rate in normal times, a country would see its currency depreciate by 0.9% in case of a new IMF program for a non-UNSC member. However, it would depreciate by 0.54% for a UNSC member. The link we find is not significant at conventional levels. The limitation of the

dataset to cases where the IMF considered the exchange rate regime as floating explains the lower number of observations in this regression compared to the other regressions.

The high volatility of both stock markets and exchange rates, as compared to money and bond markets, make that much less of its variation can be explained by our model. The inflation coefficient largely shows the expected pattern. Higher inflation is in line with the classical Fisher effect and standard exchange rate theories associated with an increase in bond and bill yields, nominal stock market returns and a depreciating exchange rate.

Our results confirm the finding by Chapman et al. (2015) that geopolitical interests in a country that receives a new IMF program is associated with a negative reaction to sovereign bonds. Albeit not statistically significant, we also find effects for short-term bills, stock markets, and the exchange rate that go in the same direction. These findings support the idea that geopolitical interests reduce the IMF's catalytic effect, which might render IMF programs less effective.

4.6.2 Robustness checks

Section 4.7.2 in the appendix provides detailed results for all robustness check regressions. Overall, the main results are relatively robust to several changes in the regression setup.²⁹ A first robustness check is to see whether the limiting of extreme values by winsorizing affects the results. To allow more extreme values, we adjust the winsorizing cuts from the 1st and 99th percentiles to the 0.5th and 99.5th percentiles. The results remain comparable to the main regression – removing more extreme values does not qualitatively affect our results.

A second robustness check is to see whether it makes a difference to limit the sample to exclude LICs (as we do in the main regression) compared to keeping all countries in an unconstrained regression, but extending the interaction term on IMF program and UNSC membership by a third dummy on being a LIC. The variable of interest is then the interaction term in case the dummy on LIC is zero. The results remain close to the main regression.

An third robustness check is to see whether our findings change if we replace year-country dummies and monthly dummies by other controls like GDP growth, global stock prices, and yields on US bonds and bills. While the size of the coefficients changes somewhat, the signs and statistical significance levels remain the same.

²⁹ We also considered a robustness check of keeping the sample steady for all four dependent variable regressions, but it did not yield sufficient cases where the interaction term on IMF program and UNSC membership was positive.

4.7 Appendix

4.7.1 Summary statistics

Table 4.4: Summary statistics

Variable	N	Mean	Standard deviation	Min	Max	Skewness	Kurtosis
New IMF program (dummy)	60912	0.01	0.09	0	1	10.82	118.15
UNSC member (dummy)	60912	0.06	0.24	0	1	3.73	14.95
Bond yield (100*x/(x+100), winsorized)	24964	6.28	3.90	0.44	23.31	1.85	7.83
Bill yield (100*x/(x+100), winsorized)	25132	7.48	6.75	-0.11	36.31	1.86	7.29
Stock price in local currency (growth rate, winsorized)	17724	0.71	6.96	-19.94	23.73	0.17	4.60
Exchange rate to US dollar (growth rate, winsorized)	54222	0.38	2.30	-5.20	12.41	1.95	11.74
CPI percentage change, year-on-year (100*x/(x+100), winsorized)	47965	0.59	1.41	-2.11	8.93	3.12	17.42

Note: UNSC is United Nations Security Council.

4.7.2 Robustness checks

Table 4.5: Robustness check: change in winsorizing cuts

	(1) Bond yield	(2) Bill yield	(3) Stock prices (growth rate, local currency)	(4) Exchange rate (growth rate, to US dollar)
New IMF program during UNSC temporary membership (interaction term)	0.377 (1.122)	0.854 (1.592)	-2.453 (-0.900)	1.704 (0.887)
New IMF program (dummy)	0.0667 (0.533)	-0.0452 (-0.155)	1.406 (1.390)	-0.433 (-1.341)
UNSC temporary membership (dummy)	-0.0625 (-0.654)	0.00459 (0.0216)	-0.0614 (-0.130)	-0.0102 (-0.0403)
Inflation	0.113** (2.026)	0.174*** (3.035)	0.287* (1.850)	0.669*** (7.770)
Adjusted R-squared	0.953	0.967	0.360	0.371
Number of Observations	19038	14833	15417	14022
Number of Countries	108	94	64	96
Number of Years	27	27	27	25
Number of Periods	324	324	323	299

Note: UNSC is United Nations Security Council. Winsorizing cuts employed are at 0.5th and 99th percentile, instead of at 1st and 99th percentile like in the main regression. Coefficients are based on OLS with robust standard errors. Robust t-statistics in parentheses. Stars indicate significant p-values (** p<0.01, * p<0.05, * p<0.1). The variable of interest is the interaction term between a new IMF program and UNSC membership. For readability, only a selection of controls is shown. Time (month) dummies, country dummies, and year-country interaction terms are omitted from the table. The regression with the exchange rate as dependent variable is limited to cases where the exchange rate regime is considered floating at the point in time. Inflation is monthly changes in the CPI index compared to the previous year. UNSC election period starts with the election month and ends at the end of election period.

