

Political Economy of Unrest under IMF Programs:

Labor Groups, Mobility and Conditionality

Abstract

What causes political unrest under IMF programs? I argue that IMF labor conditionality generates large-scale mobilization and opposition in countries where labor is immobile. Immobile workers cannot easily switch between jobs and sectors, or substantially lose benefits if it is forced to do so due to wage differentials. Hence labor groups strongly react against programs that promote labor market decentralization. I test this theory in a global sample of 117 countries over between 1992 and 2008. I then subject the theory to a series of alternative measurement and model specification tests. The results as well as alternative model specifications support the theory. At lower levels of mobility, IMF labor conditions trigger political unrest in borrowing countries.

Introduction

Unrest and antagonistic reactions against International Monetary Fund (IMF) programs are frequent to the extent that they are considered ‘normal’ and ‘somehow expected’ by the IMF staff (Interview No.1). The Fund officials attribute the reactions to destabilizing economic crisis and local politicians shifting the blame to an external actor (Interview No.2). The protestors and local politicians often do blame the IMF for the painful measures and policies. However, we also observe that in some countries such as Turkey in 2001 and in Ireland in 2010, programs are implemented without large-scale unrest or reactions from society. If the economic crisis or the politicians conveniently shifting the blame are the causes of unrest, why do we observe this variation? What causes political unrest under IMF programs?

This article argues that the cause of unrest lies in the organization of the labor market and the scope of conditionality. When the labor market is largely immobile (i.e. it is difficult for workers to switch jobs and sectors), IMF labor conditionality generates large-scale grievances among labor groups. In an immobile labor market, there are substantial wage differentials and differences in labor protection measures such as collective bargaining rights and job protection (Hiscox and Rickard 2002). Those differences make the market rigid and impede the movement across sectors. When IMF labor conditions decentralize the market and open it up in an attempt

to foster movement, the immobile labor groups lose in terms of income and rights in the short-term. They simply become ‘trapped’ in their jobs and are forced to accept relative wage decreases and less protection. They, therefore, mobilize in order to protect their interests and to block the implementation of the program. In other words, what distinguishes the cases of unrest and smooth program implementation is the level of mobility in the job market and the scope and the intensity of IMF labor conditions.

The article builds on the previous literature establishing a strong correlation between the IMF programs and societal reactions. Earlier studies found evidence that the IMF programs increase the likelihood of human rights violations by triggering governmental repression (Abouharb and Cingranelli 2011; Franklin 1995; Pion-Berlin 1985). The governments, which have a stake in implementing the program, are argued to repress any opposition (Pion-Berlin 1985). Programs were also argued to cause governmental instability due to collective social opposition and precipitate the fall of governments (Dreher and Gassebner 2010). While the literature makes a strong case on the mobilization under IMF programs and its consequences, such as human rights violations and governmental instability, where and how mobilization emerges is scarcely discussed. Most of the existing studies attributes the formation of opposition to relative deprivation of groups. An investigation into the underlying causes of mobilization would complement the existing studies.

This paper contributes to the existing body of work in two respects. Firstly, it demonstrates that there is a material and objective basis for rising grievances and mobilization under IMF programs. ‘Relative deprivation’ theory attributes grievances to ‘perceived difference’ between one’s actual material well-being and her expectations. The economic programs under IMF, however, actively redistribute across groups by reforming the economy (Gartzke and Naoi 2011). Moreover, they often redistribute away from labor (Vreeland 2002). By studying the objective economic basis for grievances we can explain which groups and how are aggrieved under the programs. The article in this sense aims at providing a more grounded explanation

than attributing the grievances to perceptions. Secondly, it delves into the correlation between IMF programs and collective mobilizations and offers a causal explanation as to how and why collective mobilizations occur. In light of the current literature, we know that there is a greater likelihood of unrest under IMF programs. However we cannot explain the variation across cases such as Greece and Ireland in 2010. By establishing a causal relationship, we not only further the explanation a step ahead of the correlation but we can also explain why we observe the variation across cases.

In addition, understanding the causes of political unrest has practical policy relevance both for the borrowing governments and the IMF. The IMF is the main lending agency in the international system and operates on limited funds (IMF 2016). It has a stake in completing the programs and help governments resume economic growth (IMF 2016). Preventing political unrest enables more expeditious completion of programs. Secondly, governments often borrow from the Fund and accept the policy conditions due to unavailability of credit in favorable terms in the private financial markets. They often face a credibility problem. Political unrest perpetuates this credibility problems and the lack of confidence in the markets. It starts a vicious circle: governments undergo IMF programs because they cannot find credit; IMF programs result in reactions from societal actors and generate unrest; and unrest further fuels the lack of confidence and keeps governments under the programs (Stiglitz 2012). If we can understand the causal process leading up to unrest under IMF programs, we can design better programs and break this cycle.

I test the theory in a global sample of 117 countries between 1992 and 2008. I employ a two-stage latent class model in order to account for specific (possibly unrest-generating) characteristics of IMF program countries such as being relatively poor and politically unstable compared to non-program countries (Vreeland 2003). In the second stage, I use an account model, which is sensitive to a large-number of zeros on the dependent variable (zero-inflated

negative binomial regression), in order to test for the correlation between conditionality, mobility, and unrest.

The rest of the paper is organized as follows. The next section discusses the theoretical model in detail. It explains the impact of labor conditionality on unrest in an immobile labor market. The following section outlines the empirical strategy used to test the hypothesis emerging from the theoretical section. The third section reports the results of the two-stage latent class model. The fourth section discusses heterogeneity of results with respect to trade openness, democratic development, and regional patterns. The fifth section discusses alternative model specifications for robustness checks. The final section summarizes the main arguments.

Theory

The IMF lends to member countries undergoing economic difficulties and helps them correct their balance of payments (IMF 2014). IMF lending comes with ‘programs’ that define precise measures, reforms, and policies in borrowing countries. Programs are specified in the ‘Letter of Intent’ by the borrowing government, and presented to and approved by the Executive Board of the IMF. Lending of credit comes in installments; and upcoming disbursements are tied to the fulfillment of pledged measures, i.e. conditionality (IMF 2014). IMF conditionality, in other words, has a material basis (conditional disbursement of credit) and a political basis (implementation of reforms and policies at home).

Although governments voluntarily demand credit from the IMF and sign the program, there are three factors that render the relationship between the IMF and the borrowing government asymmetrical. Firstly, the IMF is the last resort for credit for governments under economic distress. Governments that are unable to find credit in favorable conditions often apply to the IMF (IMF 2014). Secondly, the Fund ties disbursements to fulfillment of conditions specified in the programs and monitors their implementation (IMF 2014). Governments are obliged to comply with conditions in order to secure the pledged credit. Thirdly, due to

institutional arrangements,¹ no single borrowing country can control IMF conditions.² In other words, IMF conditionality is exogenous and above and beyond the control of the borrowing country. Moreover, due to the economic hardship of the borrowing government, the conditionality attached to the loans and IMF institutional setting, programs privilege the Fund at the expense of borrowing governments.

IMF conditionality is multifaceted and envisages reform in various domains of the economy.³ We can logically infer that different types of conditionality and their varying intrusiveness will give rise to different types of grievances and opposition within the borrowing country. It is, therefore, a better strategy to analyze the components of conditionality rather than the programs as a monolithic whole (Brown 2009; Stone 2008). Furthermore, drawing from the literature, we can contend that IMF programs are highly likely to cause distributive conflicts among different socio-economic groups (Gartzke and Naoi 2012). Every economic reform has both direct and indirect impacts on the wealth of individuals and has the potential to shape their political affiliations (Frieden 2001; Rogowski 1989).⁴ Economic policies implemented under IMF programs, thus, might potentially generate support or opposition between different groups.

