

# Winner Takes All?

## The Distributional Impact of IMF Privatization Conditionality

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### Abstract

Privatization of state-owned enterprises (SOEs) has been a defining feature of International Monetary Fund (IMF) programs since the 1980s. We investigate the distributive impact of IMF privatization conditions in the developing world. We theorize that privatization reduces the labor share of income by weakening labor's bargaining power through two channels: reducing labor's capacity to disrupt production, and reducing labor unions' ability to organize. We test our theory using a mixed-methods approach. We first trace the underlying causal mechanism of our argument through two typical case studies of IMF sponsored privatization in Pakistan and Turkey. To test the generalizability of our argument, we then employ regression analysis on all IMF programs from 1980 to 2015 and find that IMF privatization conditions have a negative effect on the national labor share of income.

**Keywords** IMF · conditionality · SOE privatization · labor share of income

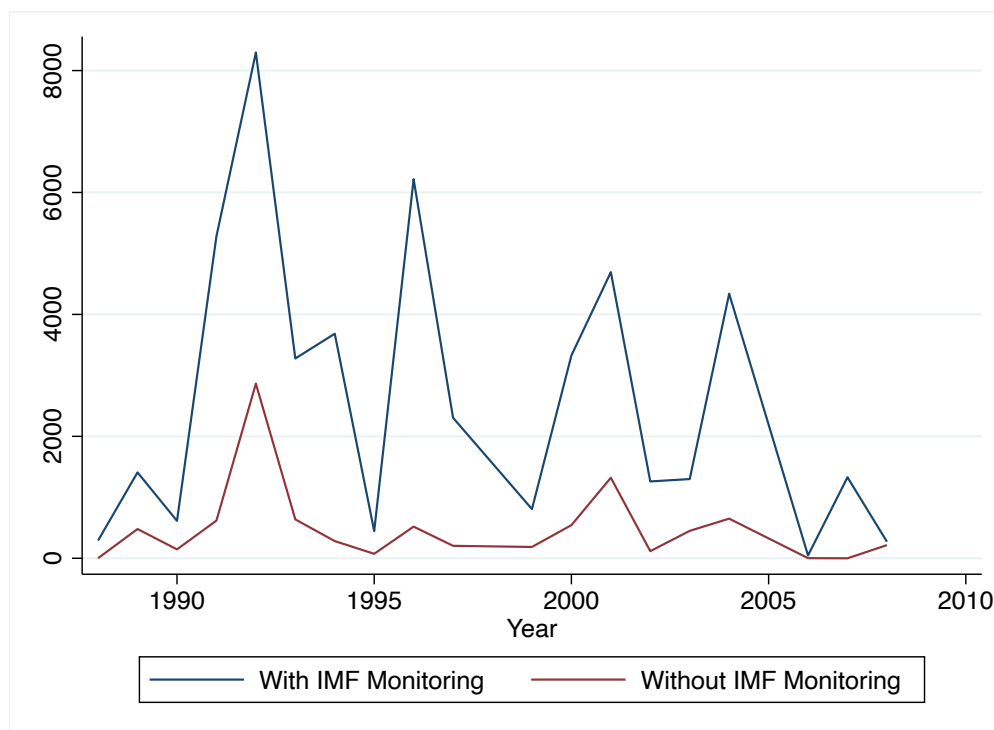
## Introduction

The privatization of state-owned enterprises (SOEs) has been a defining feature of IMF programs since the 1980s. Privatization is amongst the most significant, and also most politically contentious type of IMF conditionality as it not only requires changes in the institutional framework of the recipient country, but also leads to major structural changes in its economy through transferring ownership and control from public to private actors.

The IMF has been instrumental in promoting the spread of privatization reform across the developing world. As Figure 1 shows, the majority of privatizations were implemented as a condition of IMF programs. A key question that emerges in this context is the distributional impact of these IMF conditionalities in borrowing countries. Despite their role in precipitating major transformations in asset ownership, IMF privatization conditionalities remain understudied. In this paper we systematically investigate the impact of the IMF's privatization conditionalities on the functional distribution of income in borrowing countries.

We first probe the causal mechanisms at work through case studies of Pakistan and Turkey, two typical cases of IMF-sponsored privatization. The cases suggest that IMF conditionalities reduce the national labor share of income through weakening national labor power. Historically, state ownership tended to be higher in strategic sectors that had the potential to cause the most disruption to the economy in the event of a strike. Labor unions also tended to be strongest in large public sector firms, because the private sector tended to be dominated by smaller firms to which labor law did not apply. Privatization resulted in mass firings in these sectors, motivated by cutting the wage bill. Public sector unions were decimated, while the share of workers in highly disruptive industries was drastically reduced. This had knock on effects for the national labor movement through weakening its disruptive capacity and reducing labor union's ability to organize. A diminished labor movement was less able to bargain for wages, and opposite anti-labor policies, including further rounds of privatization. Consequently, this led to a sustained

Figure 1: Global privatization proceeds (in million USD) between 1988 and 2008



*Data Source:* IMF MONA Database and World Bank Privatization Database

decrease in the national labor share of income.

To test the generalizability of our two-stage argument that privatization reduces the labour share through these channels, we employ two-stage least squares (2SLS) models on a dataset including all IMF programs from 1980 to 2015. We find that IMF privatization conditions have a negative effect on labor share of income.

We contribute to a growing literature on the relationship between IMF programs and inequality by using a disaggregated approach to IMF conditionalities. This approach is better able to isolate the effects of privatization, a key mechanism through which IMF conditionality affects inequality, than studies that rely on aggregate data and do not disentangle the effects of various conditionalities. Despite its outsize distributional effects through transfers of asset ownership and control, privatization has so far been neglected in this literature.

We also contribute to literature on the distributional impacts of privatization through

highlighting a novel causal pathway through which privatization can increase inequality: labor power. While previous studies on the distributional impact of privatization in OECD countries find that privatization reduces labor share through job shedding, we find no direct unemployment effect. We attribute this to structural differences between OECD and developing countries. Developing countries tend to have large informal sectors which absorb excess labor, but still contribute to weakening labor power, as labor law tends not to cover informal sector workers. Furthermore, existing studies on how privatization effects the factor share of income focus on advanced economies, making this paper, to the best of our knowledge, the first study to systematically investigate the impacts of privatization on the labor share of income in the developing world.

In the following sections we review existing literature on IMF programs and inequality, and the distributional effects of privatization, and summarize our hypothesis. Next, we trace the causal mechanisms at play through country case studies. We then outline our data and empirical strategy. Finally, we discuss results and conclude by suggesting areas for further research.

## **IMF Programs and Inequality**

The IMF has emerged as a key influence on economic policy in developing countries since the 1980s. Consequently, examining the distributional effects of structural adjustment programs is vital for research on inequality in the developing world. Existing research generally finds that IMF programs have led to an increase in income inequality (Lang 2020; Forster et al. 2019). Inequality increases in program countries both compared to pre-program levels and non-program countries (Pastor 1987b; a), with labor bearing the burden of adjustment (Vreeland 2003). However, many of these studies use aggregated data on IMF conditions, making it difficult to disentangle the causal channels through which various IMF conditions increase inequality.

More recent studies on IMF lending have disaggregated conditionality by issue area, focusing on fiscal policy, trade and capital account liberalization, financial sector reforms, external debt restrictions and labor market conditions (Caraway et al. 2012; Rickard and Caraway 2014). Yet, the role of privatization conditions remains neglected: the only systematic study of IMF privatization conditions, to the best of our knowledge, examines their effect on corruption (Reinsberg et al. 2020).

Furthermore, existing studies tend to focus on income based indicators of inequality, such as the Gini coefficient or re-distributive indicators like welfare spending and outcomes. Nevertheless, recent landmark studies suggest that patterns of asset ownership are just as, if not more important, for inequality than income and redistributive measures, particularly as inequality at the upper end of the distribution tends to accrue from asset ownership rather than wage income (Piketty 2013). Given recent insights about the importance of asset ownership for inequality, the neglect of privatization conditions in existing literature is all the more salient, because a major consequence of privatization is change in the ownership and control of productive assets.