Table 4.6: Robustness check: Unconstrained model with interaction term on low-income countries (LICs)

	(1) Bond yield	(2) Bill yield	(3) Stock prices (growth rate, local currency)	(4) Exchange rate (growth rate, to US dollar)
New IMF program during UNSC temporary membership, not LIC (interaction term)	0.361 (1.037)	1.031* (1.783)	-2.213 (-0.841)	0.803 (0.626)
New IMF program (dummy)	0.104 (0.842)	-0.0999 (-0.487)	1.219 (1.327)	-0.292 (-0.951)
UNSC temporary membership (dummy)	-0.0616 (-0.657)	-0.0330 (-0.149)	0.0368 (0.0791)	0.0568 (0.225)
Inflation	0.0660** (2.475)	0.0467** (2.220)	0.179* (1.784)	0.272*** (6.694)
Adjusted R-squared	0.963	0.959	0.328	0.272
Number of Observations	22188	22631	16709	22972
Number of Countries	116	100	64	97
Number of Years	27	27	27	25
Number of Periods	324	324	323	299

Note: UNSC is United Nations Security Council. This model is unconstrained, i.e. it includes all countries, including LICs. Coefficients are based on OLS with robust standard errors. Robust t-statistics in parentheses. Stars indicate significant p-values (***) $p < 0.01$, ** $p < 0.05$, * $p < 0.1$). The variable of interest is the interaction term between a new IMF program and UNSC membership. For readability, only a selection of controls is shown. Time (month) dummies, country dummies, and year-country interaction terms are omitted from the table. The regression with the exchange rate as dependent variable is limited to cases where the exchange rate regime is considered floating at the point in time. Inflation is monthly changes in the CPI index compared to the previous year. UNSC election period starts with the election month and ends at the end of election period.

Table 4.7: Robustness check: Different controls

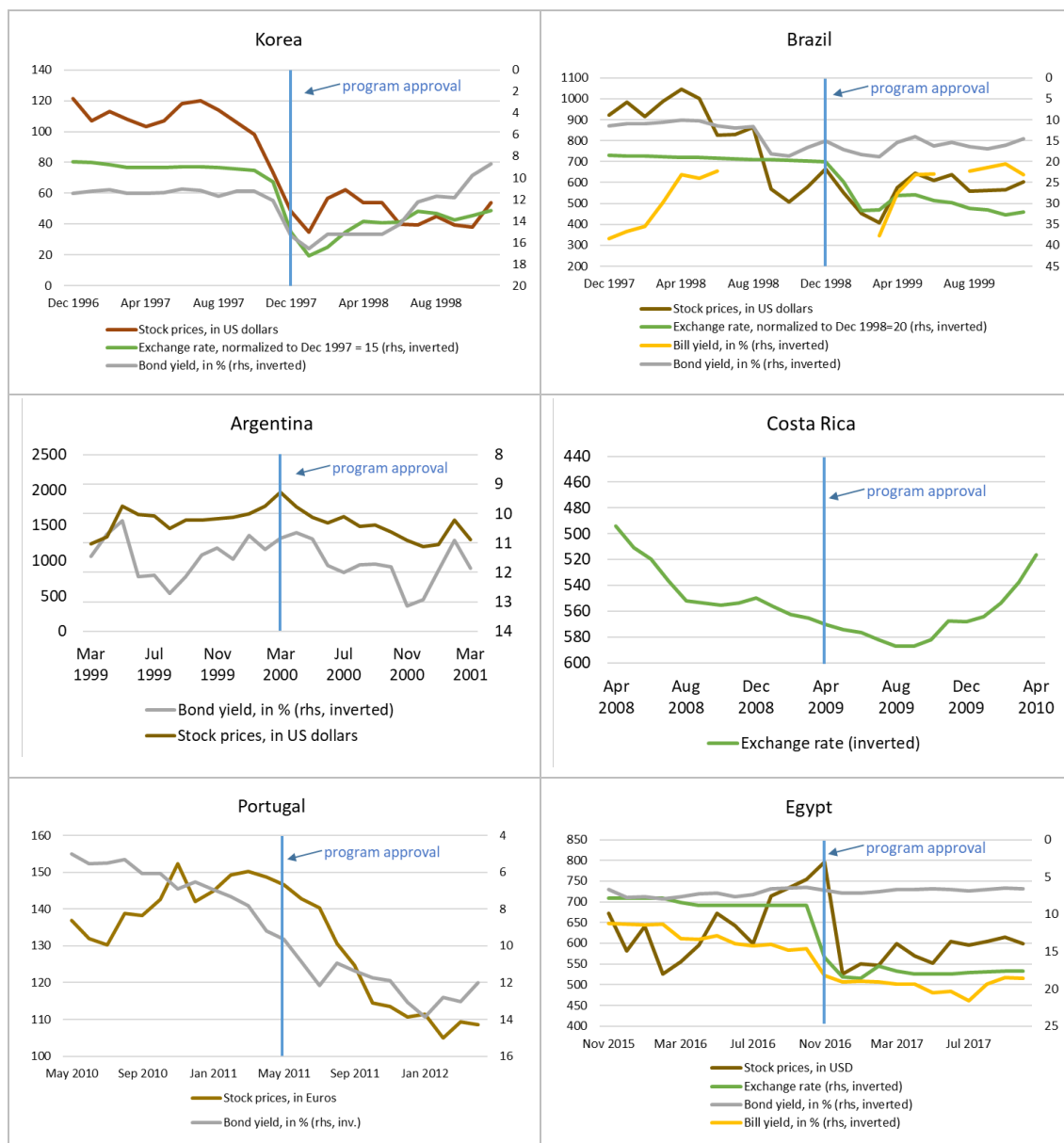
	(1) Bond yield	(2) Bill yield	(3) Stock prices (growth rate, local currency)	(4) Exchange rate (growth rate, to US dollar)
New IMF program during UNSC temporary membership (interaction term)	0.443 (0.708)	-2.333*** (-2.674)	-1.926 (-0.655)	0.452 (0.341)
New IMF program (dummy)	0.688*** (2.666)	0.929* (1.982)	0.897 (0.923)	-0.0758 (-0.225)
UNSC temporary membership (dummy)	0.164 (0.949)	0.224 (0.632)	0.0728 (0.288)	0.0542 (0.546)
Inflation	0.418*** (4.460)	1.521*** (4.736)	0.480 (1.639)	0.591*** (6.228)
Real GDP growth	-0.213*** (-6.953)	-0.303*** (-4.369)	0.0977*** (4.752)	-0.0462*** (-3.742)
Global stock prices in USD	-0.0275*** (-6.853)	-0.0210*** (-3.053)	0.804*** (21.30)	-0.100*** (-9.017)
US government bonds, yield	1.426*** (15.77)	1.348*** (6.081)	0.233*** (4.204)	-0.0466* (-1.815)
US government bills, yield	-0.103*** (-2.677)	0.289** (2.616)	-0.0682 (-1.382)	0.0227 (1.011)
Adjusted R-squared	0.700	0.729	0.274	0.109
Number of Observations	19013	14659	15417	13987
Number of Countries	108	94	64	96
Number of Years	27	27	27	25
Number of Periods	323	323	323	299