¹ In the Executive Board of the IMF, eight countries, namely the U.S., Japan, Germany, France, the UK, China, Russia and Saudi Arabia, are entitled to one seat. The remaining sixteen seats are elected by the rest of member countries (180 countries). The Executive Board makes decisions with a simple majority with the exception of decisions of expulsion of a member, changes in quotas, changes in the Executive Board and general exchange arrangement measures, which are decided by qualified majority. Decision-making procedures clearly inhibit dominance of single country.

² Scholars point out the disproportionate impact of the U.S. on lending decisions of the IMF (Stone, 2008; Abouharb and Cingranelli, 2006, 2009). U.S. allies often receive more lenient conditions. Stone (2008) calls it ‘informal governance’, where the U.S. exercises its informal dominance in cases of its allies and emergency situations. However, involvement of the U.S. is often limited to securing a loan for the allied country and perhaps to receive a smaller number of conditions. For the purposes of this study, the nuance can be ignored and IMF conditionality can be treated as exogenous; we can safely assume that conditionality flows from the Fund to the country.

³ Conditionality can be grouped under six general sub-headings: monetary reform, fiscal reform (including governmental institutional reform), legal and corporate reform, structural reform (institution building and measures to improve governmental capacity), social policy reform and labor reform (Brown 2009).

⁴ For instance, changes in taxation and indirect taxes such as VAT directly affect household income. Changes in financial regulations affect the workers and employers in import-competing and exporting industries (Frieden, 2001). Similarly, trade liberalisation and market openness would affect consumers by altering prices, employment opportunities and investment in an economy (Rogowski 1989).

In order to analyze distributive conflict, it is useful to look at how different socio-economic groups are affected by the programs. Previous studies have identified disproportionate adverse impact of the programs on labor groups (Vreeland 2003; Nooruddin and Simmons 2006; Pion-Berlin 1985). Firstly, Vreeland (2003) finds evidence that programs systematically redistribute wealth away from the labor groups towards capital owners. Secondly, programs often bring labor market flexibility, altering employment conditions for workers (Caraway et al. 2012; IMF 2012). We can infer that labor groups and their reactions to the program will play an important role in determining the conflict and opposition. Labor conditionality in this sense is critical in understanding political unrest.

Labor conditionality specifically affects all waged workers in the private or public sectors, and laws and regulations such as reductions in minimum wage, layoff conditions, pension reform, statutory working period, and collective bargaining rights, as well as vocational training and other supportive measures.⁵ It also includes privatization measures, as they relate to working life for public workers.

Labor conditionality closely interacts with labor mobility in borrowing countries. The Fund (2012) states that its labor conditionality is targeted towards efficient allocation of human resources and increasing their productive capacity. To this end, the IMF supports labor market flexibility such as reducing labor protection in order to allow the market forces to determine the optimum wage (IMF, 2012). The Fund's reasoning suggests that labor is infinitely mobile and can easily be employed wherever it is the most productive (Hiscox 2014). However, in real life, vocational and specialized training and associated benefits in different sectors and industries suggest that labor may not be easily mobile (Hiscox 2002). In fact, labor mobility greatly varies across countries. For instance, the average job tenure in Turkey and the U.S. was six years in

⁵ Labor conditionality of the IMF is mainly targeted at improving competitiveness of the economy (IMF, 2014). In order to improve competitiveness, measures often target reducing the unit labor cost and aim at deregulating and decentralizing the market (IMF, 2012). Hence, in labor conditionality, minimum wage and collective bargaining (similarly to determining the wage in particular industries) occupies a central place in addition to pension reform.

2002, which constituted the highest labor mobility among OECD countries (Chang 2014; OECD 2014). At the other extreme, the average time spent in the same job was fourteen years in Greece in 2002 (the lowest mobility among OECD countries) (ILO 2005). In between those extremes, countries such as Ireland, the Netherlands, and Finland had ten years of job tenure in 2002 (ILO 2005). In terms of strictness of job protection legislations, again Greece together with Spain and Portugal is found in the highest end among OECD countries, whereas the U.S., U.K., and Ireland are placed at the other extreme (low job protection) (OECD 2008).

When labor is immobile, that is, it cannot easily switch between jobs and industries, intrusive labor conditionality creates large-scale grievances among labor groups. Firstly, labor market flexibility facilitates entry and exit into jobs (IMF 2012). However, immobile workers become ‘trapped’ in their industries and vocations; it requires time and investment for those groups to switch into new jobs. Secondly, measures for labor market flexibility reduce labor benefits such as minimum wage, unemployment insurance, collective bargaining, and trade union rights. Thus, ‘trapped’ labor loses in absolute terms; current and prospective household income declines. As a result, labor conditionality combined with labor immobility creates large-scale opposition to the programs among the labor groups. In the counterfactual scenario, where labor is highly mobile, labor conditionality would not cause such grievances, as workers can easily switch into new sectors and jobs. Measures facilitating layoffs or diminishing collective bargaining rights would not garner such large-scale opposition, as wage differentials between jobs and industries would already be minimal, with low average job tenure and protection.

The following hypothesis emerges from the theoretical framework:

Hypothesis 1: Interaction between labor immobility and labor conditions increases the likelihood of political unrest in borrowing countries.

Two scope conditions for the application of the theory emerge from the analysis: (a) democratic and economic institutional development and (b) trade openness. The outlined theory can be applied only in contexts where there is a free-market economy and reasonably functioning

bureaucratic state apparatus. In centrally planned economies, interests and preferences of labor and welfare benefits as well as trends in labor mobility would be totally different compared to free market economies. The theory is applicable where individuals can choose where and how long they will work. Also, in countries where the state apparatus is virtually non-existent or does not extend beyond the capital city, the scope of IMF program and its implementation would be quite different. Failed states do not fulfill even the minimum conditions of the state organization (Holsti 1995) and hence cannot implement the programs. The second scope condition is trade openness. In open economies, governmental spending increases in order to compensate increased volatility in the job market (Cameron 1985; Rodrik 1995; Iversen 2001). When IMF programs introduce labor conditions, mobility as an adjustment tool becomes more crucial in open economies compared to closed ones due to higher risks.

Research Design

The study tests the theory using a latent class two-stage model for panel data. In the first stage, I look at the common characteristics of countries that concluded an IMF agreement in order to overcome the possibility of selection bias. Particularly, poor countries with contracting economies are likely to sign an agreement with the IMF (Vreeland 2003). Moreover, Pop-Eleches (2009, 2012) finds evidence that left-wing governments often opt out of programs when the economy is contracting. Hence, governmental ideology can create bias in entering into the IMF agreements. Finally, rising inflation might affect a government's decision to conclude an agreement (Pop-Eleches 2012). Such systematic commonality among borrowing countries might lead to selection bias in the sample. In the second stage, I look at the correlation between IMF labor conditionality and mobility, and political unrest accounting for the possibility of entering into IMF programs.

In the first stage of the analysis, using data from Dreher (2006)'s dataset, the binary IMF variable is the dependent variable, and the unit of analysis is country year. The IMF variable is coded as '1' if the country submitted at least one Letter of Intent in a particular year and '0'

otherwise. IMF programs include all non-concessional types of programs, namely Stand-by Arrangements (SBA), Extended Fund Facility (EFF), Structural Adjustment Facility (SAF), and Poverty Reduction and Growth Facility (PRGF) programs between 1970 and 2011. The first stage independent variables are common characteristics of countries that have signed an IMF agreement such as GDP per capita in current U.S. Dollars (poor countries), percentage change in GDP per capita in current U.S. Dollars (contracting economies), rising inflation (declining consumption power), development aid (a proxy variable for developing countries), Polity II scores (democratic development), left government (government ideology), elections (due to political cost of the programs), and recidivism (re-participation in programs). The data for all economic variables comes from the World Development Indicators (WDI) data set of the World Bank and from the Database for Political Institutions for the institutional variables.⁶

The second stage of the analysis looks at the impact of IMF labor conditionality and labor mobility on political unrest. The main dependent variable is political unrest. It is conceptualized as collective and antagonistic actions and is operationalized as the sum of number of riots, demonstrations, and strikes in a particular year. The data comes from Banks' (2012) dataset and covers the years between 1970 and 2010.⁷ The independent variables in the second stage are IMF labor conditionality and labor mobility. In particular, the interaction between labor immobility and labor conditionality reinforce each other and predict political unrest in borrowing countries. Hence, I look at the interaction term as well as the independent effect of each variable.⁸

Labor conditionality includes changes to employment protection legislation and collective labor law and bargaining, changes to minimum wages, other private sector wage

⁶ Operationalization of variables and data sources for the analysis are summarized in Appendix I.

