

The Politics of Stashing Wealth

The decline of labor power and the global rise in corporate savings

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Abstract

This paper investigates the political roots of the global rise in corporate savings. In recent years, firms throughout advanced economies have started to accumulate enormous savings. Instead of using their revenues to reinvest or raise wages, many companies now stash their profits within financial markets, contributing to sluggish growth, financial fragilities and rising inequality. I argue that political institutions that determine the balance-of-power between firms and employees play an important role in shaping this trend. The stronger unions are, the more they pressure firms into using revenues for pay increases and investment. The more their influence erodes, the stronger the rise of savings. Using panel data from 25 OECD countries as well as a regression discontinuity design leveraging the German law on co-determination, I find robust and causal evidence supporting this claim. These results have implications for our broader understanding of how political institutions affect financial imbalances and economic inequality.

Keywords: Global Imbalances, Savings Glut, Inequality, Trade Unions, Political Economy

Supplementary materials are available in an online appendix. Data, materials and information necessary to replicate analyses in the published paper are available on the Journal of Politics Dataverse. The empirical data has been successfully replicated by the JOP replication analyst.

1 Introduction

In January 2017, news outlets reported that the US tech giant Apple was sitting on \$246 billion of cash (Wang, 2017). Rather than using its profits to expand its business, increase payouts to shareholders or raise the wages of its workers, the company had accumulated savings that surpass the Gross Domestic Product (GDP) of a country like Finland. In the US, these and similar reports about other companies sparked heated debates over appropriate tax policy responses and the political issue of excessive corporate wealth (The Economist, 2016; Summers, 2016). But while the corporate rivers of riches in the tech industry flow especially strongly, they are part of a much broader trend. In many developed countries, companies in recent years have turned into a net lender to the rest of the economy (Chen, Karabarbounis and Neiman, 2017; Karabarbounis and Neiman, 2012).

Economically, this is a puzzling development. Since companies traditionally take idle resources and put them into productive use, economists expect corporations to use the savings of other sectors (e.g. private households) to fund operations and finance investments (Gruber and Kamin, 2015). The recent shift towards corporate saving has therefore aroused considerable interest among economists and the global financial press (Armenter, 2012; Wolf, 2015). More importantly, it has crucial political implications.

First, corporate savings are a main driver behind the global macroeconomic imbalances that were at the heart of the Great Recession and the Eurocrisis (Gruber and Kamin, 2015; Pozsar, 2013; Duchin et al., 2017). While companies across the world have stopped investing and started to stash profits on financial markets, this trend has been especially pronounced in countries like Germany and Japan, where firm savings have become a key reason for capital exports and current account surpluses (Klug, Mayer and Schuler, 2019). In Europe, debates about these surpluses have dominated much of the politics around the Eurocrisis (Frieden and Walter, 2017). At the international level, they have turned into an important justification for the reemergence of protectionism and trade conflicts (Irwin, 2016).

Second, the rise of corporate savings fuels economic inequality. As more and more firms retain their revenues and park them on financial markets, less and less of their profits find their way back into the real economy. While this leads to booming asset prices, the flip sides of this trend are lower investment rates and decreased demand for labor. Income generated from company savings falls mostly on the side of capital and, thus, the biggest earners (Piketty,

2014; IMF, 2019). For workers they mean fewer jobs and lower wage growth. The rise of corporate savings is, therefore, closely linked to the fall in labor shares of national income in many advanced economies (Autor et al., 2017; Sung, Owen and Li, 2019). As Karabarbounis and Neiman (2012) point out, as the share of corporate savings in total global savings in recent years rose by more than 20 percent, this increase was associated with a 5 percent drop in the share of national income that was paid to workers and employees. This falling labor share is directly linked to several measures of income inequality. Explaining what shapes the global trend towards higher corporate savings thus constitutes an important and often overlooked aspect of our understanding of rising inequality and its effects on democratic politics, voter preferences and political imbalances (Dahl, 1986; Bartels, 2016).