In order to gauge the distributional consequences of privatization, focusing on interpersonal income inequality and redistribution is insufficient because this may not fully capture inequality which results from changes in asset ownership. Following asset ownership transfers, firm profits no longer remain in the public sector, but become the property of private shareholders. Furthermore, production is likely to be organized differently after privatization, according to profit maximization rather than public interest or other objectives.

Instead, we examine the effect of privatization conditions on the national factor share of income. The factor share compares returns to the activity of labor, which remains the primary source of income for the vast majority of the population, with returns to capital ownership, which is a more important source of income for the wealthy. It gives a better aggregate picture of how the benefits and costs from asset transfers are distributed between

capital holders and workers (Rodriguez et al. 2010).

## **Distributional Effects of Privatization**

While a host of studies focus on the effects of privatization on firm level performance and efficiency, Estrin and Pelletier (2018) far fewer focus on its distributional impacts. There is a lack of consensus on the distributional effects of privatization, with earlier studies focusing on individual country cases having mixed findings (Birdsall and Nellis 2003).

On the one hand, privatization might increase the labor share of income. If as privatization results in labor being shed from low productivity SOEs and redeployed to higher productivity sectors, this could increase national employment and wages (Azmat et al. 2012). Similarly, if privatization increases firm profitability, and profits are redistributed to employees or reinvested, employment and wages might rise, even improving the employment generating potential of the economy as a whole (Vuylsteke 1988, World Bank 1995). For instance, Gupta (2011) finds that in India between 1989 to 2009, privatization increased employment significantly and was not associated with a declining wages. Privatization might also lead to product market deregulation, which reduces barriers to entry for new firms, increases product market competition, and thus increases labor share (Kalecki, Torrini 2005; Blanchard and Giavazzi 2003.).

On the other hand, privatization might reduce the labor share of income. In existing literature, the major channel through which this occurs is through job shedding in privatized firms. SOEs were historically used to absorb excess workers, which tended to decrease firm level profitability. As a result, one of the major consequences of privatization was firing of these excess workers. (Azmat et al. 2012) find that privatization in OECD countries has led to a decline in the labor share due to job shedding, even in cases where wages increased within privatized firms. According to (Azmat et al. 2012), privatization shifted the incentives of senior managers towards maximizing shareholder value and away

from broader public objectives such as job creation and protection, resulting in mass job shedding. Similarly, based on a survey of 308 privatized firms (covering 84 countries) over the period 1982 to 2000, (Lopez-de Silanes and Chong 2002) show that employment was reduced by 78 percent post-privatization. Mass unemployment might result in downward pressure not only in privatized firms and sectors, but also in those were already private, and in non-privatized public sector firms, reducing national labor shares.

While job shedding is undoubtedly important, we contend that this is only part of the story and focus on a distinct causal mechanism: the weakening of labor power.(Azmat et al. 2012) focus on privatization in OECD countries, but most of the developing countries that privatized under IMF conditionalities have distinct economic structures: namely, large informal sectors. The informal sector might absorb workers made unemployed by mass privatization, reducing the impact on aggregate unemployment.

In developing countries, labor bargaining power has historically been strongest in the public sector. SOEs normally operated or were established in the most strategically important sectors. Due to their economic importance, these sectors had the greatest potential to cause economic disruption in the event of a strike. Following privatization and mass job shedding, the share of workers in these higher disruptive capacity industries dramatically reduced.

As labor law tends not to apply to the informal sector, labor unions in developing countries were strongest in the formal sector, which historically tended to be state-owned. Unionization rates in the public sector tended to be higher than in the private and informal sector. Since privatization often resulted in the mass firing of unionized labor, key public sector unions in the most important sectors of the economy were dramatically weakened or in some cases even ceased to exist.

We expect that even if privatization does not increase aggregate levels of unemployment, privatization related job shedding from high union density and high disruptive capacity sectors should lead to a decline in labor power and therefore labor share of income.

Due to the historical importance of public sector workers for the strength of the national labor movement, we expect we expect to see these effects not only within the privatized firms and sectors, but also at the national level. Privatization could lead to a generalized decline in the strength of the national labor movement.

We expect these effects to persist in the long run. An initial weakening of the national labor movement could put further downward pressure on national labor share, as unions became too weak to fight against anti-labour policies, including further rounds of privatization.

We surmise the following hypotheses with respect to the channels through which IMF sponsored privatization could lead to a decline in the labor share:

*H1: Privatization reduces national labor share through weakening labor's disruptive capacity.*

*H2: Privatization reduces national labor share through reducing union density.*

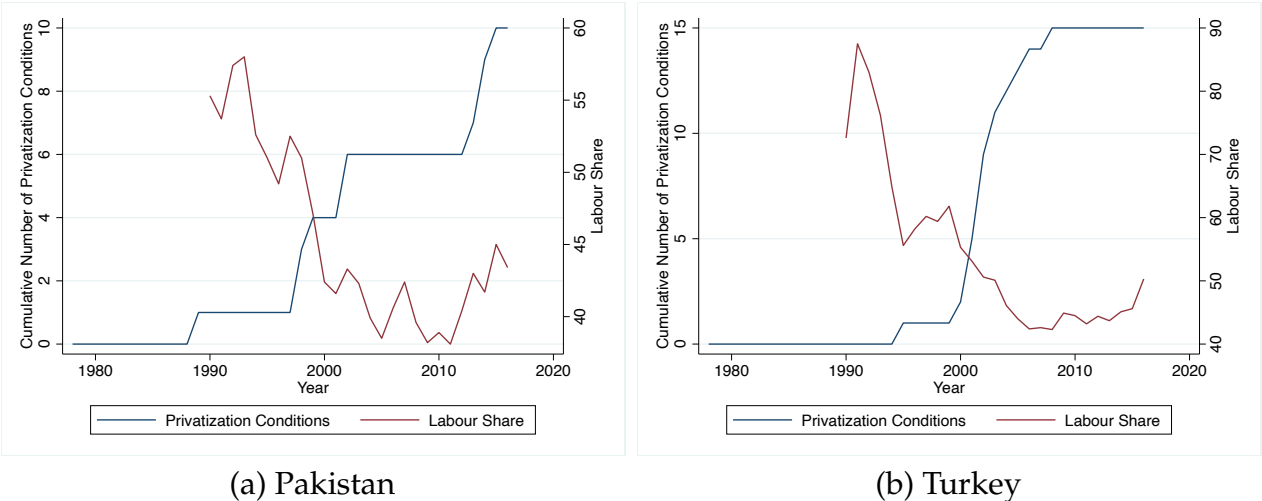
Before turning to the large-N analyses, we trace how the IMF's privatization conditions reduce labor's share of income by weakening labor power in two typical cases, Pakistan and Turkey.

## **Typical cases: Pakistan and Turkey**

Pakistan and Turkey have both implemented numerous IMF programs that required privatizing SOEs in strategic sectors. Turkey has been a member of the IMF since 1947, and signed 19 arrangements with the Fund. Although in 2009, Turkey made a decision to operate without the assistance and involvement of the IMF (Meltzer 2011), its long experience with the Fund is still illuminating for the time period under study. Pakistan has been a member of the IMF since 1950, and has entered into 23 arrangements to date.



Figure 2: IMF privatization conditions and labor share of income in Pakistan and Turkey



Data Source: IMF MONA Database and Conference Board

At the time of writing Pakistan is still borrowing from the IMF, with its latest arrangement dated July 2023. Although they have different economic fundamentals, both countries followed a similar route to privatizing SOEs under IMF monitoring, with privatization beginning at a slow pace through the 1980s, but gaining steam through the 1990 and early 2000s. Figure 2 graphs the number of privatization conditions attached to the IMF programs implemented in Pakistan and Turkey since 1980, and the labor share trend for both countries.