⁷ The original Bank (2012) dataset covers the years between 1860 and 2010 for all independent states. For the purposes of consistency, I only take the years between 1970 and 2010 and synchronise it with the IMF programs dataset.

⁸ In the second stage of the analysis I also control for the relevant variables defined in the literature. For the description and the operationalization of control variables, please see Appendix II.

measures, public pension reforms, changes to employment benefits such as overtime premium, privatization, and other “labor market easing, decentralizing, deregulating and rationalization measures” (Caraway et al. 2012). Following Caraway et al. (2012) and Stone (2008), I measure conditionality depending on its attached significance in Letters of Intent. For example, performance criteria and prior actions are the conditions that must be completed before the next installment of the loan. Benchmarks and indicative targets are similarly binding. However, failure to meet them does not result in suspension of loans (Caraway et al. 2012). Accordingly, following Stone (2008) and Caraway et al. (2012), performance criteria and prior actions are the most stringent conditions and are given the highest value ‘4’ while benchmarks and indicative targets are weighted as ‘3’.

I operationalize the second independent variable, labor mobility, through cross-sectoral movement of workers. Hiscox and Rickard (2002) measure inter-industry reallocation by calculating annual changes in the number of employees in different industries and subtracting short-term volatility (i.e. retirement, parental leave, leaving the labor market or new entrants) from this measure. They turn this measure into a ratio by dividing the difference by the average number of employees in all industries for the two years. I repeat the same analysis for a global sample of countries using International Labor Organization (ILO) data. Moreover, I calculate the mobility rates not only for the manufacturing sector but also for all the sectors of the economy such as the service sector, retail and tourism, and agriculture. I call this measure ‘cross-sectoral mobility’.

The formula for cross-sectoral reallocation can be denoted as follows:

$$\text{Cross-sectoral mobility} = \frac{\sum | E_{i, t} - E_{i, t-z} | - |\sum E_{i, t} - \sum E_{i, t-z} |}{0.5 * (\sum E_{i, t} + \sum E_{i, t-z})}$$

E_i denotes the total number of employees in the industry ‘i’; ‘t’ denotes the year (2000, 2001 etc.); and ‘z’ stands for the number of years we want to calculate the inter-industry reallocation. For instance, if z is 1 and t is 2001, we calculate the movement between 2000 and 2001.

For example, in order to calculate cross-sectoral reallocation between 2001 and 2002, I subtract the number of employees and take the absolute value for all thirteen industries and sum the differences. I then calculate the difference between the total number of employees in all industries for 2001 and 2002. This second measure controls for the changes due to those entering to the job market or leaving it. I then extract these ‘natural’ movements in the labor market from the actual changes between the sectors (the first measure). I finally divide this measure by the average number of employees in these two years in order to get the ratio.

I use cross-sectoral reallocation for two reasons. Firstly, the manufacturing sector is often a small part of the economy, and labor not only switches jobs in between manufacturing industries but also moves in and out of different sectors. By looking at the movement across sectors, we can gain a better sense of the mobility level in a market. Secondly, cross-sectoral mobility distinguishes between causes and consequences of labor mobility in measurement. Iversen and Soksice (2001) defend using vocational training—specifically the percentage of young workers in secondary and post-secondary vocational training—and occupational classifications as a measure of labor immobility and asset specificity. However, vocational training and wage differentials are distinct causes of labor mobility, whereas resultant mobility is in fact a consequence. When there are significant wage differentials between industries, movement between industries might mean significant loss of income, hence discouraging labor mobility. Similarly, when vocational training is absent, workers would be unable to gain new skills that might have helped them to be relocated to different industries. In other words, wage differentials and vocational training define incentive structure for mobility. Cross-sectoral reallocation, on the other hand, directly observes the consequence instead of using the proxy variables, which might indeed measure motivations for or causes of mobility.⁹

⁹ Hall and Gingrich (2009) use the average job tenure and the percentage of workers who have been in their current jobs for less than a year as a measurement of labor mobility. This measurement similarly focus on the consequence of mobility rather than its causes such as vocational training or wage differentials. Nevertheless, data is limited to OECD countries, and is not available for a global sample. I do not use this measure because of data limitations.

I construct a cross-sectoral mobility data set by using International Labor Organization (ILO) labor force statistics. ILO gathers the number of employees in thirteen different industries from a global sample of governments. I calculate the mobility levels by using the above-mentioned formula for the sample countries. I exclude the official estimates for reliability purposes: those estimates might not reflect the actual changes in different sectors. I use ISIC 3 Review of the ILO wherever possible and complement the data with ISIC 2 Review when it is not available.¹⁰

In the following two-stage analysis, I firstly estimate the probability of a country being under an IMF program and receiving more than one condition in any particular year as a vector of GDP per capita, changes in its GDP per capita from the previous year (i.e. growth rate), the level of inflation, the amount of development aid it receives, its democratic development, whether its government is left-wing, whether there were elections in that year, and the number of previous programs (recidivism). There are two possible outcomes in the analysis:

Y_1 : If the country is under an IMF program in year t ;

Y_0 : If the country was not under an IMF program in year t .

In order to estimate the probability of an IMF program, I use logistic regression for panel data with fixed effects. The analysis looks at how changes in economic indicators and existing political institutions affect the probability of a country signing an IMF program.

In the second stage, I look at the determinants of political unrest and use zero-inflated negative binomial regression analysis clustered around countries with robust standard errors. Zero-inflated models account for high numbers of ‘zero’s in data in terms of unrest (hence skewed to the left) (Baltagi 2008). Negative binomial regression is well-fit for count dependent variable such as unrest (total number of strikes, protests, and riots). Finally, clustering option controls for country specific characteristics such as cultural and historical determinants of unrest.

¹⁰ ILO data can be viewed at: http://laborsta.ilo.org/data_topic_E.html.

Results

The results show that economic determinants such as the income level of a county (GDP per capita), rising inflation, and developing country status have very high predictive power for concluding an IMF program compared to institutional variables such as government ideology and elections (See Table 1 for the results of the first stage of the analysis). Surprisingly, among all the variables, economic crisis, or the decline in the gross domestic output, has the weakest effect on signing an IMF program. This is counter-intuitive, since it is often argued that countries with major economic distress conclude an IMF agreement. These findings support Vreeland (2003)'s argument that signing an IMF agreement is in fact more of a political decision than an economic necessity. Governments might enter into the programs in order to implement their reform agenda through an external anchor such as the IMF even in the absence of a deep macro-economic crisis (Vreeland 2003).