Note: UNSC is United Nations Security Council. Coefficients are based on OLS with robust standard errors. Robust t-statistics in parentheses. Stars indicate significant p-values (***) $p < 0.01$, ** $p < 0.05$, * $p < 0.1$). The variable of interest is the interaction term between a new IMF program and UNSC membership. The regression with the exchange rate as dependent variable is limited to cases where the exchange rate regime is considered floating at the point in time. Inflation is monthly changes in the CPI index compared to the previous year. Real GDP growth is year-to-year change on annual level. UNSC election period starts with the election month and ends at the end of election period.

4.7.3 Case studies in detail

There are 14 cases in the dataset in which a country receives an IMF program in a given month, and at the same time the country is either elected to serve or serving as non-permanent member on the UNSC. While the cases of Pakistan and Peru are described in detail in Section 4.4, this Section provides an overview of the remaining 12 cases.

Figure 4.4: Cases with a negative reaction of financial markets in the short-term to a new IMF program while being temporary UNSC member



Notes: UNSC is United Nations Security Council. The charts show the short-term reaction of financial market indicators to a new IMF program (vertical blue line) for countries that are temporary UNSC members. The time range shown is IMF program approval months plus/minus 12 months. The charts are constructed so that a falling line implies a negative reaction by financial markets (for this, the exchange rate and the yields of bonds and bills are inverted, right-hand scale). Some indicators are normalized to allow a better visualization. Exchange rate is to US dollars; rhs = right-hand scale.

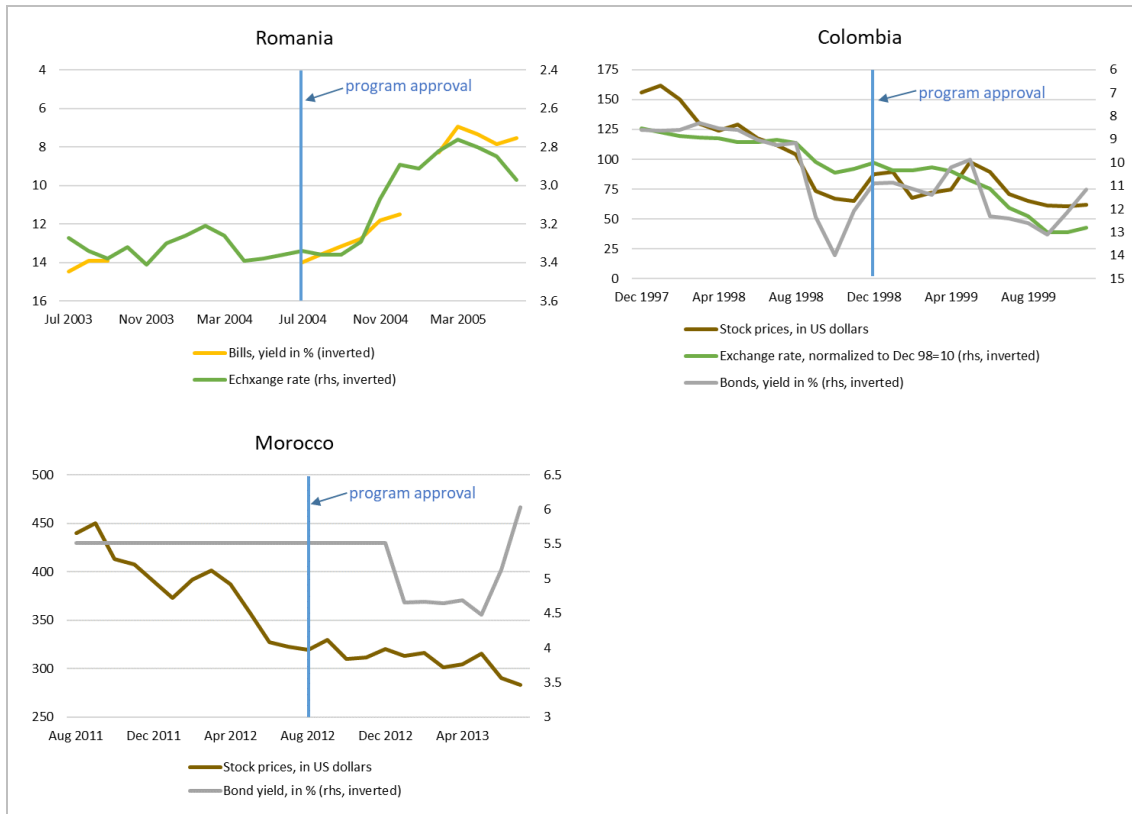
We find the predicted *negative reaction* by financial markets in the short-term, or the sale of domestic financial assets, to a new IMF program while being UNSC temporary member for six cases in addition to Pakistan (see Figure 4.4):