**Pakistan**

Privatization in Pakistan began in earnest the 1990s, when the IMF began including privatization conditions in its programs (International Monetary Fund 2019). Prior to this, although the military Zia-Ul-Haq regime had announced a privatization programme after seizing power in 1978, privatization remained limited to a few small agro-processing units and hotels. IMF sponsored privatizations continued throughout the late 1990s and 2000s, regardless of whether centre-left, pro-business, or military governments were in power.

Over the course of the 1990s and 2000s, SOEs in sectors that formed the industrial

backbone of the economy were privatized under IMF and World Bank conditionality. These included large formal sector firms in energy, automobiles, cement, chemicals, engineering, fertilizers, banking, and telecommunications. Major SOEs that were privatized included National Refinery Limited and Karachi Electric Supply Corporation in the energy sector, Habib Bank Limited and United Bank Limited in banking, Pakistan Telecommunications Corporation Limited in telecommunications, Pak-American Fertilizers, Javedan Cement Company Limited and Millat Tractors Limited <sup>1</sup>.

Unionization rates were highest in these large formal public sector firms. These public sector jobs were permanent, secure, and better paid, with all the attendant benefits such as paid leave (Munir et al. 2015). Given that one of the key criticisms of SOEs prior to privatization was overstaffing, significant job shedding occurred across sectors as a result of privatization. Between 1991 and 1998, employment in public sector corporations was halved (Sayeed 2006).

Although public sector unions in some sectors managed to put up resistance and extract better terms, they were ultimately unable to prevent privatization except in selected sectors like airlines (Munir et al. 2015). In 1990 union representatives from 115 public sector units scheduled for privatization negotiated an agreement with the federal government. Firms were bound by law to provide workers the option of retaining their jobs for at least one year after privatization, leaving with a generous severance package, or purchasing the enterprise using retirement funds and bank loans (Candland 1999). Although this led to more generous terms for laid off workers, it also smoothed the path to increased job shedding (Naqvi and Kemal 1994, p. 184).

In some cases firms were rationalised by reducing the labour force while still under state ownership, to make the units more attractive to buyers in preparation for sale. In 2001 the World Bank extended a 450mn USD Banking Sector Adjustment Loan which provided funding for voluntary severance schemes in commercial banks designated for privatization.

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<sup>1</sup><http://www.privatisation.gov.pk/Detail/NTU0ZjE1NGQtNmYzNC00NWZjLWl1xZTEtYWZmMzZlYzFhNzk4>

Reducing the wage bill was "seen as a necessary condition to their privatization to reputable investors" (World Bank 2001). In others, the new private sector management fired workers in order to reduce costs and boost profits. For instance, following privatization, the new management of Pakistan Telecommunication Corporation Ltd (PTCL) reduced the workforce from 57,000 to 27,000 using voluntary severance schemes. Similarly, the SOE Millat Tractors that had 830 employees at the time of privatization, approximately 250 employees were laid off through a golden handshake offer (Bhowmik 1995, p.932).

Jobs were also permanently lost when privatized units were shut down. For instance, buyers of many privatized engineering units did not have the know how to effectively maintain the enterprises they had purchased, leading to closure. In other cases buyers bought SOEs not with the intention of managing them, but of selling off assets such as real estate and machinery in order to make a fast profit (Pervez 1995).

Privatized firms also began to fire and re-hire workers on a contract rather than permanent basis through subcontractors in order to cut costs and to prevent workers from re-unionizing. Because subcontracting firms typically employed fewer than ten workers they were not subject to formal labor law (Munir et al. 2015). Post-privatization, a typical large factory, tended to hire up to 85 percent of workers through as many as twenty different subcontractors (Munir et al. 2015). (Naqvi and Kemal 1994, p. 202) estimate that 40 percent of employees in privatized firms had previously been fired and re-hired.

In addition to directly reducing labour's share of income within privatized firms and sectors due to reduced wage bills, job shedding also weakened unions and their bargaining power over future wages and working conditions.

Mass firing of unionized workers meant that their unions often ceased to exist. For example, prior to privatization Millat Tractors had two unions. All workers opting for golden handshakes came from one of those unions. Following the departure of these workers, the union ceased to exist, and only one union remained (Bhowmik 1995, p.932). In addition to reducing the number of unions and union membership, privatization also

deterred union activity in industrial disputes. Newly appointed private management often targeted unionized workers for firing.

Increased informalization as the result of fire and rehire tactics further weakened the labour movement. While Pakistani labour law afforded formal workers some protection, an informal worker could be fired without reason or serving notice (Ahmed, Noman 2020). As informal workers were easily replaceable they were afraid of losing their jobs and less likely to engage in collective action (Handayani 2016, p.240)

As a result, privatization served to weaken trade unions not only at firm and sector level but also the national level. By virtue of the fact that historically public sector unions were the strongest, the elimination of these unions meant that mainly weaker private sector unions remained, having knock on effects for the ability of the trade union movement to negotiate on national labor regulations.

## **Turkey**

Like in Pakistan, although privatization had already been on the agenda since the 1980s (Yalman 2009; Onis 2009), it was not until the 2000s, when the IMF began including privatization conditions in its programs that privatization began in earnest in Turkey.

Over the course of the 2000s, five of the largest SOEs that had been on the privatization agenda since the 1980s were privatized one by one. These highly profitable SOEs were in strategic sectors, namely Türk Telekomünikasyon A.Ş., (TTAŞ) in telecommunications, Petrol Ofisi A.Ş., (POAŞ), Turkish Petroleum Refineries Corporation, (TÜPRAŞ) Petrochemical Holding A.Ş., (PETKİM) in petroleum , and Ereğli Demir ve Çelik Fabrikaları T.A.Ş, (ERDEMİR) in steel (Angın and Bedirhanoğlu 2012)

Despite the expectation that privatizations would lead to an increase in firm profitability, which would trickle down to workers, Cengiz (2018) shows that the effects of privatization on employment, real sales, and profit were negative at the aggregate level. Not only did the size of the overall pie shrink, but an even greater portion went to capital as

workers jobs were shed as a result of privatization. According to the Istanbul Chamber of Independent Public Accountants (ISMMMO), 22,000 individuals became unemployed as a direct result of privatizations that occurred between 1986 and 2006 (ISMMMO, 2010, p. 369). In a study of the cement sector, Ozmucur (1998) finds that following a change in ownership employment decreased by 15.5 percent in privatized firms compared to 7.8 percent in private firms. At the firm level, Simga-Mugan and Yuce (2003) find that two years after privatization, privatized companies operated with approximately two thirds of the workforce that was employed before privatization (p. 105). This is supported by Cengiz (2018), who finds that the privatization process in Turkey has directly produced a sixty-five percent decline in the “firm-level workforce” (p. 700).

These figures for job shedding after privatization are likely underestimates as dismissals often took place in while still under state ownership in order to make the enterprise attractive for sale (Ozmucur 1998). The Turkish Privatization Authority pre-emptively dismissed workers as it was assumed buyers would be reluctant to purchase firms with perceived labour problems (Buyukuslu 1995).

In addition, employment after privatization was less formal and secure than employment in state-owned enterprises. Dismissed workers were often rehired at other private sector firms with worse working conditions. Wages tended to be lower, for instance, cement workers lost an average of 61 percent and Petkim workers 57 percent of their pre-dismissal earnings (Tansel 1997). Dismissed workers lost not only wages but also in kind benefits. While almost all of the workers reported subsidized lunch, transportation, heating fuel and child support provided as benefits of their jobs in the state-sector, more than half of dismissed workers did not receive simialr benefits at their new places of employment (Tansel 1997, p.637).

Not all workers were lucky enough to find formal re-employment following privatization. The share of subcontract labor increased dramatically in privatized plants immediately after their privatization (Saygili and Taymaz 1996, p.592). This was facilitated by

legal changes. Law 4-C enabled the transfer of redundant employees to other government departments, where they were usually employed on a contractual or temporary basis (Kayaalp 2014). For instance, under this law state tobacco company (TEKEL) workers were entitled to only one third the wage they were previously paid (Önis 2011). Dismissed workers were also replaced with informal workers or the employees of sub-contracting firms (Buyukuslu 1995). This served to weaken union membership and worker protections as these workers' rights to unionize were not covered by law (Buyukuslu 1995).