Economic variables such as income level, inflation, and development aid predict self-selection into programs. There is a negative correlation between economic development and IMF programs in general. As expected, rich countries are less likely to conclude an agreement. However, the substantive effect is very small: results only point in the direction of correlation. Increasing inflation makes a government less likely to go under an IMF program. This supports earlier findings of the literature. According to Pop-Eleches (2009), a rise in inflation makes left-wing governments less likely to conclude an agreement; since left-wing governments would interpret the causes of the crisis and hence solutions to it differently from the Fund. In fact, the reluctance to borrow from the Fund at higher levels of inflation is intuitive. When inflation is high, the political cost of implementing a program is higher, due to the mass electorate's decreasing consumption power. Finally, as expected, developing countries are more frequent

borrowers from the Fund. At higher levels of development aid from international institutions and bilateral agreements between countries, the likelihood of concluding an agreement rises.¹¹

Table 1: First Stage: Selection into IMF programs

Dependent variable: IMF

GDP per capita	-.000 (.000)***
Inflation	-.023 (0.006) ***
Development aid	.004 (.002) **
Polity2	.140 (.026) ***
Left government	-.397 (.230) *
Elections	-.254 (.145)*
Recidivism	.780 (.061)***
Number of observations	N=2,536

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

Institutional determinants, except for democratic regime, are less effective compared to economic indicators in a government's decision to conclude an agreement with the IMF. Within the sample, democracies are much more likely to conclude an agreement than autocracies. One unit increase in the 21-point democracy scale makes a government sixty-six per cent more likely to borrow from the Fund, presumably going under a similar level of economic distress. When tested with a binary 'democracy' variable —countries with a Polity II score of '2' or higher— the impact grows even bigger. A democratic country is almost ten times more likely to borrow from the Fund during an economic crisis at a constant level of inflation compared to a non-

¹¹ The random effects model gives very similar results. Statistical significance of variables does not change with slight changes in substantive effects.

democratic one. This can, however, be due to the bias in the sample. The IMF board might be more likely to approve the agreements granted to democratic countries and create a bias in terms of the type of borrowers (Stone 2008).

The statistical results are in line with the earlier studies that left-wing governments are less likely to borrow from the IMF, all else being equal (Pop-Eleches 2009). Elections in a particular year and number of earlier programs also affect a government's decision to enter a program. In election years, governments often shy away from the program. This can occur due to two reasons. Firstly, governments might try to avoid the political cost of the programs before the elections, with vote concerns in mind (Rickard and Caraway 2012). Secondly, IMF officials indicate that the Fund prefers to wait for the formation of a government with a fresh democratic mandate before starting negotiations since the agreement might be challenged by the new government in the post-elections period (Interview No.1). Finally, the existence of earlier programs —recidivism— increases the possibility of a new program. Countries that went under several programs in the past are more likely to conclude a new one.¹² This again supports the earlier findings of the literature that governments might sign an agreement in order to bypass opposition at home (Vreeland 2003).

In the second stage of the analysis, I investigate the factors that affect unrest within the IMF program countries. I carry the probability of a country to be under an IMF program to the second stage (predicted *imfhat* variable) and test for the individual and interactive effects of labor mobility and conditionality on political unrest. In the analysis I also control for other conditions that might generate political unrest, such as population density, poverty, democratic instability, inequality, left-wing government, and representative political institutions such as proportional representation. I conduct zero-inflated negative binomial regression by clustering countries in order to control for individual fixed effects. Table 2 reports the results of the analysis.

¹² Particular exceptions are Panama and Haiti, which concluded seventeen and sixteen programs between 1970 and 2010, respectively.

Table 2: Second Stage: Impact of Labor Mobility and Conditionality on Unrest

Dependent Variable: Unrest

Mobility	-1.318 (2.935)	.755 (3.056)	-.722 (3.096)	-5.190 (8.530)
Labor conditionality	.029 (.021)	.055 (.025)**	.045 (.028)	.034 (.024)
Mobility*Labor conditionality		-1.493 (.714)**	-1.729 (.726)**	-1.559 (.597)***
Democracy (Polity2)			-.070 (.017)***	-.044 (.037)
Trade			-.010 (.001)***	-.009 (.002)***
Logged GDP per capita				-.000 (.162)
Inflation				-.000 (.000)***
International Reserves				-.000 (.000)
Logged population				.107 (.156)
Hybrid regime				.551 (.459)
Inequality (Squared)				.000 (.000)***
Left-wing government				-.508 (.173)***
Proportional representation				-.758 (.354)**
Self-Selection into IMF				7.909 (3.983)**
Number of observations	N= 1018	N= 1018	N= 1001	N= 706

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

The results show that labor conditionality has a statistically strong individual effect on political unrest among IMF program countries. As the number of conditions (or levels of conditionality) increases, the likelihood of political unrest increases, all else equal. In other words, the results verify the hypothesis that there is a positive correlation between conditionality and unrest within the sample of IMF countries. When the IMF brings conditionality regarding the labor market, reactions become stronger against the programs. Labor mobility, on the other

hand, does not have a significant individual effect. Rather, it has a conditioning effect for the conditionality variable. A rigid labor market, in other words, does not necessarily create political unrest on its own. It is the sudden opening-up under the conditionality that creates tensions and ultimately causes unrest.

The interaction effect between labor mobility and labor conditionality is highly significant in predicting political unrest in program countries. At lower levels of mobility, the probability of labor conditionality generating political unrest increases. On the opposite end of the spectrum, at higher levels of mobility, labor conditionality is expected to have either less pronounced or no effect on political unrest. In a mobile labor market, IMF conditionality bringing measures such as cuts in minimum wages, hiring and firing flexibility, or changes to service contracts does not generate large-scale opposition. When there are changes to collective and individual rights in the job market under the conditionality, it is easier for mobile labor to move towards sectors and jobs that are less affected. On the opposite end, when labor is not mobile, such measures imply significant cuts in benefits and earnings for workers who do not have the skills or the ability to move across sectors. This leads to grievances from the immobile workers and hence, reactions to the programs.

Figure 1: Interactive Effect of Mobility and Labor Conditionality

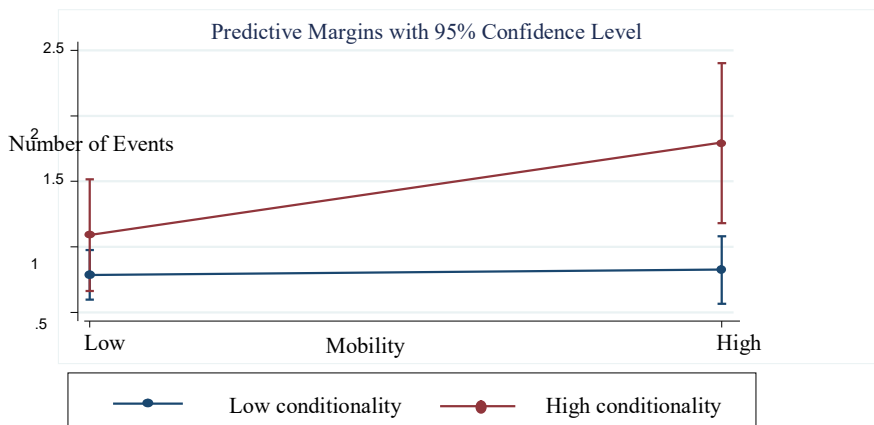


Figure 1 depicts the interactive impact via binary mobility and conditionality variables. In the graph, low mobility refers to the mobility level smaller than the mean in the sample (.025),

and high conditionality refers to conditionality higher than five conditions. At low levels of mobility, conditionality higher than the small number of five conditions has a substantial effect on unrest. When there is no conditionality, on the other hand, low mobility does not lead to unrest. The results indicate that as mobility gets smaller, the impact of labor conditionality on political unrest compounds. For countries with mobility level lower than the mean (.025), each labor condition creates an additional two events (strikes, demonstrations, riots) on average. The impact gets even more pronounced when other possible causes of unrest such as poverty, hybrid regime, and inequality, are controlled.

Unrest is negatively correlated with trade openness: political unrest declines as the volume of trade increases. This might be because mobility and trade openness reinforce each other. Where labor is mobile, it is more supportive of open trade policies (Hiscox 2002). When there is higher competition from abroad, labor also develops more flexibility. In countries where there is higher integration in the world economy, such as Ireland for instance, labor seems to gradually adjust to competition from abroad and develop more mobility. Some of the impact of mobility might be absorbed in trade.