- Korea was elected to become temporary UNSC member in November 1995, and served on the council from January 1996 to December 1997. In context of the Asian crisis, Korea received a three-year SBA in December 1997. One month after the program approval, financial markets show a clear negative reaction with rising bond yields, exchange rate depreciation, and falling stock prices. This pattern predated the program approval and continued thereafter.
- Brazil was elected to become temporary UNSC member in October 1997, and served on the council from January 1998 to December 1999. In the context of a severe currency crisis related to the Asian and Russian crises at the time, Brazil received a one-year SBA in December 1998. Financial markets showed a clear negative reaction, with bond and bills yields increasing, the exchange rate depreciating, and stock prices falling. This negative reaction continued a few months after program approval and then stabilized.
- Argentina was elected as temporary UNSC member in October 1998, and served on the council from January 1999 to December 2000. In context of severe economic crisis in the country, Argentina received a three-year SBA in March 2000. In the month following the approval, financial markets reacted negatively with falling stock prices, and increasing bond yields (but with a small lag). This trend continued in the following months.
- Costa Rica was elected as temporary UNSC member in November 2007, and served on the council from January 2008 to December 2009. In context of the GFC, Costa Rica received a one-year SBA in April 2009. The program was precautionary. One month after the program approval, the exchange rate (the only available indicator) depreciated in a negative reaction by financial markets. This pattern predated the program approval and continued thereafter.
- Portugal was elected to become temporary UNSC member in October 2010, and served on the council from January 2011 to December 2012. In May 2011, in the context of the European debt crisis, Portugal received a three-year program under the EFF. In the month following the approval, bond yields increased and stock prices fell in a clear negative financial market reaction. This pattern predated the program approval and continued thereafter.
- Egypt was elected as temporary UNSC member in October 2015, and served on the council from January 2016 to December 2017. Egypt received a three-year EFF program in November 2016 to address long-standing vulnerabilities. One month after the program approval, financial markets showed a clear negative reaction,

with the exchange rate depreciating, yields of bonds and bills rising, and falling stock prices. In the following months, the financial market variables stabilized.

We find a *no clear direction* in the short-term financial market reaction to a new IMF program while being UNSC temporary member for three countries (see Figure 4.5):

Figure 4.5: Cases *without clear direction* in the financial market reaction in the short-term to new IMF program while being temporary UNSC member



Notes: UNSC is United Nations Security Council. The charts show the short-term reaction of financial market indicators to a new IMF program (vertical blue line) for countries that are temporary UNSC members. The time range shown is IMF program approval months plus/minus 12 months. The charts are constructed so that a falling line implies a negative reaction by financial markets (for this, the exchange rate and the yields of bonds and bills are inverted, right-hand scale). Some indicators are normalized to allow a better visualization. Exchange rate is to US dollars; rhs = right-hand scale.

- Romania was elected as temporary UNSC member in November 2003, and served on the council from January 2004 to December 2005. The country received a one-year SBA in July 2004 to address general economic vulnerabilities. The immediate financial market reaction shows a small exchange rate depreciation. This was followed in the medium-term by a positive financial market reaction, with a strong exchange rate appreciation and a prolonged decline in yields of bills.
- Colombia was elected as temporary UNSC member in October 2010, and served on the council from January 2011 to December 2012. In May 2011, Colombia received a precautionary arrangement under the Flexible Credit Line, which has

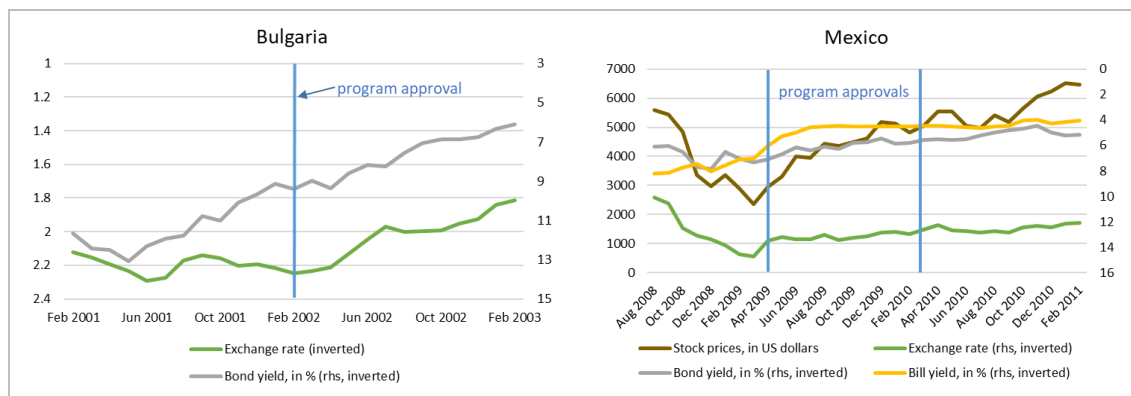
no ex-post conditionality and hence no economic reform program. The FCL is only available for countries with a track record of very strong economic policies, which is considered “ex-ante” conditionality. At the same time, the FCL is not necessarily linked to combatting a specific economic crisis but can be seen as insurance against tightening financial market conditions. The immediate financial market reaction was mixed. The exchange rate and bonds reacted slightly negative, while stock price increased marginally. In the medium-term, the financial reaction turned more negative.