Like in Pakistan, job shedding in former SOEs decimated historically strong public sector labour unions. In many cases, unionized workers were deliberately targeted for dismissal. For instance after energy SOE IPRAĞAZ was sold off to a French company in 1992, within five years all unionized workers were dismissed, and the company became union-free (Buyukuslu 1995). The result was a significant reduction in unionization rates in privatized entities. According to Tansel, the union membership rate was 97 percent for cement workers and 87 percent for petrochemical workers under state ownership. After privatization induced dismissals, "union membership was nil" (Tansel 1997, p. 6).

Management's targeting of union members for dismissal discouraged the formation of new unions as workers feared retaliation Cam 1999, 705. New private sector management often took a hostile approach to labour relations. Anti-union tactics frequently used by private management included annulling the collective bargaining authority of unions, refusing to attend collective bargaining sessions, and preventing the functioning of arbitration and strikes. If workers objected to these measures, the matter would go to court and take years to be finalised, in which time the unions would lose a large number, if not all, of their membership (Toksöz 2008, p.61-62). This dissuaded remaining unions from organizing against privatization and in favour of better working conditions (Yücesan-Özdemir and Özdemir 2007, p.464). Between 1980 and 2005 alone, national union membership declined by one third (Ercan 2007). According to Ministry of Labour figures, the percentage of workers covered by collective bargaining declined from 44.6 percent in 1988 to only 11.7

percent in 2005 (Yücesan-Özdemir and Özdemir 2007, p.464).

## **Research Design**

To test the generalizability of our hypothesis that IMF privatization conditionalities reduce the labor share of income by weakening labor power, in a large-N setting, we build a country-year panel dataset including all IMF privatization conditions from 1980 to 2015.

## **Dependent Variables**

Our dependent variable is the labor share of income, a ratio that indicates the division of national income between labor and capital. For reasons mentioned above, this measure of the functional distribution of income has advantages over interpersonal income when looking at the effects of changes in ownership patterns. We define labor share as wages divided by value added, the most widely used measure in the literature (Karabarbounis and Neiman 2013; Guerriero 2019; Rodrik 1999; Jayadev 2007). The capital share of national income is simply the inverse of the labor share. The data is available from OECD.

## **Independent Variables**

We use two measures to capture different forms of labor power, the underlying capacities of labor to bargain for larger shares of firm or sector profits. First, we use the disruptive capacity index from Usmani (2018) to proxy for labor power. The intuition is that labor's power depends on its ability to disrupt economic activity in the event of a strike. Disruptive ability varies across sectors. The greater the percentage of workers that are employed in high disruptive capacity sectors, the greater national labor power. Disruptive capacity is defined as the number of workers employed in manufacturing, mining, construction, or transport, all considered high disruptive capacity sectors, divided by the total working age population. We also use union density from the ILO, which captures labor's capacity

for organization and mobilization. Our unemployment measure comes from World Bank data.

## **Instrumental variables**

We operationalize the IMF privatization conditions variable by aggregating the number of privatization-related conditions for each IMF program within a given year. When a country is subject to multiple lending arrangements approved simultaneously, these are treated as a single program for our analysis. In contrast, arrangements approved separately are counted as distinct observations to reflect the specific economic context and policy implications of each approval. We use a 3-year lag since a borrowing country usually takes 3 years to implement a program. We utilize Kentikelenis et al. (2016) data, which contains observations for each policy condition across all IMF borrowing countries.

Because implementation of IMF conditionality is not guaranteed, as a robustness check we also take into account actual privatization revenues (in million USD normalized by GDP) instead of IMF privatization condition numbers in a separate set of regressions. This variable represents the size of privatization programs relative to the size of the economy. The data is from the World Bank, obtained from Estrin and Pelletier (2018)).

## **Controls**

Our models control for factors plausibly associated with labor share of income. Previous research shows that technological change, economic integration/globalization, and economic growth influence the labor share (Hutchinson and Persyn 2012). Therefore we use percentage change in total factor productivity (from Conference Board data), capital account openness (from Chinn and Ito (2006)) , trade Globalization Index (from KOF), and GDP growth (using World Bank Data), as controls.

We also control for the existence of an IMF program with a dummy variable to distin-



guish the cases where a country had no privatization condition under an IMF program from those who had no IMF program at all in a given year.

## **Modelling strategy**

We model this data in a 2SLS model. 2SLS has previously been used in research on IMF interventions to disentangle the causal effects of IMF programs from other confounding variables (Barro and Lee 2005; Lang 2020). The core principle behind this approach is to use instrumental variables (IV) that can predict the potentially endogenous explanatory variable but are uncorrelated with the error term of the outcome variable. We posit that IMF privatization conditions are a potent instrument. While these conditions are good predictors for changes in structural policies like privatization, which can subsequently affect the labor share of income, they are plausibly exogenous to other unobserved determinants of labor share. By deploying the 2SLS method, we aim to isolate the causal impact of privatization on labor's share of income, correcting for potential endogeneity biases that might arise from omitted variables or reverse causality.

The 2SLS method not only addresses endogeneity concerns, but helps unpack the indirect pathways through which IMF programs may exert influence. The method fits well with the two-stage nature of our hypothesis that IMF privatization conditions may reduce the labor share of income via reducing labor power.

### **First Stage: Predicting Share of Workers in High Capacity Industries using IMF Privatization Conditions as the instrument**

$$\text{Share of Workers in High Capacity Industries}_{it} = \phi + \theta \times \text{IMF Privatization Conditions}_{it} + \lambda \times \text{Controls}_{it} + \mu_{it}$$

### **Second Stage: Predicting Labor Share of Income using the predicted Share of Workers from the first stage**

$$\text{Labor Share of Income}_{it} = \delta + \xi \times \widehat{\text{Share of Workers in High Capacity Industries}}_{it} + \pi \times \text{Controls}_{it} + \nu_{it}$$

Where:

- $\phi$  Constant or intercept term in the first stage. Expected value of the "Share of Workers in High Capacity Industries" when all independent variables (including the instrument) are zero.
- $\theta$  Coefficient of the instrumental variable (IMF Privatization Conditions) in the first stage. Effect of a one-unit increase in the IMF Privatization Conditions on the "Share of Workers in High Capacity Industries".
- $\lambda$  Vector of coefficients for the control variables in the first stage.
- $\delta$  Constant or intercept term in the second stage. Expected value of the "Labor Share of Income" when all independent variables (including the endogenous predictor) are zero.
- $\xi$  Coefficient of the endogenous variable (Share of Workers in High Capacity Industries) in the second stage after it has been instrumented using the predicted values from the first stage. It captures the causal effect of a one-unit increase in the "Share of Workers in High Capacity Industries" on the "Labor Share of Income", after accounting for potential endogeneity.
- $\pi$  Vector of coefficients for the control variables in the second stage.
- $\mu$  Error term for the first stage. Captures unobserved factors affecting the "Share of Workers in High Capacity Industries".
- $\nu$  Error term for the second stage. Captures unobserved factors affecting the "Labor Share of Income".

## Results

Table 1 provides 2SLS estimates for the relationship between labor share and IMF privatization conditions through labor power. The first stage of the 2SLS predicts the values of the endogenous independent variable (disruptive capacity) using this instrument (IMF privatization conditionalities). The second stage then uses these predicted values to estimate the relationship with the dependent variable, the labor share of income. The vector of controls include IMF labor-market conditions, % GDP growth, Chinn Ito Index, KOF Trade Globalization Index and % Growth of total factor productivity.

The first stage results reported in Table 1 demonstrate that the instrument is relevant. The first-stage IV enters with a positive coefficient that is statistically significant. The results are robust across specifications including control variables. This supports the argument that the identification strategy is able to isolate quasi-exogenous variation.

The second-stage results reported in Table 1 show that IMF privatization conditions, on average, decrease the labor share of income. The coefficient is negative and statistically significant across specifications with (models 2-7) and without (model 1) control variables.