Democracy also reduces unrest. Theoretically, in a democratic country, there will be channels to communicate preferences and to affect policy-making (Dahl 1979; Hegre et al. 2001). Representatives of interest groups mobilize their ties to the government and affect policies. In fact, the statistical results demonstrate the importance of democratic institutions, particularly, representation in ameliorating political unrest. Left-wing governments reduce the likelihood of political unrest, and the effect is statistically very significant. This can be attributed to the fact that left-wing governments might be more sensitive and receptive to labor interests. Hence, labor groups might observe that their interests are represented in negotiations and might be discouraged from taking street action or staging strikes. Similarly, proportional representation (PR) decreases the likelihood of political unrest. In PR electoral systems, multiple and plural

interests can be voiced as a result of elections, which might ameliorate tensions during the program implementation.

As predicted by the literature, hybrid regimes increase the likelihood of political unrest. Those grey regimes, located between democracy and authoritarianism, repress political representation in often arbitrary and unpredictable ways (Diamond 2002). Such unpredictability combined with genuine democratic participation opportunities such as parliaments, media, and judicial protection of human rights (Levitsky and Way 2008) increases the likelihood of unrest. These results should be interpreted with caution, however. Hybrid regimes are overly represented among developing countries, which might create bias towards this type of regimes in the sample.

Macroeconomic indicators, on the other hand, do not seem to affect political unrest as much as political variables. Poverty and economic crisis (measured by logged GDP per capita income), do not seem to directly affect political unrest under IMF programs. It seems that economic decline is not an immediate cause. In fact, strikes, protests, and riots might be political actions to protect interests rather than a reaction to economic decline. Interestingly enough, rising inequality does not immediately generate political unrest, either. This supports the thesis that IMF programs are external shocks to the existing systems and alter the interests of domestic actors. When labor interests are challenged under the program, groups mobilize to block the implementation. In other words, political unrest is not a consequence: it is a tool and a reaction against the programs. Similarly, one of the main findings of the earlier studies, that countries with higher populations are conflict prone, is not supported by the results. Although population is positively correlated with unrest, the association is not statistically significant among program countries.¹³

¹³ The analysis also included several regional dummies, which represent possible regional-level variables that are not represented by county fixed effects. See Appendix III for results including regional dummies.

The results of statistical tests demonstrate that when the labor market is immobile and rigid in a borrower country, IMF labor conditionality is likely to stir opposition and generate unrest. Unrest in this sense is a resistance tool against challenged interests by labor groups. The impact is more salient in democratic countries with less trade openness, due to blocked democratic representation and the compounding impact of an external opening up in the economy.

Heterogeneity of Results

While the global analysis depicts the overall relationship between labor conditionality and mobility and unrest, the contextual variables qualify this analysis.¹⁴ In this section, I re-run the model for countries with open and closed economies, hybrid regimes and full-fledged democracies, and for several regions such as Southern Europe, South, East, and West Asia, and Latin America.

Trade openness magnifies the impact of both labor mobility and conditionality. In open economies both factors have more potent impact compared to closed economies. In hybrid regimes, labor conditionality becomes an important predictor of unrest. Grievances generated by labor conditions are more likely to be expressed by unrest due to malfunctioning democratic institutions and flawed representation channels in hybrid regimes. The analysis also shows that mobility is a highly significant factor in subduing unrest in Latin American and Southern and Western Asian countries. In regions such as Southern Europe and East Asia, the impact of labor conditionality is higher. This might be due to predominant skill composition in the labor markets. Where low skilled workers constitute the majority and labor protection measures are absent or minimum, mobility becomes a more crucial tool of adjustment. The next section discusses each factor in detail.

¹⁴ The global analysis assumes that any increase in labor conditionality would result in the same level of unrest at a certain level of mobility. In other words, we assume 'unit homogeneity' (Holland 1986). However, some contextual variables might amplify or ameliorate the impact of the independent variables.

Trade openness

A country's trade openness amplifies the impact of both mobility and conditionality.¹⁵ Both variables have stronger effects on unrest in open economies compared to closed ones. Mobility reduces the likelihood of unrest, whereas labor conditionality is more likely to trigger unrest in open economies. In closed economies, we see that the impact decreases and loses its significance.

We can explain the amplified impact in open economies with the positive correlation between trade openness and the expansion of the welfare state (social spending) (Cameron, 1978; Katzenstein 1985; Rodrik 1995). Increased volume of trade makes a country more vulnerable to external shocks and compounds labor market volatility. Governmental spending increases to stabilize the economy in tandem with increased volume of trade (Rodrik 1995). Moreover, labor groups demand higher protection against the increased risks, and the governments often respond by providing greater welfare services in open economies (Iversen 2001). We can infer from this argument that immobile labor groups will be better protected in open economies against external shocks. In fact, Iversen (2001) finds evidence that welfare states expand to protect dislocated labor groups due to globalization and increased openness within those countries. Under IMF programs, however, this type of protection would not be available. Labor conditions bringing labor market flexibility would, therefore, have a bigger effect in already volatile labor market and generate greater opposition in an open economy.

¹⁵ I measure trade openness as the total sum of exports and imports as a ratio of GDP. The mean level of trade in the sample is 75.46. The minimum value is .308 and maximum is 531.74. In the distribution of the variable, there is a clear cut off point around the ratio 76. Therefore, I classify economies with a ratio above 76 as 'open economies' and under this value as 'closed economies'.

Table 3: Trade Openness and Unrest

Dependent Variable:	Open Economies	Closed Economies
Unrest		
Mobility	-11.909 (5.541)**	1.821 (3.626)
Labor conditionality	.098 (.028)***	.002 (.019)
Mobility*Labor conditionality	-1.573 (1.094)	-.940 (.800)
Self-selection to IMF programs	.213 (.494)	
Number of observations	N=469	N=545

*Standard errors in parentheses, * significant at 10%; ** significant at 5%; *** significant at 1%*

Table 3 shows that mobility has a statistically and substantially very significant negative effect on unrest. If we think of a spectrum of available reactions with ‘adaptation’ on the one end and ‘antagonistic reactions’ on the other, we can say that trade openness widens the spectrum. The mobile groups adapt to the changes more easily in open economies, whereas the risks and the loss of income and rights are greater for the immobile groups. Therefore, the impact of mobility is amplified in this wider range of available options. While mobile groups adjust more smoothly, immobile groups react against the programs more strongly. In closed economies, on the other hand, the spectrum is much narrower due to lower levels of volatility, hence the need for protection. Since the differences and adaptation costs are not as large between immobile and mobile groups, the reactions are accordingly subdued. In a similar vein, the impact of labor conditions is magnified in open economies. Since the labor groups are in greater need of security due to higher external volatility, the cuts in labor benefits and decentralization of the market have a greater adverse effect on them. We also see that the interactive effect of labor mobility and conditionality is closer to the original model (tested in the global sample) in open economies compared to closed ones.

Trade openness emerges as a contextual variable in the analysis. It does not trigger unrest on its own. Conversely, it reduces unrest when we control for other relevant factors such as the depth of the crisis and the availability of representative channels. It instead provides a context where mobility and conditionality operate. It interacts with and accentuates the impact of both variables. Whenever the economy is open, we can expect that volatility and sensitivity to external impacts of the IMF would increase.

Hybrid regimes

In hybrid regimes, labor conditions have a more disturbing impact compared to democratic regimes. Whereas mobility becomes a more significant factor in the distinction between open and closed economies, the impact of labor conditions is magnified in hybrid regimes compared to democratic ones. In the binary analysis, labor conditions become the only statistically significant factor that distinguish hybrid regimes and democratic countries.

We can explain this with the importance of democratic channels and representation in reducing unrest. Hybrid regimes in general restrict the participation of the opposition and implement restrictive measures that hinder a level playing field between the government and the opposition (Levitsky and Way 2010; Diamond 2002). The IMF programs place an additional strain on representation in those regimes. Under IMF programs, the democratic channels to reach out to the government are also hindered and cannot canalize the grievances, since decision-making shifts to the international level. Therefore, the reactions are more likely to be expressed through extra-democratic ways in hybrid regimes.