- Morocco was elected temporary UNSC member in November 2011, and served on the council from January 2012 to December 2013. In August 2012, Morocco received an IMF program under the Precautionary Liquidity Line (PLL). This program is very similar to the insurance-like FCL, but the qualification criteria are somewhat softer. The financial market reaction was mixed, based on the limited available data. In the short term, there was a small stock price increase and no reaction in bond yields. Over the year, a negative pattern emerged with stock prices falling and bond yields eventually increasing.

Finally, we find a *positive* financial market reaction to a new IMF program while being UNSC member for Bulgaria and Mexico, in addition to the case of Peru described in Section 4.4 (see Figure 4.6):

- Bulgaria was elected temporary UNSC member in October 2001, and served on the Council from January 2002 to December 2003. Bulgaria received a one-year SBA in February 2002. The immediate financial market reaction was slightly positive, with appreciating exchange rate and slightly falling bond yields. Over the next months, the positive pattern strengthened.
- Mexico was elected temporary UNSC member in November 2008, and served on the council from January 2009 to December 2010. During that time, Mexico received two consecutive programs under the FCL, in April 2009 and March 2010. The programs were intended to insulate Mexico from further percussions of the GFC of 2007-2008, and were purely precautionary. The first FCL approval in April 2009 led to a stabilization of financial market indicators, which all showed a positive investor reaction. This stabilization started about two months before the program approval, which suggests an early leaking of information about the program. In reaction to the second FCL approval in March 2010 (a planned renewal of the first FCL), this positive pattern strengthened further.

Figure 4.6: Cases with a *positive reaction* of financial markets in the short-term to a new IMF program while being temporary UNSC member



Notes: UNSC is United Nations Security Council. The charts show the short-term reaction of financial market indicators to a new IMF program (vertical blue line) for countries that are temporary UNSC members. The time range shown is IMF program approval months plus/minus 12 months. The charts are constructed so that a falling line implies a negative reaction by financial markets (for this, the exchange rate and the yields of bonds and bills are inverted, right-hand scale). Exchange rate is to US dollars; rhs = right-hand scale.

Bibliography

- Acemoglu, D. & Johnson, S. (2005). Unbundling institutions. *Journal of Political Economy*, 113(5), 949-995.
- Ahmad, A. & Mohammed, A. (2012). Pakistan, the United States and the IMF: Great game or a curious case of Dutch Disease without the oil? LSE Asia research centre working paper, 57.
- Ahmed, M. A. (2012). The IMF and Pakistan (A road to nowhere). PIDE Lectures Series. Retrieved from <http://www.pide.org.pk>.
- Anwar, M. (2006). The political economy of international financial institutions' lending to Pakistan. *HWWA discussion papers*, 338.
- Banks, A. S. & Wilson, K. A. (2017). Cross-national time-series data archive. Databanks International. Jerusalem, Israel. Retrieved from <https://www.cntsdata.com>.
- BBC (2015). Pakistan profile - Timeline. Retrieved from <http://www.bbc.com/news/world-south-asia-12966786>.
- Bird, G. & Rowlands, D. (2002). Do IMF programmes have a catalytic effect on other international capital flows? *Oxford Development Studies*, 30(3), 229-249.
- Bird, G. & Rowlands, D. (2008). Catalysing private capital flows and IMF programs: Some remaining questions. *Journal of Economic Policy Reform*, 11(1), 37-43.
- Bird, G. (1996). Borrowing from the IMF: The policy implications of recent empirical research. *World Development* 24(11), 1753-1760.
- Birkland, T. A. (2014). An introduction to the policy process: Theories, concepts and models of public policy making. Routledge.
- Blood, P. R. (Ed.). (1994). Pakistan: A country study. Federal Research Division.
- Blustein, P. (2015). Laid low: The IMF, the euro zone and the first rescue of Greece. CIGI Paper Series, 61.
- Boughton, J. M. (2006). American in the shadows: Harry Dexter White and the design of the International Monetary Fund. *IMF Working Papers*, 06(6).
- Breen, M. (2012). The international politics of Ireland's EU/IMF bailout. *Irish Studies in International Affairs*, 23, 75-87.
- Breen, M. (2013). The politics of IMF lending. Palgrave Macmillan.
- Breen, M. (2014). IMF conditionality and the economic exposure of its shareholders. *European Journal of International Relations*, 20(2), 416-436.
- Broz, J. L. & Hawes, M. B. (2006). Congressional politics of financing the International Monetary Fund. *International Organization*, 60(2), 367-399.
- Bulmer-Thomas, V. (2003). The economic history of Latin America since independence. Cambridge University Press.