Economic research so far ascribes the trend towards large firm savings mostly to structural factors such as technological advances and demographic change (Chen, Karabarbounis and Neiman, 2017; Gruber and Kamin, 2015). It offers valuable insights into the macro-trends underlying this development. However, this paper argues that focusing solely on economics provides an incomplete account of what lies behind the rise in corporate savings. Political institutions play a key role in mitigating this trend. A vast literature within political science documents the secular decline in the political power of organized labor and its impact on wage inequality (e.g. Ahlquist, 2017; Scheve and Stasavage, 2009; Rueda and Pontusson, 2000), democratic politics and partisan politics (e.g. Becher, Stegmueller and Käppner, 2018; Mosimann and Pontusson, 2017) as well as trade politics and market regulation more generally (e.g. Mosley and Singer, 2015; Dean, 2015). Building on these insights, I argue that the demise in the organizational power of labor also helps explaining the rise in corporate savings. Whereas economic insecurity and the deregulation of financial markets have made it attractive for firm owners and managers to retain profits and stash them in financial assets, this strategy comes at considerable opportunity costs for workers, who would prefer the fruits of their labor to be used for employee expenses and productive investment. Savings are thus subject to distributional conflict between capital and labor. Their emergence depends on political institutions that determine the balance-of-power between the two actors. The larger labor's political profit-sharing capacities are, the more they will pressure firms into using revenues for wage raises and investment. The more their influence erodes, the larger the rise of savings.

I employ two strategies that provide evidence that supports this argument. As a first descriptive test, I analyze panel data from 25 OECD countries over 19 years. I show that there is a robust negative relation between corporate savings and trade union density as well as employment protection legislation at the country level. The larger the share of organized workers and the stricter employment protection rules, the lower the savings rate of the corporate sector. Second, I move my analysis to the firm level and exploit a natural experiment provided by the German law on co-determination. The law mandates firms with more than 2000 domestic employees to allocate half of their supervisory-board seats to employee representatives. As these boards not only monitor investment decisions and strategic business choices but also directly appoint the firm's management board, parity co-determination hands workers with considerable power resources. Using the discontinuity around the mandated threshold, I am able to causally identify the effect of increased labor influence on corporate savings. I find that labor power in the form of co-determination significantly decreases savings. On average, firms with parity co-determination accumulate about US\$50 million (or about 4.2% of total assets) less in cash and short-term investments than similar companies without such institutions.

Besides adding to our understanding of the political economy of large corporate savings, this paper makes two broader theoretical contributions. First, it adds to a growing literature within international political economy which analyses the domestic sources of global imbalances (e.g. Ahlquist, 2010; Baccaro and Pontusson, 2016). By showing that the demise of labor power in some countries has contributed significantly to the rise of corporate savings, the paper helps to explain an important driver of global balance-of-payments imbalances and financial fragilities. Second, it contributes to the literature on the effects of declining labor power and trade unionism. Recent research has pointed out that the demise of labor power is an important factor behind falling labor shares and rising functional income inequality (Sung, Owen and Li, 2019; Dao et al., 2017). By showing that labor's politically-backed ability to push for profit-sharing also plays an important role in the rise of corporate savings, the paper illustrates that the political power of workers does more than determine how profits are split between capital and labor. It also influences whether firms reinvest their profits in ways that stimulate growth and employment or stash them on international financial markets.

2 The Global Rise and National Variations in Corporate Savings

Corporate savings are defined as the excess of revenues over debts, investment and payouts. Savings are thus retained profits which are held in the form of cash and other financial assets (Gruber and Kamin, 2016). In recent years, these savings have risen dramatically. Global corporate saving has increased from below 10% of global GDP in the 1980s to almost 15% in the 2010s. Crucially, retained earnings do not necessarily rest quiescent on corporate bank accounts. Instead, Duchin et al. (2017) show that, for example, U.S. industrial firms are increasingly holding their growing savings stock in financial assets including risky corporate debt, equity, and mortgage-backed securities. The rise in corporate savings, therefore, also partly reflects a trend in which more and more non-financial firms prefer short-term financial investments over real investments and payouts and constitutes an important aspect of recent trends towards financialization (Krippner, 2005, 2011; Witko, 2016).