Table 4: Hybrid Regimes and Unrest

Dependent Variable:	Hybrid Regimes	Non-Hybrid Regimes
Unrest		
Mobility	3.550 (9.107)	1.106 (3.469)
Labor conditionality	.097 (.037)***	-.022 (.029)
Mobility*Labor conditionality	-1.091 (1.207)	-1.926 (1.143)*
Self-selection into IMF programs	1.749 (4.773)	-1.459 (2.032)
Number of observations	N=102	N=782

*Standard errors in parentheses, * significant at 10%; ** significant at 5%; *** significant at 1%*

Table 4 shows the compounded impact of labor conditions in hybrid regimes. The impact is positive and more substantial compared to the original model. We can explain this with the lack of democratic channels for the expression of grievances. In an immobile labor market, labor conditions generate grievances. Some of those grievances can be expressed if there is a left-wing government in power, and if the electoral system is proportional (see the global model). In hybrid regimes, on the other hand, participation and representation are more restricted.¹⁶ Extra-democratic and authoritarian practices aggregate the negative pressure on the democratic channels. Those pressures then translate into expression of grievances through extra-democratic ways and greater level of unrest.

¹⁶ The discussion on the scope and the tools of restricting participation of the opposition in hybrid regimes falls outside the subject matter of this thesis. Earlier studies found that those tools vary from case to case, albeit being uniformly directed towards tilting the playing field in favor of the government (Levitsky and Way 2010; Carothers 2004; Diamond 2002). Some examples of using the judiciary to start economic and political cases against opposition members by using judicial channels. Another one is denying the opposition members the venue for election campaigns and using state resources for campaigning in favor of the government. In some other cases, the opposition members might be violently intimidated from campaigning and/or voting. Media sources can be silenced or used for propaganda purposes for the government (Levitsky and Way 2010). Although practical tools and the extent of restriction on participation differ across cases, we can say that they are systematically used to exclude the opposition from capturing power via democratic means.

One caveat to be placed here is the small number of observations in the analysis. There are very small number of hybrid regimes in the data set (108 observations). The results in this study, therefore, may not be generalizable. However, there are robust earlier works that show that hybrid regimes are more vulnerable to violence compared to authoritarian or democratic regimes (Hegre et al. 2004). Hegre et al. (2004) explain that hybrid regimes have an internal contradiction. On the one hand, they provide some limited opportunities for participation and representation; on the other, they limit the participation by extra-democratic means such as abusing judicial power and violently intimidating opposition members. Those internal contradictions might be argued to make hybrid regimes more prone to unrest compared to democratic regimes.¹⁷

Regional models

Particular regions often share common cultural, historical, and economic traits. Those traits might amplify or ameliorate the impact of the independent variables. The results below show that we in fact see that the impact of labor conditions are accelerated in regions such as Southern Europe and East Asia. In regions such as Western and Southern Asia and Latin America, on the other hand, mobility becomes a more important factor in predicting unrest. We can explain this with the skill composition in their economies. Wherever low skilled workers constitute the majority of the work force, such as in Western and Southern Asia and Latin America, mobility becomes the crucial tool of adjustment against rising risks during the crisis. When high skilled workers dominate the economy, on the other hand, labor protection measures

¹⁷ It can be argued that hybrid regimes repress protests and provide less opportunities for mobilization by making collective action more costly. We then expect to see less unrest in those cases rather than more. The argument has merits. In cases where authoritarian practices exist and are often used by governments, collective mobilization might result in abuse of the members of the protesting groups. Turkey is one example, for instance, where protests were banned after the IMF program was signed in 2001. Further study on the causal mechanism and dynamics of protest in hybrid regimes might unearth the peculiar dynamics in hybrid regimes and how the choice between mobilization and acquiescence work. This study together with earlier studies finds empirical evidence that they are more vulnerable to unrest. However, due to its focus on IMF programs and unrest, it does not further discuss those dynamics.

become critical in coping with the impact of the crisis. When the IMF programs cut those security measures, labor groups are aggrieved and mobilize against the programs.

Table 5: Unrest in Southern Europe and East Asia

Dependent Variable:	Southern European Countries	Eastern Asian Countries
Unrest		
Mobility	6.482 (10.316)	9.804 (7.255)
Labor conditionality	.058 (.082)	.301 (.138)**
Mobility*Labor conditionality	-7.520 (5.540)	-20.911 (13.259)
Number of observations	N=108	N=107

*Standard errors in parentheses, * significant at 10%; ** significant at 5%; *** significant at 1%*

Table 5 depicts the analysis for Southern European and East Asian countries. The interactive impact of labor mobility and conditionality is highly strong and nearly statistically significant in both regions. Furthermore, labor conditionality becomes stronger in both regions compared to the global model. We can explain this with the ratio of low skilled to high skilled labor in their economies. High skilled labor often enjoys better job security and employment rights (Blau and Kahn 2011; King and Rueda 2008). They therefore react more strongly against decentralizing measures under IMF programs compared to low skilled labor groups. In fact, South Korea provides an example for the strong labor reactions. The labor conditions in the IMF program in 1997 generated large-scale ‘sit-in’s, protests, and strikes in the country (Caraway et al., 2012; Banks, 2012). Similarly, labor market decentralization measures generated extensive resistance and reactions from the labor groups in Greece.

A completely different process unfolds in Western Asian¹⁸ and Southern Asian¹⁹ countries and Latin America. In those regions, mobility becomes an extremely significant factor

¹⁸ Western Asian countries include Turkey, Iraq, Israel, and oil rich Gulf states such as Bahrain and Kuwait.

in subduing unrest, while labor conditionality loses its statistical and substantial significance.²⁰ We can explain the increased impact of mobility with the ratio of low skilled to high skilled labor in those economies. Those countries heavily rely on low skilled labor and overall have lower labor protection and welfare provision compared to more developed countries. Mobility therefore becomes an even more crucial coping mechanism in the absence of well-developed welfare schemes. Labor groups increase mobility away from affected sectors towards growing ones and hence maintain their previous income. Where this option is not available for low skilled worker groups, however, we expect extensive reactions against the programs. In a similar fashion to trade, an economy based on low skilled labor widens the spectrum on which mobility operates. Where there is high mobility, we see fewer reactions compared to the economies based on high skilled workers. Where mobility is low, we see bigger reactions than the ones predominantly based on high skilled economies.

Table 6: Unrest in Western and Southern Asia & Latin America

Dependent Variable: Unrest	Western Asian Countries	Southern Asian Countries	Latin American Countries
Mobility	-45.346 (13.113)***	-18.453 (6.983)***	-6.521 (5.863)
Labor conditionality	-.058 (.157)	-.244 (.115)**	-.073 (.055)
Mobility*Labor conditionality	.910 (2.927)	3.216 (1.434)**	.297 (1.832)
Number of observations	N=59	N=31	N=167

*Standard errors in parentheses, * significant at 10%; ** significant at 5%; *** significant at 1%*

¹⁹ Those countries are India, Pakistan, Afghanistan, Iran, Maldives, Bhutan, Sri Lanka, Indonesia, Malaysia, Myanmar, Thailand and Viet Nam.

²⁰ In fact, the sign of the variable changes to negative, although this is statistically not significant.

Table 6 reports the results for Western Asian, Southern Asian and Latin American countries. We see that the impact of mobility increases almost nine times compared to the original model in Western Asian countries. Labor conditions on the other hand loses its significance. This might be due to the absence of extensive labor protection measures in those countries. The IMF assigns labor conditions in order to reduce the unit labor cost and boost exports (IMF 2014). Since the unit labor costs are already very low in Western Asian countries, the impact of labor conditions is negligible and statistically insignificant.