We interpret these results as evidence to support H1, that privatization of SOEs as a result of IMF conditionalities reduces labor's national income share by weakening labor's disruptive capacity.

In order to address concerns about non-implementation of IMF conditions, we repeat the analyses using privatization revenue in million USD normalized by GDP as the instrumental variable instead of the number of IMF privatization conditions. The first-stage results in Table 2 demonstrate that the instrument is relevant. The second stage results show that privatization, on average, decreases the labor share of income. The coefficient is negative and statistically significant across various model specifications with and without control variables. We interpret these results as further evidence to support H1.

Next, we run 2SLS estimates using union density as the endogenous variable instead of disruptive capacity, in order to test H2, that privatization reduces labor share by weakening

labor unions. The first-stage results in Table 3, demonstrate that our instrument is valid. The second stage results show that IMF privatization conditions, on average, decrease the labor share of income. The coefficient is negative and statistically significant across various model specifications with and without control variables.

We interpret these results as evidence to support our hypothesis that privatization reduces the labor share of income through two distinct but related channels. Privatization weakens labor's disruptive capacity which in turn weakens the national labor share of income. Privatization also weakens labor unions, which in turn weakens the national labor share of income.

In Table 10 (shown in the Appendix), we run 2SLS estimates in order to check whether IMF privatization conditions reduce the labor share through unemployment growth as predicted by the literature, and find that there is no significance. In Table 11 (shown in the Appendix), we repeat the analyses using privatization revenue as the instrumental variable find no significance. We suspect that unlike in the developed world, in developing countries, privatization does not reduce the labor share of income by increasing aggregate unemployment because the informal sector absorbs excess labor. In a developing country context, the labor power channels are more important in influencing labor share of income than aggregate unemployment levels.

Finally, in Table 4 and 5 in the appendix, we repeat the analyses in Table 1 and 3 using IMF conditions on privatization in year  $t$  with no-lag as the instrument instead of using IMF conditions with a three year lag. We find that there is no significance. We interpret this as evidence that once the IMF imposes privatization conditions on a borrowing country, the effects on national labor share are not immediate. These effects take about three years to materialize.

Table 1: Conditionality Highcapratio: Two-way Fixed Effect 2SLS Regressions for Labor Share

<i>Dependent variable: Labor share of income (second-stage results)</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Share of Workers in High Capacity Industries	-0.156* (0.080)	-0.049** (0.019)	-0.126*** (0.040)	-0.130** (0.063)	-0.114** (0.048)	-0.110** (0.049)	-0.122** (0.050)	-0.032* (0.018)
IMF Conditions on Labor Market (t-3)			-0.006 (0.012)	-0.007 (0.015)	-0.005 (0.013)	-0.005 (0.013)	-0.006 (0.014)	
IMF Conditions on Labor Market (t-5)								-0.003 (0.004)
Chinn Ito Index				-0.002 (0.038)	0.018 (0.028)	0.017 (0.026)	0.008 (0.034)	0.015 (0.012)
KOF Trade Globalization Index					-0.007 (0.004)	-0.007 (0.004)	-0.004 (0.003)	-0.001 (0.001)
% GDP Growth					0.167 (0.108)	0.167 (0.108)	0.352** (0.162)	0.128** (0.053)
% Growth of Total Factor Productivity							-0.013** (0.007)	-0.004** (0.002)
Constant	2.923*** (0.757)	1.905*** (0.184)	2.642*** (0.379)	2.665*** (0.506)	2.904*** (0.573)	2.867*** (0.584)	4.016*** (1.457)	1.394*** (0.535)
N	460	460	460	453	453	453	412	412
<i>Dependent variable: Share of workers in high capacity industries (first-stage results)</i>								
IMF Conditions on Privatization (t-3)	0.120*** (0.039)		0.171** (0.074)	0.157** (0.069)	0.177*** (0.065)	0.183** (0.070)	0.168** (0.075)	
IMF Conditions on Privatization (t-5)		0.247** (0.114)						0.272** (0.115)
IMF Conditions on Labor Market (t-3)			-0.081 (0.099)	-0.085 (0.099)	-0.081 (0.102)	-0.080 (0.102)	-0.076 (0.112)	
IMF Conditions on Labor Market (t-5)								-0.006 (0.084)
Chinn Ito Index				-0.082 (0.313)	0.071 (0.318)	0.064 (0.316)	-0.003 (0.328)	-0.016 (0.298)
KOF Trade Globalization Index					-0.055** (0.027)	-0.055** (0.027)	-0.029 (0.021)	-0.028 (0.022)
% GDP Growth					1.278 (0.949)	1.278 (0.949)	2.528*** (0.882)	2.634*** (0.867)
% Growth of Total Factor Productivity							-0.101*** (0.036)	-0.102*** (0.034)
Constant	9.436*** (0.156)	9.417*** (0.154)	9.479*** (0.159)	9.195*** (0.999)	12.296*** (1.714)	12.420*** (1.742)	29.819*** (0.949)	30.132*** (0.805)
N	460	460	460	453	453	453	412	412
R <sup>2</sup>	0.321	0.329	0.324	0.321	0.363	0.370	0.405	0.414

Notes: These estimates are from 2SLS regression. The dependent variable is the labor share of income of borrowing country  $j$  in year  $t$ . The instrument variable is the number of IMF conditionalities on privatization of the borrowing country  $j$  in year  $t - 3$  for (2)nd to (7)th column whereas it is in year  $t - 5$  for the (1)st and (8)th column. All independent variables pertain to borrowing country  $j$  in year  $t$  unless a lag variable is used. Year and country fixed effects are included in all models. Standard errors are clustered on borrowing country  $j$  and are shown in parentheses. \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$

Table 2: Actualization Highcapratio: Two-way Fixed Effect 2SLS Regressions for Labor Share

<i>Dependent variable: Labor share of income (second-stage results)</i>							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Share of Workers in High Capacity Industries	-0.046** (0.021)	-0.045** (0.020)	-0.044* (0.023)	-0.048** (0.020)	-0.050*** (0.019)	-0.048*** (0.018)	-0.044*** (0.014)
IMF Dummy		0.010 (0.027)	0.008 (0.024)	0.010 (0.023)	0.007 (0.022)	0.009 (0.024)	0.009 (0.023)
IMF Conditions on Labor Market			0.001 (0.007)	0.001 (0.007)	-0.001 (0.007)	-0.000 (0.007)	0.002 (0.005)
Chinn Ito Index				0.002 (0.015)	0.002 (0.015)	0.002 (0.015)	0.003 (0.016)
KOF Trade Globalization Index					-0.002 (0.001)	-0.002 (0.001)	-0.001 (0.001)
% GDP Growth						0.085** (0.041)	0.170*** (0.065)
% Growth of Total Factor Productivity							-0.006*** (0.002)
Constant	1.099*** (0.343)	1.068*** (0.329)	1.057*** (0.369)	1.107*** (0.309)	1.218*** (0.310)	1.168*** (0.307)	1.140*** (0.281)
N	248	248	248	245	245	245	236
<i>Dependent variable: Share of workers in high capacity industries (first-stage results)</i>							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
SOE privatization deals in millions US dollars normalized by GDP	-1.7e+07*** (5.5e+06)	-1.7e+07*** (5.7e+06)	-1.5e+07*** (5.1e+06)	-1.7e+07*** (5.2e+06)	-1.6e+07*** (5.2e+06)	-1.6e+07*** (5.1e+06)	-1.9e+07*** (5.2e+06)
IMF Dummy		-0.084 (0.353)	0.225 (0.353)	0.189 (0.320)	0.141 (0.306)	0.169 (0.319)	0.279 (0.309)
IMF Conditions on Labor Market			-0.165*** (0.059)	-0.195*** (0.064)	-0.212*** (0.068)	-0.210*** (0.066)	-0.209*** (0.067)
Chinn Ito Index				-0.447 (0.358)	-0.428 (0.361)	-0.441 (0.366)	-0.446 (0.367)
KOF Trade Globalization Index					-0.023 (0.020)	-0.024 (0.020)	-0.019 (0.018)
% GDP Growth						1.099 (0.846)	1.809* (0.903)
% Growth of Total Factor Productivity							-0.034 (0.027)
Constant	16.974*** (0.265)	17.067*** (0.377)	16.760*** (0.342)	15.817*** (0.829)	16.866*** (1.154)	16.606*** (1.176)	20.514*** (0.691)
N	248	248	248	245	245	245	236
R <sup>2</sup>	0.336	0.336	0.362	0.394	0.401	0.409	0.473