- Bush, G. W. (2002). *The national security strategy of the United States of America*. Washington, DC.
- Catan, T. & Talley, I. (2013). Past rifts over Greece cloud talks on rescue. *The Wall Street Journal*.
- Chapman, T., Fang, S., Li, X. & Stone, R. W. (2015). Mixed signals: IMF lending and capital markets. *British Journal of Political Science*, 47(2), 329-349.
- Chinn, M. D. & Ito H. (2006). What matters for financial development? Capital controls, institutions, and interactions. *Journal of Development Economics*, 81(1), 163-192.
- Cohen, P. R. (1995). *Empirical methods for artificial intelligence* (Vol. 139). Cambridge, MA: MIT press.
- Copelovitch, M. S. (2010). Master or servant? Common agency and the political economy of IMF lending. *International Studies Quarterly*, 54(1), 49-77.
- Corsetti, G., Guimaraes, B. & Roubini, N. (2006). International lending of last resort and moral hazard: A model of IMF's catalytic finance. *Journal of Monetary Economics*, 53(3), 441-471.
- Cottarelli, C. & Giannini, C. (2003). Bedfellows, hostages, or perfect strangers? Global capital markets and the catalytic effect of IMF crisis lending. *Cahiers d'économie politique/Papers in Political Economy*, 211-250.
- Cox, Nicholas J. (2017). *Transformations: An Introduction*. Retrieved from <http://fmwww.bc.edu/repec/bocode/t/transint.html>.
- Daily Nation (2014, September 27). IMF rejects Zimbabwe loan request. Retrieved from <http://mobile.nation.co.ke>.
- De Haan, J. & Sturm, J. E. (2017). Finance and income inequality: A review and new evidence. *European Journal of Political Economy*, 50, 171-195
- De Vries, M. M. G. (1987). *Balance of payments adjustment, 1945 to 1986: The IMF experience*. International Monetary Fund.
- Dell, S. (1981). *On being grandmotherly: the evolution of IMF conditionality*. Princeton.
- Drazen, A. (2002). Conditionality and ownership in IMF lending: A political economy approach. *IMF Staff Papers*, 36-67.
- Dreher, A. & Vreeland, J. R. (2011). *Buying votes and international organizations*. Discussion Papers, Center for European Governance and Economic Development Research, 123.
- Dreher, A. (2006). Does globalization affect growth? Evidence from a new index of globalization. *Applied Economics*, 38(10), 1091-1110.
- Dreher, A., Eichenauer, V. Z. & Gehring K. (2014). *Geopolitics, aid and growth*. CEPR Discussion Papers, DP9904.
- Dreher, A., Marchesi, S. & Vreeland, J. R. (2008). The political economy of IMF forecasts. *Public Choice*, 137(1-2), 145-171.
- Dreher, A., Sturm, J. E. & Vreeland, J. R. (2009). Global horse trading: IMF loans for votes in the United Nations Security Council. *European Economic Review*, 53(7), 742-757.

- Dreher, A., Sturm, J. E. & Vreeland, J. R. (2015). Politics and IMF conditionality. *Journal of Conflict Resolution*, 59(1), 120-148.
- Dupuis, J. & Biesbroek, R. (2013). Comparing apples and oranges: The dependent variable problem in comparing and evaluating climate change adaptation policies. *Global Environmental Change*, 23(69), 1476-1487.
- Edwards, M. S. (2006). Signalling credibility? The IMF and catalytic finance. *Journal of International Relations and Development*, 9(1), 27-52.
- Eichengreen, B., Gupta, P. & Mody, A. (2008). Sudden stops and IMF-supported programs. In *Financial markets volatility and performance in emerging markets*, NBER Chapters, 219-266. University Of Chicago Press.
- Fasihuddin. (2009). Pakistan at IMF door again. *Policy Perspectives*, 6(1), 105-114. Retrieved from <http://www.jstor.org/stable/42909228>.
- Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative inquiry*, 12(2), 219-245.
- Frankel, J. (2007). Is the IMF obsolete? A symposium of views. *The International Economy*, 12-13.
- Fritz-Krockow, B. & Ramlogan, P. (2007). *International Monetary Fund handbook: Its functions, policies, and operations*. International Monetary Fund.
- Geddes, B. (1990). How the cases you choose affect the answers you get: Selection bias in comparative politics. *Political Analysis*, 2, 131-150.
- Ghafoor, A. & Hanif, S. (2005). Analysis of the trade pattern of Pakistan: Past trends and future prospects. *Journal of Agriculture & Social Sciences*, 1(4), 346-349.
- Goldman, Y. (2012, July 2). Palestinian Authority faces worst financial crisis since its founding, says labor minister. *The Times of Israel*.
- Gould, E. R. (2003). Money talks: Supplementary financiers and international monetary fund conditionality. *International Organization*, 57(3), 551-586.
- Greene, W. G. (1997). *Econometric Analysis*. 3 edn, Prentice-Hall.
- Green-Pedersen, C. (2004). The dependent variable problem within the study of welfare state retrenchment: Defining the problem and looking for solutions. *Journal of Comparative Policy Analysis: Research and Practice*, 6(1), 3-14.
- Gunadasa, S. (2015, March 20). IMF rejects Sri Lankan request for loan bailout. *World Socialist Web Site*. Retrieved from <http://www.wsws.org>.
- Gygli, S., Haelg F., Potrafke N. & Sturm, J. E. (2019). The KOF Globalization Index – Revisited. *Review of International Organizations*, 14(3), 543-574.
- Hansen, H. & Tarp, F. (2001). Aid and growth regressions. *Journal of Development Economics*, 64(2), 547-570.
- Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica: Journal of the econometric society*, 153-161.
- Howlett, M. & Cashore, B. (2007). Re-visiting the new orthodoxy of policy dynamics: The dependent variable and re-aggregation problems in the study of policy change. *Canadian Political Science Review*, 1(2), 50-62.