This trend is especially puzzling as building up savings and large financial portfolios is not what economic theory expects firms to do. Instead, surplus revenues should be reinvested to increase productivity, used to raise employee remuneration or distributed to shareholders (Blanchard, Rhee and Summers, 1993). To explain the leap in corporate savings, research so far has focused on structural factors such as technological advances which push down the prices of investment goods and increase corporate profits (Karabarbounis and Neiman, 2012), strengthened precautionary saving motives¹ (Sánchez, Yurdagul and S, 2013) and a protracted decline in investment incentives due to factors linked to the “secular stagnation” hypothesis (Summers, 2014).

However, as Figure 1 illustrates the trend towards higher savings has varied considerably across countries. In some countries, like the US and the UK, non-financial corporations (NFCs) have been net lenders to the economy since the early 2000s. The lending position of the German corporate sector, on the other hand, has only recently turned positive and in countries like France or Italy the corporate sector remains a net-borrower. The national contexts in which firms operate, thus, seem to play an important role in mitigating this trend.

¹ Precautionary savings motives also play an important role for research in corporate finance on firm-level motives for savings and cash holdings (Lins, Servaes and Tufano, 2010).



FIGURE 1: Development of Corporate Savings in Major Economies; Data based on Chen, Karabarbounis and Neiman (2017).

Against this background, this paper analyses the role of policies and political institutions in shaping the trend towards higher corporate savings.

3 Corporate Savings and Profit Sharing Capacities

To explain the rise of corporate savings, I focus on its distributional implications. While for managers and large owners, it has become beneficial to retain profits and park them on financial markets, this strategy comes at significant opportunity costs for workers. Given these distributional implications, I argue that political institutions and policies which increase workers' profit-sharing capacities counteract the rise of corporate savings. The more such institutions erode, the stronger the surge in savings.

It is important to note that, while this paper focuses on distributional conflicts along class lines (Gourevitch and Shinn, 2007), conflicts about savings may also arise between managers and owners. Small shareholders in particular should push for the distribution of surpluses since they cannot prevent executives from using them for their private benefits (La Porta et al., 2000). However, in most economies, firms are still owned by a few large owners, who can influence the decisions of executives and whose savings motives are aligned with those of managers (e.g. Anderson and Hamadi, 2009). Also, dividend payments have remained relatively stable since the 1990s (Gruber and Kamin, 2016) and changes in own-

ership structures have mainly led to a greater dispersion of equity holders (Krippner, 2005). If anything, this should have led to lower savings. I thus focus my theory on class cleavages and account for the role of shareholders empirically.

The Distributional Implications of Large Corporate Savings

There are four ways in which surplus revenues can be used: raising wages, paying dividends to shareholders, increasing investment or building up savings. For management and controlling owners, raising wages provides the least preferred strategy (Gourevitch and Shinn, 2007). While the second option - increasing dividends - is preferable to higher wages, distributing profits also comes at the cost of losing access to valuable resources. A large literature within corporate finance shows that it requires a whole battery of minority shareholder rights to pressure company insiders into handing out profits to external owners (e.g. La Porta et al., 2000). This leaves management and controlling owners with two options: retaining profits or reinvesting them. The attractiveness of savings has increased for at least three reasons.

First, large savings ensure flexibility. Where investment opportunities in the current environment are perceived to be limited, saving today's profits helps finance future investments irrespective of possible credit constraints (Gruber and Kamin, 2016). Second, even if the economy is doing well, large volumes of savings provide opportunities to realize profits on financial markets. Studies of financialization show that since the 1990s non-financial firms increasingly rely on financial investments for a substantial part of their income (Krippner, 2011; Witko, 2016). The liberalization of capital accounts, the deregulation of financial markets and the expansion of financial instruments have made it lucrative for firms to retain parts of their profits and stash them in short-term, reversible assets which maximize yields without bearing the risks of fixed capital investments (Duchin et al., 2017). Finally, corporate savings have come to produce direct gains for executives. In many firms, a large share of executive compensation today is tied to the company's stock value (Krippner, 2011). Corporate savings benefit these values in two ways. First, financial investors in many sectors place a high value on savings (Pinkowitz and Williamson, 2007). The higher the savings stashed inside a firm, the higher the value of its shares. Second, savings are often used for share buybacks. By buying back stocks - which, since the investment stays within the firm, accounting-wise counts as savings - executives can drive-up the market value of their shares and boost their compensation (Gruber and Kamin, 2016).