Notes: These estimates are from 2SLS regression. The dependent variable is the labor share of income of borrowing country  $j$  in year  $t$ . The instrument variable is SOE privatization deals in millions US dollars normalized by GDP of borrowing country  $j$  in year  $t$  for all columns. All independent variables pertain to borrowing country  $j$  in year  $t$ . The independent variable *IMF Dummy* is equal to 1 if an IMF programme is in place, 0 otherwise. Year and country fixed effects are included in all models. Standard errors are clustered on borrowing country  $j$  and are shown in parentheses. \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$

Table 3: Conditionality Union Density: Two-way Fixed Effect 2SLS Regressions for Labor Share

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Dependent variable: Labor share of income (second-stage results)</i>						
Union Density	-0.095* (0.052)	-0.072*** (0.025)	-0.076*** (0.027)	-0.062*** (0.023)	-0.069*** (0.026)	-0.050** (0.024)
IMF Conditions on Labor Market (t-3)		0.034** (0.017)	0.035* (0.018)	0.027** (0.012)	0.034* (0.020)	0.020 (0.023)
Chinn Ito Index			0.025 (0.086)	0.066 (0.109)	0.062 (0.120)	0.038 (0.101)
KOF Trade Globalization Index				-0.004 (0.005)	-0.004 (0.005)	-0.002 (0.005)
% GDP Growth					-0.235 (0.299)	-0.091 (0.271)
% Growth of Total Factor Productivity						-0.013 (0.011)
Constant	3.047** (1.436)	2.393*** (0.665)	2.475*** (0.733)	2.328*** (0.609)	2.489*** (0.662)	1.893*** (0.592)
N	109.000	109.000	109.000	109.000	109.000	105.000
<i>Dependent variable: Union density (first-stage results)</i>						
IMF Conditions on Privatization (t-3)	0.816** (0.362)	1.093** (0.441)	1.082** (0.424)	1.321** (0.547)	1.208* (0.592)	1.380* (0.733)
IMF Conditions on Labor Market (t-3)		0.511* (0.269)	0.508* (0.266)	0.485* (0.244)	0.541* (0.286)	0.527* (0.298)
Chinn Ito Index			0.076 (0.990)	0.758 (1.659)	0.638 (1.643)	0.330 (1.786)
KOF Trade Globalization Index				-0.065 (0.086)	-0.055 (0.083)	-0.030 (0.099)
% GDP Growth					-3.179 (3.854)	-2.164 (4.391)
% Growth of Total Factor Productivity						-0.146 (0.233)
Constant	28.770** (1.276)	28.729*** (1.246)	28.696*** (1.196)	32.600*** (4.882)	31.997*** (4.684)	31.046*** (5.531)
N	109.000	109.000	109.000	109.000	109.000	105.000
R <sup>2</sup>	0.455	0.462	0.462	0.468	0.472	0.467

Notes: These estimates are from 2SLS regression. The dependent variable is the labor share of income of borrowing country  $j$  in year  $t$ . The instrument variable is the number of IMF conditionalities on privatization of the borrowing country  $j$  in year  $t - 3$  for all columns. All independent variables pertain to borrowing country  $j$  in year  $t$  unless a lag variable is used. Year and country fixed effects are included in all models. Standard errors are clustered on borrowing country  $j$  and are shown in parentheses. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

## Discussion and Conclusion

This research sheds light on the distributional effects of IMF privatization conditions in borrowing countries. We focused on two typical cases of IMF sponsored privatization, namely Pakistan and Turkey, in order to trace the causal mechanisms through which IMF privatization conditionalities effect the labor share of income. Our cases suggest that privatization resulted in mass job shedding in state owned sectors, which historically tended to be strategic sectors with high disruptive capacity and strong labor unions. The share of workers employed in high disruptive capacity industries was reduced, and historically strong public sector unions were decimated. This had negative knock on effects for the strength of the national labor movement, weakening labor's ability to resist future privatization reform, as well as to bargain over wages and conditions.

We then tested the generalizability of our hypotheses in a large-N setting , which gave us statistically significant results in the expected direction.

Future research might disaggregate data further to look at sectoral differences in the relationship between privatization and labour share. A comparative analysis of Turkish privatizations of Çitosan, a cement plant, and Petkim, a petrochemical firm, illustrates that post-privatization unemployment rates was higher among workers in the cement industry than petrochemical workers (Tansel 1997, p.638). This suggests that the effects of privatization may be more severe in sectors that use unskilled rather than skilled labor.



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# Appendix

Table 4: Conditionality Highcapratio: Two-way Fixed Effect 2SLS Regressions for Labor Share

	<i>Dependent variable: Labor share of income (second-stage results)</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Share of Workers in High Capacity Industries	0.013 (0.013)	0.089 (0.066)	0.088 (0.063)	0.071 (0.047)	0.072 (0.047)	0.069 (0.057)
IMF Conditions on Labor Market (t)		0.028* (0.017)	0.031* (0.019)	0.028* (0.015)	0.028* (0.015)	0.028 (0.017)
Chinn Ito Index		0.037 (0.051)	0.037 (0.051)	0.025 (0.039)	0.026 (0.040)	0.028 (0.044)
KOF Trade Globalization Index				0.003 (0.003)	0.003 (0.003)	0.002 (0.002)
% GDP Growth					-0.043 (0.079)	-0.102 (0.111)
% Growth of Total Factor Productivity						0.005 (0.004)
Constant	1.319*** (0.123)	0.572 (0.630)	0.698 (0.507)	0.666 (0.493)	0.651 (0.502)	-1.541 (1.635)
N	460	460	453	453	453	412
	<i>Dependent variable: Share of workers in high capacity industries (first-stage results)</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
IMF Conditions on Privatization (t)	-0.213*** (0.071)	-0.111 (0.067)	-0.120* (0.062)	-0.156** (0.074)	-0.152** (0.075)	-0.150** (0.072)
IMF Conditions on Labor Market (t)		-0.174** (0.066)	-0.191*** (0.069)	-0.193*** (0.068)	-0.190*** (0.069)	-0.178** (0.066)
Chinn Ito Index			-0.185 (0.320)	-0.033 (0.326)	-0.041 (0.323)	-0.092 (0.343)
KOF Trade Globalization Index				-0.059** (0.027)	-0.059** (0.027)	-0.035 (0.024)
% GDP Growth					1.075 (0.959)	2.305** (0.966)
% Growth of Total Factor Productivity						-0.096*** (0.032)
Constant	9.599*** (0.165)	9.684*** (0.174)	9.096*** (1.021)	12.415*** (1.643)	12.503*** (1.662)	28.838*** (0.881)
N	460	460	453	453	453	412
R <sup>2</sup>	0.333	0.344	0.349	0.397	0.401	0.433

*Notes:* These estimates are from two-stage least squares (2SLS) regression. The dependent variable is the labor share of income of borrowing country  $j$  in year  $t$ . The instrument variable is the number of IMF conditionalities on privatization of the borrowing country  $j$  in year  $t$  for all columns. All independent variables pertain to borrowing country  $j$  in year  $t$ . Year and country fixed effects are included in all models. Standard errors are clustered on borrowing country  $j$  and are shown in parentheses. \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$

Table 5: Conditionality Union Density: Two-way Fixed Effect 2SLS Regressions for Labor Share