Similarly, mobility is an extremely significant factor in predicting unrest in Southern Asian countries. When the impact of mobility is compared for two regions, however, we see that the effect is in fact reduced in Southern Asia. We can explain this with the relative importance of trade in the economies of two regions. The volume of trade as a percentage of GDP is almost the double in Western Asian countries compared to Southern Asian ones. The average trade openness (i.e. total sum of exports and imports as a percentage of GDP) is 89.42 in Western Asian countries, whereas it is 44.53 in Southern Asian countries. It can be argued that higher volumes of trade make Western Asian countries more vulnerable to external shocks and hence increase the significance of mobility as a coping mechanism during the crisis.

We see that mobility is highly significant in Latin America as well.²¹ However, the impact is again reduced compared to Western and Southern Asian countries. This can perhaps be explained by the reduced proportion of skilled to unskilled labor in Latin American countries. The impact of mobility closely follows the original model.

The global model depicts the correlation between mobility and labor conditionality and unrest. The results, however, demonstrate some heterogeneity. The above analysis shows that the interaction between mobility and conditionality is more significant for open economies compared to closed economies. Larger volumes of trade make a country more vulnerable to

²¹ Although the variable loses its statistical significance in the model, when we run the model with the relevant control variables such as volume of trade, democratic development, and the depth of crisis, we see that mobility becomes statistically and substantially more significant.

external shocks and give rise to greater labor protection (Iversen 2001). When IMF labor conditions cut this type of protection, risks become higher for the workers in open economies relative to closed ones. We therefore predict greater mobilization and antagonistic reactions in those economies. Secondly, labor conditions are more likely to trigger unrest in hybrid regimes compared to democratic ones. We can explain this with the absence or malfunctioning of representative channels in hybrid regimes. Although demands and grievances rising from the labor groups cannot be turned into policy under IMF programs due to the negotiations at the international level, democratic institutions can still canalize some of those grievances such as through left-wing governments and political parties in the Parliament. Arbitrary repression and defected democratic arrangements in hybrid regimes on the other hand might compound grievances and give rise to higher level of unrest. Finally, mobility becomes a more significant factor in predicting unrest in regions such as South and West Asia as well as Latin America, whereas labor conditions have greater impact compared to the original model in Southern Europe and East Asia. This might be attributed to predominant skill composition in their economies. Where the economy heavily relies on low skilled labor, mobility plays a greater role. Low skilled workers in temporary and precarious jobs rely more heavily on mobility to reduce risks and to adjust to the crisis. In more skilled economies, labor groups turn to labor protection measures for reducing the risks and react back more strongly against the labor conditions in IMF programs.

Robustness Tests

For robustness checks, I also test the theory through OLS with fixed effects and with panel-corrected standard errors (PCSE). These two models are linear models testing the association between the dependent and independent variables. I also report the results for Poisson regression for panel data with fixed effects (random effects models yield very similar results). This allows for checking against any bias created by zero-inflated models. Finally, I introduce time- and dynamic-effects into the model. Temporal and dynamic models control for

additional factors that are carried on by time or individual characteristics of cases that are not accounted for by zero-inflated models.

All four groups of models yield very similar results in terms of the direction of the relationship between mobility and labor conditionality and political unrest. Mobility has a reducing effect on unrest, whereas labor conditionality increases its likelihood. In alternative models as well, the interactive effect is stronger than the individual effects of either variable. However, substantive effects of independent variables vary across models depending on how the dependent variable, unrest, is treated. In pooled models, the independent effect of interaction is reduced. In this model, the dependent variable—unrest—is treated as a linear variable. The bias is likely to be due to the finite number of possibilities on the unrest variable, whereas OLS models treat the dependent variable with infinite possibilities. Similarly, in the Panel Corrected Standard Errors (PCSE) model, the statistical significance of the interaction and its substantive effect are reduced. This might result from the OLS regression model, where both independent and dependent variables are treated as continuous variables without particular sensitivity to ‘zero’s in the model.

Table 7: Alternative Models: OLS, PCSE and Poisson Models

Dependent Variable: Unrest	Model 1: OLS with Fixed Effects	Model2: Panel- Corrected Standard Errors	Model 3: Poisson Regression for Panel Data
Mobility	-2.364 (3.051)	.547 (3.705)	-3.054 (2.012)*
Labor conditionality	.023 (.013)*	.025 (.017)	.028 (.008)***
Mobility*Labor conditionality	-.546 (.383)	-.653 (.479)	-1.201 (.445)***
Imf6hat	-5.506 (2.141)***	.664 (3.046)	-5.434 (1.089)***
Number of observations	N=889	N=884	N=884

*N= 985, Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

The Poisson count model yields neater results and indicates a stronger impact, both for individual variables and the interactive effect. This can be attributed to the sensitivity of Poisson models for count variables. In this model, the independent effect of variables is weighed in accordance with the finite number of possibilities for the dependent variable, unrest. The results are very similar to the negative binomial model with reduced effect for the interaction term. This can be explained by the skewed nature of the dependent variable, which is accounted for by the zero-inflated negative binomial models.

Non-zero-inflated count models (negative binomial and Poisson models) also yield very similar results to the two-stage model. The substantive effects of the interaction between them closely follow the results in the two-stage latent class model. In terms of the individual effect of mobility, however, there is a significant difference between the negative binomial and Poisson models; the effect is stronger in the negative binomial model. This can again be explained by the insensitivity of the Poisson model to the distribution of the variables. Poisson models assume normal distribution both for the dependent and independent variables (Greene 2012), whereas negative binomial models relax this assumption and hence are more adaptive to non-normal distribution (Rabe-Hasketh and Skrondal 2008). In other words, the results of negative binomial model might be closer to the ‘true model’.

We can also specify the model by taking country-specific historical and cultural variables into account. Some countries might have a stronger tradition of street action outside of democratic politics (possibly as a way of affecting democratic politics in election intervals). In such cases, political unrest would be attributed to the country-specific traditions rather than the impact of IMF programs. In addition, social groups (including labor groups) might develop organizational capacity over time (Tarrow 1997; Tilly 2004). Tilly (2004) calls this ‘repertoire of action’ for the societal groups. Repertoire of action offsets the cost of collective action and facilitates re-organization, once a group is mobilized. For example, labor mobilization to block IMF programs might be facilitated by earlier organization and mobilization of groups

irrespective of conditionality within a program country. In order to control for such possible impact and to single out the interactive impact of mobility and conditionality, I test the theory in temporal and dynamic models with a lagged dependent variable. The dynamic model looks at how unrest changes once a country undergoes an IMF program. The temporal model looks at whether mobilization in a particular year conditions subsequent attempts for collective antagonistic action. I test for the impact with Poisson regression for count variables for panel data set, as it allows the inclusion of panel variables such as lagged time and dependent variable unlike zero-inflated models.²² Table 8 reports the results.

Table 8: Alternative Models: Temporal and Dynamic Effect Models

Dependent Variable: Unrest	Model 1: Dynamic (Lagged Dependent Variable) Model	Model2: Temporal (Time Control) Model
Mobility	-4.853 (2.065)**	-5.452 (2.115)***
Labor conditionality	.028 (.008)***	.026 (.008)***
Mobility*Labor conditionality	-1.110 (.451)**	-1.029 (.434)**
Lagged unrest	-.034 (.007)**	-
Imf6hat	-5.016 (1.088)***	-2.407 (1.230)**
Number of observations	N=883	N=884

*Standard errors in parentheses, * significant at 10%; ** significant at 5%; *** significant at 1%*

Mobility and interaction between mobility and conditionality yield significant results when time and country effects are controlled in the analysis confirming the original model. In fact, the impact of mobility becomes more significant in these models. It has a very significant substantive individual impact on unrest. Similarly, labor conditionality remains statistically

²² I do not use the negative binomial regression command for panel data (xtnbreg) as it is a relatively new command, and often authors warn against using it for the analysis of panel data (Baltai 2008). Baltagi (2008) recommends using 'xtmixed' and conducting a mixed effect regression instead. However, since the dependent variable is a count variable, Poisson might yield more accurate results. Moreover, it is the model that most closely follows the zero-inflated model.

significant with almost the same level of substantive effect. Their interactive effect remains the same, as well, confirming the hypothesis that labor conditionality would increase likelihood of unrest at lower levels of labor mobility.