- Hudson, R. A. & Meditz, S. W. (Eds.). (1990). *Uruguay: A country study*. Federal Research Division.
- Independent Evaluation Office of the International Monetary Fund [IEO] (2002). *Evaluation of the prolonged use of fund resources: Pakistan*. Retrieved from <http://www.ieo-imf.org>.
- Independent Evaluation Office of the International Monetary Fund [IEO] (2007). *IEO evaluation on structural conditionality in IMF-supported programs*. Retrieved from <http://www.ieo-imf.org>.
- Independent Evaluation Office of the International Monetary Fund [IEO] (2014). *IMF forecasts: Process, quality, and country perspectives*. Retrieved from <http://www.ieo-imf.org>.
- Independent Evaluation Office of the International Monetary Fund [IEO] (2016). *The IMF and the crises in Greece, Ireland, and Portugal*. Retrieved from <http://www.ieo-imf.org>.
- International Monetary Fund (1958-2013). *Annual Reports*. Retrieved from <http://www.imf.org>.
- International Monetary Fund (2001a). *IMF Executive Board approves US\$1.3 billion PRGF credit to Pakistan*. Press Release No. 01/51. Retrieved from <http://www.imf.org>.
- International Monetary Fund (2001b). *Structural conditionality in Fund-supported programs*. Retrieved from <http://www.imf.org>.
- International Monetary Fund (2002). *2002 Review of Conditionality*. Retrieved from <http://www.imf.org>.
- International Monetary Fund (2004). *IMF Executive Board completes final review under Pakistan's PRGF arrangement*. Press Release No. 04/259. Retrieved from <http://www.imf.org>.
- International Monetary Fund (2005a). *Review of the 2002 conditionality guidelines*. Retrieved from <https://www.imf.org>.
- International Monetary Fund (2005b). *Uruguay: Ex post assessment of longer-term program engagement*. IMF Country Report No. 05/202. Retrieved from <http://www.imf.org>.
- International Monetary Fund (2007). *International Monetary Fund Handbook. Its Functions, Policies, and Operations*.
- International Monetary Fund (2008a). *Implementation plan in response to board-endorsed recommendations arising from the IEO evaluation of structural conditionality in IMF-supported programs*. Retrieved from <http://www.imf.org>.
- International Monetary Fund (2008b). *Uruguay: Ex post evaluation of exceptional access under the 2005 Stand-By Arrangement*. IMF Country Report No. 08/47. Retrieved from <https://www.imf.org>.
- International Monetary Fund (2011). *Articles of Agreement*. Retrieved from <http://www.imf.org>.

- International Monetary Fund (2012a). 2011 Review of conditionality. Background paper 1: Content and application of conditionality. Retrieved from <https://www.imf.org>.
- International Monetary Fund (2012b). 2011 Review of conditionality. Overview paper. Retrieved from <https://www.imf.org>.
- International Monetary Fund (2013). Factsheet: IMF's response to the global economic crisis. Retrieved from <http://www.imf.org/external/np/exr/facts/changing.htm>.
- International Monetary Fund (2014). IMF Financial Operations. Washington, October 2014.
- International Monetary Fund (2020a). Annual Report on Exchange Arrangements and Exchange Restrictions. Database.
- International Monetary Fund (2020b). IMF conditionality. Retrieved from <https://www.imf.org/en/About/Factsheets/>
- International Monetary Fund (2020c). IMF lending. Retrieved from <https://www.imf.org/en/About/Factsheets/IMF-Lending>.
- International Monetary Fund (2020d). IMF support for low-income countries. Retrieved from <https://www.imf.org/en/About/Factsheets/IMF-Support-for-Low-Income-Countries>.
- International Monetary Fund (2020e). Pakistan: Transactions with the Fund. Retrieved from https://www.imf.org/external/np/fin/tad/extrans1.aspx?memberKey1=760&endDate=2099-12-31&finposition_flag=YES.
- International Monetary Fund (2020f). The IMF at a glance. Retrieved from <https://www.imf.org/en/About/Factsheets/IMF-at-a-Glance>.
- International Monetary Fund (2020g). Uruguay: Transactions with the Fund. Retrieved from https://www.imf.org/external/np/fin/tad/extrans1.aspx?memberKey1=1040&endDate=2099-12-31&finposition_flag=YES.
- Inter-Parliamentary Union (2017). PARLINE database on national parliaments - Election archives. Retrieved from <https://data.ipu.org/>.
- Jasper, M. L. & Ribando Seelke, C. (2008). Peru: Political Situation, Economic Conditions and U.S. Relations. CRS Reports for Congress. Retrieved from <https://fas.org/sgp/crs/row/RS22715.pdf>
- Joyce, J. P. (2006). Promises made, promises broken: A model of IMF program implementation. *Economics & Politics*, 18(3), 339-365.
- Knight, M. & Santaella, J. A. (1997). Economic determinants of IMF financial arrangements. *Journal of Development Economics*, 54, 405-436.
- Krahnke, T. (2020). Doing more with less: The catalytic function of IMF lending and the role of program size. *Deutsche Bundesbank Discussion Papers*, 18/2020.
- Kronstadt, K. A. (2011, October). Pakistan-US relations: A summary. Congressional Research Service, Library of Congress.
- Kronstadt, K. A. (2015). Pakistan-U.S. Relations: Issues for the 114th Congress. Congressional Research Service Report, 7-5700.