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Dependent variable: Labor share of income (second-stage results)</i>						
Union Density	0.036*** (0.014)	0.492 (2.060)	0.337 (1.081)	0.457 (2.150)	0.393 (1.649)	0.400 (1.889)
IMF Conditions on Labor Market (t)		0.234 (1.041)	0.176 (0.596)	0.226 (1.095)	0.230 (0.999)	0.239 (1.157)
Chinn Ito Index			0.115 (0.328)	-0.066 (0.965)	0.051 (0.535)	0.200 (0.827)
KOF Trade Globalisation Index				0.019 (0.114)	0.010 (0.062)	-0.002 (0.038)
% GDP Growth					1.922 (8.614)	1.736 (8.563)
% Growth of Total Factor Productivity						0.035 (0.246)
Constant	-0.724** (0.366)	-14.225 (60.916)	-9.700 (32.161)	-14.403 (70.223)	-12.015 (52.406)	-11.625 (57.380)
N	111.000	111.000	111.000	111.000	111.000	107.000
<i>Dependent variable: Union density (first-stage results)</i>						
IMF Conditions on Privatization (t)	-0.537*** (0.220)	-0.164 (0.709)	-0.238 (0.798)	-0.177 (0.858)	-0.206 (0.895)	-0.194 (0.939)
IMF Conditions on Labor Market (t)		-0.356 (0.667)	-0.348 (0.685)	-0.366 (0.704)	-0.436 (0.753)	-0.455 (0.776)
Chinn Ito Index			-0.333 (0.901)	0.138 (1.690)	-0.139 (1.592)	-0.500 (1.724)
KOF Trade Globalisation Index				-0.042 (0.091)	-0.025 (0.085)	0.005 (0.100)
% GDP Growth					-4.949 (3.465)	-4.331 (3.717)
% Growth of Total Factor Productivity						-0.101 (0.231)
Constant	29.274** (1.364)	29.482*** (1.561)	29.644*** (1.261)	32.109*** (5.135)	31.221*** (4.825)	29.796*** (5.428)
N	111.000	111.000	111.000	111.000	111.000	107.000
R <sup>2</sup>	0.500	0.501	0.503	0.505	0.513	0.509

Notes: These estimates are from two-stage least squares (2SLS) regression. The dependent variable is the labor share of income of borrowing country  $j$  in year  $t$ . The instrument variable is the number of IMF conditionalities on privatization of the borrowing country  $j$  in year  $t$  for all columns. All independent variables pertain to borrowing country  $j$  in year  $t$ . Year and country fixed effects are included in all models. Standard errors are clustered on borrowing country  $j$  and are shown in parentheses. \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$



Table 6: Actualization: Two-way Fixed Effect OLS Regressions for Labor Share

<i>Dependent variable: Labor share of income</i>							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
SOE privatization deals in millions US dollars normalized by GDP	5.2e+05 (3.9e+05)	4.9e+05 (3.9e+05)	4.2e+05 (3.7e+05)	4.7e+05 (3.8e+05)	4.9e+05 (3.6e+05)	4.8e+05 (3.5e+05)	5.1e+05 (3.4e+05)
IMF Dummy		0.017 (0.021)	0.001 (0.018)	0.003 (0.018)	0.001 (0.017)	0.002 (0.017)	-0.001 (0.017)
IMF Conditions on Labor Market			0.009*** (0.003)	0.010*** (0.003)	0.010*** (0.002)	0.010*** (0.002)	0.011*** (0.002)
Chinn Ito Index				0.017 (0.023)	0.018 (0.023)	0.017 (0.022)	0.017 (0.022)
KOF Trade Globalization Index					-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
% GDP Growth						0.040 (0.030)	0.096* (0.051)
% Growth of Total Factor Productivity							-0.004* (0.002)
Constant	0.314*** (0.017)	0.294*** (0.031)	0.309*** (0.026)	0.335*** (0.053)	0.369*** (0.051)	0.360*** (0.050)	0.233*** (0.037)
N	282	282	282	279	279	279	269
R <sup>2</sup>	0.102	0.110	0.149	0.190	0.196	0.201	0.222

Notes: These estimates are from the ordinary least squares (OLS) regression. The dependent variable is the labor share of income of borrowing country  $j$  in year  $t$ . All independent variables pertain to borrowing country  $j$  in year  $t$ . The independent variable *IMF Dummy* is equal to 1 if an IMF programme is in place, 0 otherwise. Year and country fixed effects are included in all models. Standard errors are clustered on borrowing country  $j$  and are shown in parentheses. \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$

Table 7: Conditionality: Two-way Fixed Effect OLS Regressions for Labor Share

<i>Dependent variable: Labor share of income</i>						
	(1)	(2)	(3)	(4)	(5)	(6)
IMF Conditions on Privatization	-0.001 (0.003)	-0.007 (0.004)	-0.007 (0.005)	-0.007 (0.005)	-0.007 (0.005)	-0.007 (0.006)
IMF Conditions on Labor Market		0.011*** (0.004)	0.012*** (0.004)	0.012*** (0.004)	0.012*** (0.004)	0.014*** (0.004)
Chinn Ito Index			0.008 (0.015)	0.009 (0.015)	0.009 (0.015)	0.009 (0.016)
KOF Trade Globalisation Index				-0.000 (0.000)	-0.000 (0.000)	0.000 (0.001)
% GDP Growth					0.022 (0.020)	0.051* (0.029)
% Growth of Total Factor Productivity						-0.002 (0.001)
Constant	1.441*** (0.005)	1.435*** (0.006)	1.460*** (0.048)	1.469*** (0.058)	1.471*** (0.058)	0.374*** (0.049)
N	582	582	570	569	569	511
R <sup>2</sup>	0.397	0.423	0.440	0.440	0.441	0.117

Notes: These estimates are from the ordinary least squares (OLS) regression. The dependent variable is the labor share of income of borrowing country  $j$  in year  $t$ . All independent variables pertain to borrowing country  $j$  in year  $t$ . Year and country fixed effects are included in all models. Standard errors are clustered on borrowing country  $j$  and are shown in parentheses. \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$

Table 8: Conditionality (3-year lag): Two-way Fixed Effect OLS Regressions for Labor Share

<i>Dependent variable: Labor share of income</i>						
	(1)	(2)	(3)	(4)	(5)	(6)
IMF Conditions on Privatization (t-3)	-0.014*	-0.015*	-0.016**	-0.016**	-0.016**	-0.016**
	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)	(0.007)
IMF Conditions on Labor Market (t-3)		0.003	0.003	0.003	0.003	0.002
		(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Chinn Ito Index			0.000	0.000	0.000	-0.001
			(0.011)	(0.011)	(0.011)	(0.011)
KOF Trade Globalisation Index				-0.000	-0.000	0.000
				(0.001)	(0.001)	(0.001)
% GDP Growth					0.016	0.039
					(0.018)	(0.027)
% Growth of Total Factor Productivity						-0.001
						(0.001)
Constant	1.444***	1.443***	1.442***	1.446***	1.448***	0.343***
	(0.005)	(0.005)	(0.035)	(0.042)	(0.043)	(0.033)
N	571	571	559	558	558	500
R <sup>2</sup>	0.433	0.435	0.449	0.449	0.450	0.120

*Notes:* These estimates are from the ordinary least squares (OLS) regression. The dependent variable is the labor share of income of borrowing country  $j$  in year  $t$ . All independent variables pertain to borrowing country  $j$  in year  $t$  unless a lag variable is used. Year and country fixed effects are included in all models. Standard errors are clustered on borrowing country  $j$  and are shown in parentheses. \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$

Table 9: Cumulative Conditionality Highcapratio: Two-way Fixed Effect 2SLS Regressions for Labor Share