In the dynamic model, the impact of mobility is increased compared to the original model. The dynamic model measures the impact of mobility and labor conditionality on the *change* in unrest (i.e. the change in the number of events) from the previous year. Compounded impact of mobility in the dynamic model supports the thesis that labor mobility is a coping strategy for the crisis. Wherever labor mobility does not synchronize with the decline in output, the likelihood of political unrest increases. If labor mobility follows the movement of the GDP per capita, workers would start switching away from sectors that are affected by crisis towards sectors that are still growing. This would increase mobility, and hence decrease political unrest. When the job market is more rigid, however, mobility is harder. This creates grievances, which then result in increased political unrest. The increased impact of mobility on the chance of political unrest verifies that mobility and grievances are closely related.

In the dynamic analysis, the lagged unrest variable is also significant. It implies that the level of unrest in the previous year predicts the number of strikes, riots, and demonstrations in the following one. This might yield support for the arguments that collective action is costly, and mobilization depends on earlier levels of organizational capacity. Alternatively, the impact might be due to accumulating impact of the IMF conditionality (as the programs often last around three years). Further research, particularly case studies on IMF program countries, can entangle the impact of labor mobility and conditionality and previous mobilization patterns of the labor groups.

Conclusion

In this article, I analyzed the impact of labor mobility and IMF conditionality on political unrest (i.e. protests, strikes, and riots). The model presented in the article predicts that labor conditions implemented in an immobile labor market lead to an increase in political unrest. IMF

labor conditions cause immobile labor groups to lose in terms of real and prospective benefits and income. As a result, they react against programs in order to block their implementation. Statistical analysis in a global sample of IMF program countries supports this thesis. The results remain robust when tested with alternative model specifications as well.

The article offers several contributions to the literature on the impact of IMF programs on political mobilization. In previous studies, scholars have argued that programs increase the likelihood of human rights violations and governmental instability due to the formation and mobilization of opposition. Studies provide several plausible yet untested explanations such as rising expectations under programs and ‘relative deprivation’. This article aims at providing a deeper understanding into causes behind the opposition and mobilization. It argues that labor conditions implemented under IMF programs challenges the interests of immobile labor. In an immobile labor market, labor is not as flexible to adjust to the conditions brought by the IMF program. Even when it does, it loses in real terms such as income and rights. In other words, it explains the link between IMF program and rising grievances and how they turn into unrest. Secondly, I believe this article is the first in the literature that recognizes the importance of labor mobility in shaping domestic preferences and reactions against programs. The impact of labor mobility on trade politics literature is well-known. This article is a first attempt to discuss its consequences in terms of the impact of an exogenous actor, i.e. the IMF. Finally, the article uses cross-sectoral mobility as a measure of labor mobility. Following earlier studies such as Hiscox and Rickard (2002), it argues that measurement of labor mobility in terms of actual movement instead of proxy variables such as vocational training and wage differentials would yield more accurate results.

This analysis offers a possible policy lesson in the design of IMF programs. In prospective programs, the Fund officials might pay closer attention to labor market development and particularly its mobility levels. Different adjustment strategies can be followed for more immobile sectors. Alternatively, immobile sectors might be compensated via upskilling and

training programs. Those programs might help replacement of redundant workers and facilitate mobility across sectors. Ultimately, they might contribute to more peaceful program implementation and quicker resumption of economic growth and political stability in borrowing countries.

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Appendix I: List of Variables, Operationalization, and Data Sources

Variable	Operationalization	Data Source
Unrest	Sum of number of demonstrations, strikes and riots in a particular year	Banks (2012) dataset
Strikes	Number of strikes	Banks (2012) dataset
Demonstrations	Number of demonstrations	Banks (2012) dataset
Riots	Number of riots	Banks (2012) dataset
Imf	'1' if an IMF program is signed in a particular year, '0' otherwise	Dreher (2006) IMF Dataset; IMF Official Website Letters of Intent
Imf6	'1' if there is at least one Letter of Intent in a particular year, '0' otherwise.	IMF Official Website Letters of Intent
Mobility	Cross-sectoral mobility across eighteen sectors	ILO Laborsta
Labor conditionality	Number of labor conditions in a particular Letter of Intent	IMF Official website, Letters of Intent
Total conditionality	Total number of conditions weighed depending on their stringency in a Letter of Intent	IMF Official website, Letter of Intents
GDP per capita	Gross Domestic Product	Banks (2012) dataset

	per capita	
Growth rate	Changes in GDP per capita income	World Bank World Development Indicators (WDI)
Inflation	Implicit GDP deflator (rate of price change in an economy)	World Bank World Development Indicators (WDI)
Current account balance	Sum of exports and primary and secondary income measured as a percentage of GDP	World Bank World Development Indicators (WDI)
Development aid	Official development aid received from international organizations as well as bilateral agreements	World Bank World Development Indicators (WDI)
Population	Log of population (in 1000s)	Banks (2012) dataset
Polity2	Democratic development on a scale from -10 to 10	Correlates of War Project
Hybrid regime	Polity2 score ranging from -5 to 5	Correlates of War Project
Elections	1 if there were elections in a particular year, 0 otherwise	National Elections Across Democracy and Autocracy (NELDA) Project
Inequality (squared)	Distribution of income	Salt (2010) Adjusted Inequality Dataset

Left government	1 if there is a left-wing government in office in a particular year, and 0 otherwise (center or right-wing government)	World Bank Database of Political Institutions (DPI)
Recidivism	Number of previously signed programs	Dreher (2006) IMF and World Bank Programs data set
Trade	Sum of exports and imports measured as a percentage of GDP	World Bank World Development Indicators (WDI)
Proportional representation	'1' if a country has proportional representation system, '0' otherwise.	World Bank Database of Political Institutions (DPI)
Labor power	Ratio of skilled labor to unskilled labor multiplied by the unemployment rate	Rudra (2002) potential labor power dataset
Labor rights	Collective labor rights (including freedom of assembly, right to strike, and collective bargaining rights)	Mosley and Uno (2007) Collective Labor Right dataset

Appendix II: Control Variables

Appendix III: Model Specification with Regional Dummies

Dependent Variable: Unrest

Mobility	.362 (3.290)	2.098 (3.325)	-.261 (3.188)	10.240 (8.530)
Labor conditionality	.034 (.020)*	.058 (.024)**	.020 (.018)	.308 (.122)**
Mobility*Labor conditionality		-1.543 (.728)**	-1.641 (.729)**	-16.765 (6.550)***
Polity2			-.111 (.024)***	-
Trade			-.010 (.001)***	-.007 (.002)**
Logged GDP per capita				-.045 (.147)
Current account balance				-.015 (.078)
Logged population				-.137 (.203)
Hybrid regime				1.006 (.442)**
Inequality				.005 (.085)
Left government				-.443 (.348)
Proportional representation				-1.411 (.465)***
Imf6hat				7.909 (3.983)**
Latin America				.779 (1.383)
Eastern Europe				-.437 (1.074)
South Asia				-.635 (.895)
East Asia (Pacific)				-.444 (1.734)
Sub-Saharan Africa				-20.160 (2.019)***
North Africa				-20.200 (1.474)***
Caribbean				-22.289 (1.915)***
Western Asia				2.152 (1.325)
Southern Europe				-.107 (.825)
Oceania				-.710 (.716)
Number of observations	N= 884	N= 884	N= 879	N=195

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