Accruing savings has become increasingly attractive for management and controlling owners. But this does not apply to workers. First, labor’s preferred way of using surpluses should be to increase wages. Higher salaries are the most direct way in which workers can benefit from profits. Assuming that workers want to maximize their income, employees of firms with substantial surpluses, first and foremost, press for higher wages (Ahlquist, 2010). If these cannot be achieved, increasing investment serves as an attractive alternative.² On the one hand, investments in productive assets and worker training directly foster workers’ job security. On the other hand, productivity increases enhance the prospects for future wage gains (Gourevitch and Shinn, 2007). For workers, corporate savings, thus, matter most for what they are not. While they might be preferable to distributing profits to outsiders, the accumulation of savings can only be achieved at the expense of forgone wage rises and stagnant or reduced investments. At the same time, retaining profits in financial assets may increase the stock market value of a firm and help to realize short-term gains. Workers, however, have few opportunities to participate in these forms of profit generation (Akkemik and Özen, 2014).³ Stashing profits thus directly hurts the direct material interests of employees. As a representative of one of the biggest trade unions in Germany put it in an interview: “If firms can now build up these huge savings, this simply means that we have failed in fighting for our share of the pie.”⁴

Corporate Savings and Profit-sharing Capacities

Put simply, firms have little to lose and much to gain from retaining their earnings, whereas for workers, these savings come at considerable costs. Given these distributional implications, I expect savings to be subject to conflicts between management and labor and the outcomes

² While I assume that workers favor wages over investment, this ordering could also depend on the specific status of workers. For example, long-term employees with firm-specific skills might prefer investments over the short-term gains of higher wages.

³ This distinction is less clear for companies with employee-ownership plans or stock options. However, in most OECD countries these plans remain a niche phenomenon and most prevalent among financial firms (Lowitzsch and Hashi, 2014).

⁴ Representatives of German trade unions (DGB and verdi) confirmed this view in independent interviews that I conducted in Berlin in December 2017.

of these conflicts to be shaped by the balance of power between the two actors. This balance is to a large degree shaped by economic factors such as the labor market situation, the skill-set of workers and their position in the production process (Dean, 2015). However, most research assumes employers enjoy a natural advantage in conflicts with labor - either due to their smaller numbers, greater material resources and their ownership of the means of production (Acemoglu and Robinson, 2008) or due to the simple fact that workers must work to live (Polanyi, 1944).

To influence the distribution of profits, workers therefore rely on political context factors. Building on Dean’s (2015) recent work on profit-sharing institutions, I call these factors the *profit-sharing capacities* of labor. Dean defines profit-sharing institutions as “a set of rules that govern wage negotiations and create a credible link between an increase in profits and an increase in workers wage” (p.32 Dean, 2015). However, not all of labor’s profit-sharing capacities are rooted in institutions in a strict sense and while rising salaries are a top concern for most employees, research has shown that employment security often ranks equally high (e.g. Johnston, Hancké and Pant, 2014). Here, I therefore define profit-sharing capacities as policies, institutions and organizational environments that strengthen the link between capital’s profits and worker’s welfare - either in the form of higher wages or due to better employment prospects through productive investments.

Two factors determine the strength of such capacities. First, profit-sharing capacities depend on *power in numbers*. Literature rooted in power resource theory, therefore, stresses the importance of associational power (Bradley et al., 2003). The more workers are able to organize in larger numbers and effectively control the supply of labor to certain firms or industries, the better they are able to push through their preferences (Ahlquist, 2010; Rosenfeld, 2014). Power resource theory, therefore, emphasizes the strength of trade unionism, for example, through a large share of employees being organized in trade unions as a core determinant of labor power (Volscho and Kelly, 2012).⁵ Second, profit-sharing capacities depend

⁵ It is important to note that associational labor power is conceptually distinct from corporatist institutions such as coordinated or centralized wage bargaining. Whereas coordinated wage-setting institutions compress the wage distribution across firms and decrease income inequality amongst employees (Pontusson, Rueda and Way, 2002), their effect on the direct bargaining power of labor vis-as-vis capital is less clear (Thelen, 2012). In fact,

on *power through policies*. Political regulation affects workers' bargaining through a wide array of channels ranging from basic labor rights like the right to strike to policies that shape workers' bargaining power in the labor market such as employment protection legislation (Blanchard and Giavazzi, 2003; Ciminelli, Duval and Furceri, 2018) and institutions that grant employees formal authority in firms' decision making process such as shop-floor representation, works councils and co-determination rights (Streeck and Thelen, 2005; Hall and Soskice, 2001).