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Dependent variable: Labor share of income (second-stage results)</i>						
Share of Workers in High Capacity Industries	-0.043*** (0.009)	-0.027* (0.015)	-0.026* (0.015)	-0.031* (0.018)	-0.029* (0.016)	-0.032* (0.018)
IMF Conditions on Labor Market		0.003 (0.003)	0.003 (0.003)	0.002 (0.003)	0.002 (0.003)	0.002 (0.003)
KOF Financial Globalization Index			0.000 (0.001)	0.001 (0.001)	0.001 (0.001)	0.000 (0.001)
KOF Trade Globalization Index				-0.002 (0.001)	-0.002 (0.001)	-0.001 (0.001)
% GDP Growth					0.058 (0.042)	0.118** (0.059)
% Growth of Total Factor Productivity						-0.004*** (0.001)
Constant	1.854*** (0.085)	1.681*** (0.162)	1.659*** (0.165)	1.795*** (0.240)	1.780*** (0.219)	1.368*** (0.496)
N	460	460	460	460	457	414
<i>Dependent variable: Share of workers in high capacity industries (first-stage results)</i>						
IMF Conditions on Privatization	-0.120*** (0.024)	-0.136*** (0.035)	-0.139*** (0.037)	-0.125*** (0.038)	-0.137*** (0.036)	-0.129*** (0.038)
IMF Conditions on Labor Market		0.021 (0.040)	0.024 (0.041)	0.013 (0.039)	0.017 (0.037)	0.002 (0.035)
KOF Financial Globalization Index			0.010 (0.016)	0.023 (0.019)	0.023 (0.019)	0.017 (0.015)
KOF Trade Globalization Index				-0.052* (0.028)	-0.053* (0.028)	-0.025 (0.019)
% GDP Growth					1.581** (0.735)	2.797*** (0.802)
% Growth of Total Factor Productivity						-0.072** (0.028)
Constant	10.310*** (0.264)	10.279*** (0.281)	9.984*** (0.463)	12.063*** (1.303)	12.317*** (1.308)	26.145*** (1.614)
N	460	460	460	460	457	414
R <sup>2</sup>	0.424	0.425	0.427	0.461	0.477	0.526

Notes: These estimates are from two-stage least squares (2SLS) regression. The dependent variable is the labor share of income of borrowing country  $j$  in year  $t$ . The instrument variable is the cumulative number of IMF conditionalities on privatization of the borrowing country  $j$  up to year  $t$  for all columns. All independent variables pertain to borrowing country  $j$  in year  $t$ . Year and country fixed effects are included in all models. Standard errors are clustered on borrowing country  $j$  and are shown in parentheses. \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$

Table 10: Conditionality Unemployment Growth: Two-way Fixed Effect 2SLS Regressions for Labor Share

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Dependent variable: Labor share of income (second-stage results)</i>						
Unemployment Growth	-0.058 (0.200)	-112.423 (3.7e+04)	-15.996 (679.226)	-7.105 (130.328)	2.064 (10.554)	1.195 (4.083)
IMF Conditions on Labor Market (t)		3.265 (1069.788)	0.387 (16.126)	0.179 (3.153)	-0.034 (0.209)	-0.021 (0.105)
Chinn Ito Index			-0.135 (6.305)	-0.066 (1.466)	0.028 (0.083)	0.025 (0.053)
KOF Trade Globalisation Index				0.006 (0.108)	-0.001 (0.007)	-0.002 (0.009)
% GDP Growth					1.147 (5.811)	0.526 (1.675)
% Growth of Total Factor Productivity						0.016 (0.057)
Constant	1.447*** (0.022)	10.161 (2864.878)	2.343 (36.935)	1.559 (1.438)	1.523*** (0.282)	0.256 (0.387)
N	576	576	564	563	563	506
<i>Dependent variable: Unemployment growth (first-stage results)</i>						
IMF Conditions on Privatization (t)	0.014 (0.013)	0.000 (0.019)	0.000 (0.018)	0.001 (0.018)	-0.003 (0.016)	-0.005 (0.017)
IMF Conditions on Labor Market (t)		0.029 (0.020)	0.023 (0.018)	0.023 (0.018)	0.022 (0.017)	0.029 (0.019)
Chinn Ito Index			-0.009 (0.020)	-0.011 (0.021)	-0.009 (0.023)	-0.013 (0.024)
KOF Trade Globalisation Index				0.001 (0.002)	0.001 (0.002)	0.002 (0.002)
% GDP Growth					-0.544** (0.207)	-0.395* (0.205)
% Growth of Total Factor Productivity						-0.014* (0.008)
Constant	0.093*** (0.018)	0.078*** (0.016)	0.055 (0.066)	0.012 (0.103)	-0.025 (0.101)	0.087 (0.098)
N	576	576	564	563	563	506
R <sup>2</sup>	0.059	0.064	0.057	0.058	0.077	0.094

Notes: These estimates are from two-stage least squares (2SLS) regression. The dependent variable is the labor share of income of borrowing country  $j$  in year  $t$ . The instrument variable is the number of IMF conditionalities on privatization of the borrowing country  $j$  in year  $t$  for all columns. All independent variables pertain to borrowing country  $j$  in year  $t$ . Year and country fixed effects are included in all models. Standard errors are clustered on borrowing country  $j$  and are shown in parentheses. \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$

Table 11: Actualization Unemployment Growth: Two-way Fixed Effect 2SLS Regressions for Labor Share

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Dependent variable: Labor share of income (second-stage results)</i>							
Unemployment Growth	3.903 (24.752)	19.49% (659.325)	-1.963 (7.737)	-3.028 (16.713)	-1.203 (2.771)	-1.774 (5.756)	-1.555 (3.680)
IMF Dummy		-1.404 (47.977)	0.044 (0.205)	0.046 (0.296)	0.043 (0.120)	0.029 (0.145)	0.010 (0.116)
IMF Conditions on Labor Market (t)			0.067 (0.235)	0.093 (0.463)	0.049 (0.093)	0.068 (0.193)	0.070 (0.148)
Chinn Ito Index				-0.051 (0.407)	-0.014 (0.089)	-0.020 (0.144)	-0.011 (0.090)
KOF Trade Globalisation Index					0.009 (0.022)	0.014 (0.049)	0.013 (0.032)
% GDP Growth						-1.058 (3.544)	-0.403 (1.223)
% Growth of Total Factor Productivity							-0.038 (0.079)
Constant	-0.202 (2.820)	-1.427 (56.285)	0.516 (1.056)	0.618 (2.033)	0.074 (0.475)	-0.034 (1.026)	0.083 (0.512)
N	280	280	280	277	277	277	268
<i>Dependent variable: Unemployment Growth (first-stage results)</i>							
SOE privatization deals in millions US dollars normalized by GDP	1.3e+05 (8.5e+05)	2.5e+04 (8.6e+05)	-2.1e+05 (8.1e+05)	-1.5e+05 (8.3e+05)	-4.1e+05 (8.3e+05)	-2.7e+05 (8.1e+05)	-3.2e+05 (7.2e+05)
IMF Dummy		0.073 (0.086)	0.022 (0.072)	0.014 (0.071)	0.034 (0.067)	0.015 (0.072)	0.007 (0.074)
IMF Conditions on Labor Market (t)			0.029 (0.021)	0.027 (0.019)	0.033 (0.020)	0.033* (0.020)	0.038* (0.022)
Chinn Ito Index				-0.023 (0.037)	-0.027 (0.036)	-0.021 (0.038)	-0.018 (0.036)
KOF Trade Globalisation Index					0.008** (0.003)	0.008** (0.004)	0.009** (0.004)
% GDP Growth						-0.619*** (0.223)	-0.321 (0.216)
% Growth of Total Factor Productivity							-0.022* (0.012)
Constant	0.114** (0.047)	0.085 (0.069)	0.135** (0.051)	0.122** (0.047)	-0.170 (0.126)	-0.177 (0.126)	-0.134 (0.128)
N	280	280	280	277	277	277	268
R <sup>2</sup>	0.066	0.070	0.081	0.076	0.092	0.128	0.149

Notes: These estimates are from two-stage least squares (2SLS) regression. The dependent variable is the labor share of income of borrowing country  $j$  in year  $t$ . The instrument variable is SOE privatization deals in millions US dollars normalized by GDP of borrowing country  $j$  in year  $t$  for all columns. All independent variables pertain to borrowing country  $j$  in year  $t$ . The independent variable *IMF Dummy* is equal to 1 if an IMF programme is in place, 0 otherwise. Year and country fixed effects are included in all models. Standard errors are clustered on borrowing country  $j$  and are shown in parentheses. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$