- Kuziemko, I. & Werker, E. (2006). How much is a seat on the Security Council worth? Foreign aid and bribery at the United Nations. *Journal of Political Economy*, 114(5), 905-930.
- Lamont, J. (2001). Pakistan ends IMF loan deal amid dispute. *Financial Times*.
- LaPorta, R., Lopez-de-Silanes F. & Shleifer, A. (2008). The economic consequences of legal origins. *Journal of Economic Literature*, 46 (2), 285-332.
- McCartney, M. (2011). *Pakistan-The political economy of growth, stagnation and the state, 1951-2009*. Routledge.
- McDowell, D. (2013). Need for speed: Analyzing IMF lending responsiveness, 1984-2009. Prepared for 2013 Midwest Political Science Association annual meeting, April 11-14, 2013.
- Mody, A. & Saraiva, D. (2003). Catalyzing capital flows: Do IMF-supported programs work as commitment devices? *IMF Working Papers*, 03(100).
- Momani, B. (2004). The IMF, the US war on terrorism, and Pakistan. *Asian Affairs: An American Review*, 31(1), 41-51.
- Moser, C. & Sturm, J. E. (2011). Explaining IMF lending decisions after the Cold War. *The Review of International Organizations*, 6(3-4), 307-340.
- Nasir, J. (2012). IMF programs in Pakistan (1988-2008) – an analysis. *Criterion Quarterly*. Retrieved online at <http://www.criterion-quarterly.com>.
- Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and the Family*, 45(1), 141-151.
- Oatley, T. & Yackee, J. (2004). American interests and IMF lending. *International Politics*, 41, 415-429.
- Polak, J. J. (1991). *The changing nature of IMF conditionality*. OECD Publishing.
- Presbitero, A. F. & Zazzaro, A. (2012). IMF lending in times of crisis: Political influences and crisis prevention. *World Development* 40(10), 1944-1969.
- Rafique, N. (2015). Pakistan-US Relations. *Strategic Studies*, 35(3), 43-70.
- Reinhart, C. (2017). IMF official exchange rate classification 1970-2007. Retrieved from <http://www.carmenreinhart.com>.
- Robinson, S., Brooks, R., Kotiadis, K. & Van Der Zee, D. J. (Eds.). (2010). *Conceptual modeling for discrete-event simulation*. CRC Press.
- Rohter, L. (1998, November 14). I.M.F. Announces a \$41.5 Billion Rescue Package for Brazil. *The New York Times*.
- Scartascini, C., Cruz, C. & Keefer, P. (2017). *The database of political institutions 2017*. Inter-American Development Bank. Retrieved from <https://publications.iadb.org>.
- Seiber, M. J. (2013). *International borrowing by developing countries*. Pergamon Policy Studies on International Development. Elsevier.
- Simmons, B. A. & Hopkins, D. J. (2005). The constraining power of international treaties: Theory and methods. *American Political Science Review*, 99(4), 623-631.
- Stake, R. E. (1995). *The art of case study research*. Sage.
- Sterne, G. (2013). IMF board – risking eternal slumber? *Financial Times*.

- Stavis, M. & Talley, I. (2013). IMF concedes it made mistakes on Greece. *The Wall Street Journal*.
- Stone, R. W. (2004). The political economy of IMF lending in Africa. *American Political Science Review*, 98(4), 577-591.
- Stone, R. W. (2008). The scope of IMF conditionality. *International Organization*, 62(04), 589-620.
- Sturm, J. E., Berger, H. & De Haan, J. (2005). Which variables explain decisions on IMF credit? An extreme bounds analysis. *Economics & Politics*, 17(2), 177-213.
- Taft-Morales, M. (2009). Peru: Current conditions and U.S. relations. CRS Report for Congress. Retrieved from <https://fas.org/sgp/crs/row/R40716.pdf>
- Taylor, J. B. (2007). Globalization and monetary policy: Missions impossible. In *International Dimensions of Monetary Policy*, 609-624. University of Chicago Press.
- Vigevani, T., Fernandes de Oliveira, M. & Thompson, T. (2007). Brazilian foreign policy in the Cardoso Era: The search for autonomy through integration. *Latin American Perspectives*, 34(5), 58-80.
- Vreeland, J. R. & Dreher, A. (2014). *The political economy of the United Nations Security Council: Money and influence*. Cambridge University Press.
- Vreeland, J. R. (2003a). *The IMF and economic development*. Cambridge University Press.
- Vreeland, J. R. (2003b). Why do governments and the IMF enter into agreements? Statistically selected cases. *International Political Science Review*, 24(3), 321-343.
- Vreeland, J. R. (2005). *The international and domestic politics of IMF programs*. Yale University, mimeo.
- Vreeland, J. R. (2006). IMF program compliance: Aggregate index versus policy specific research strategies. *The Review of International Organizations*, 1(4), 359-378.
- Walsh, D. & Masood, S. (2013, July 4). I.M.F. and Pakistan Agree to a \$5.3 Billion Bailout. *New York Times*.
- Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. MIT press.
- World Bank (2013). *Use of IMF credit*, World Bank, International Debt Statistics. Retrieved from <http://data.worldbank.org>.
- Young, K. (2018). The modern financial corporation and global policy. In *Handbook of the International Political Economy of the Corporation*. Edward Elgar Publishing.

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