It is important to note that different sources of labor power are interlinked. Policies such as union organization law influence unions' ability to organize in large numbers and acquire associational power. At the same time, strong trade unions are political actors that seek to increase their own bargaining power through political channels such as supporting labor-friendly candidates and agendas (Feigenbaum, Hertel-fernandez and Williamson, 2018; Witko, 2016) and influencing policymaking in areas that affect their own bargaining position vis-a-vis employers (Ahlquist, 2017; Hacker and Pierson, 2010; Thelen, 2012). Different sources of labor power can, therefore, be cumulative, complementary or even necessary conditions for each other and the precise nature of these inter-linkages is difficult to fathom on purely theoretical grounds. While some institutions that enable workers to push for wages and investments may rely on the backing of strong labor unions, others may empower employees independent of their broader associational capacities. How different power resources relate to each other is, therefore, largely an empirical question. In any case, my argument remains agnostic about the specific sources of profit-sharing capacities. All things being equal, the stronger the associational and political resources that workers can bring to bear to assert their interests, the more likely it becomes that labor succeeds in promoting moves to use revenues for higher wages and investment. The more this influence erodes, the higher the rise in corporate savings.

Summing up, I argue that corporate savings are the result of concrete distributional conflicts between management and labor and that their emergence is shaped by workers'

recent research shows that, especially in the context of heightened competitive pressure through globalization and technological change, centralized wage-setting institutions may increase wage moderation amongst workers and, thus, can lead to higher profit-shares and more surplus revenues amongst productive firms (Manger and Sattler, 2019).

profit-sharing capacities. The more the political context equips labor to push through its interests, the lower I expect corporate savings to be.

4 Analysis

4.1 Research Design

I investigate this argument in two steps. First, I use panel data on 25 OECD countries over 19 years to analyze the relationship between country-level corporate savings and trade union density as well as strictness of employment protection legislation as proxies for the strength of profit-sharing capacities at the country level. I find that higher levels of trade union density and stricter employment protection rules are strongly associated with lower levels of corporate savings. Second, I complement the cross-country analysis with a case study of publicly listed firms in Germany. I exploit a natural experiment provided by the setting of the German law on co-determination which mandates firms with more than 2000 employees to allocate half of their supervisory boards seats to employee representatives. Using the discontinuity around this mandated threshold, I am able to causally identify the expected negative effect of increased labor power on corporate savings.

4.2 Cross-Country Analysis - Trade Union Density & Corporate Saving

Dependent Variable

For the cross-country analysis, I assemble a dataset on 25 OECD countries between 1995 and 2013. My main variable of interest is corporate saving at country level, which is defined as the excess of gross savings of all firms in an economy over their aggregated investment spending. The variable measures all savings (that is profits after taxes, interest payments, dividends etc. minus capital investment) - irrespective of whether they are held in cash, cash equivalents or other financial assets - as a percentage of GDP. Data is taken from Chen, Karabarbounis and Neiman (2017) and based on information held in national accounts.⁶ As the savings of financial firms follow a different logics than those of non-financial companies,

⁶ I arrive at my final measure for savings by subtracting gross fixed capital formation (item GFCF) from the gross savings (item GS)

I only analyze the non-financial sector. Furthermore, I focus on OECD countries. Advanced economies have been the main driver of increased corporate savings, they traditionally have the most established forms of profit-sharing capacities and they offer the best data quality. Finally, national accounts data remains scattered for earlier time periods. To balance my panel, I thus focus on the period between 1995 and 2013. Since the main changes in the corporate savings trends occurred in the late 1990s and early 2000s, this should not constrain the validity of the analysis.⁷ Details of the variable construction and its development across countries can be found in the appendix (p.1-7).

Independent Variables and Controls

My argument suggests that increasing savings reflect a decrease in labor's profit-sharing capacities. To compare these capacities cross-nationally, I operationalize profit-sharing capacities in two different ways. First, I measure associational trade union power using *trade union density* (Baccaro and Howell, 2011). Union density measures the proportion of wage earners organized within trade unions and, thus, provides a useful proxy for unions' overall ability to mobilize, pose strike threats and build up pressure in negotiations with management (Sung, Owen and Li, 2019).⁸ Second, I use the OECD's *employment protection legislation*

⁷ Furthermore, as outlined above the factors that made savings an increasingly attractive strategy for management (capital account liberalization, financial deregulation and innovation, changes in the structure of executive boards etc.) mainly occurred from the 1990s onwards. My argument would therefore not necessarily expect differences in profit-sharing institutions to have similar effects in earlier periods.

⁸ Whereas other measures of trade union power such as union concentration mainly capture labor's political power - e.g. the ability to jointly mobilize in favor or against specific sectoral policies (Owen, 2015) - trade union density comes closest to measuring economic power vis-a-vis employers. These aspects also provide a distinct advantage over other measures of trade union power such as union centralization and wage coordination. Both of these variables capture the degree to which trade unions are able to extend their influence beyond the single firm or industries and to coordinate wage raises across different sectors. Whereas they are informative when it comes to the influence of trade unions at the macro-level, trade union density provides a more useful proxy for union's ability to affect saving decisions at the *firm-level*.

indicator as a proxy for labor power rooted in labor market policies. A large body of research shows that employment protection legislation crucially influences workers' bargaining power and ability to extract economic rents (Blanchard and Giavazzi, 2003; Ciminelli, Duval and Furceri, 2018). At the same time, pushing for stronger employment protection is an important policy area in which trade unions seek to strengthen their bargaining position by promoting political reforms (Raess, Dür and Sari, 2018; Hassel, 2014; Ahlquist, 2017).⁹ The indicator measures the strictness of employment protection on a scale from 0 to 6 with higher values indicating stricter protection laws. There is less variation in employment protection indicators than in trade union density and the indicator does not change in all countries during the period under consideration which calls for some caution when interpreting results from these panel models. Nonetheless, I expect stronger employment protection to increase labor power and, therefore, to be associated with lower corporate savings. To test for robustness, I replicate my analyses with collective bargaining coverage as a complementary measure of trade union power which covers both associational and policy channels of power (Thelen, 2012). Table A.6 in the appendix (p.11) shows that the results remain substantially the same.

To control for the macroeconomic environment, I include *real GDP growth* and the annual *real interest rate*. One problem with the national accounts data is that profits invested abroad still show up as domestic savings. To make sure that I analyze actual savings, I therefore control for annual *FDI outflows* (% of GDP). I also include a *crisis dummy* for the years 2007 and 2008 which I expect to have a negative impact on corporate savings. *Technological change* has been proposed as a key explanation for rising savings. As technological advances make capital goods cheaper, firms substitute machines for labor, leading to an increased capital share and higher savings. To control for technological change, I use the share of routine task employment (Autor, Levy and Murnane, 2003)¹⁰ by weighting employment

⁹ In line with this idea, Table A.4 in the appendix (p.8) shows that trade union density and the indicator for labor market protection legislation are strongly positively correlated.

¹⁰ Technological change mainly affects tasks that can be accomplished by machines following programmed rules. Examples include manual labor such as moving a windshield into place on an assembly line but also programmable accounting and other calculating services (Autor, Levy and Murnane, 2003).

in each occupational category per year as a percentage of total employment by its routine task intensity score (Meyer, 2017). The lower its value, the more technology intensive the economy and the higher corporate savings should be. I also include the value of *stock market capitalization* as a percentage of GDP and the *old-age dependency ratio*. The former is a widely used proxy for the level of financial deepening and should be negatively associated with savings. Old-age dependency ratio measures the proportion of dependents (older than 64) to working age population and should be positively associated with savings, as firms in aging societies might see fewer investment opportunities and fear future credit constraints. Last, I also add *statutory corporate income tax rates* as a final control (Chen, Karabarbounis and Neiman, 2017). The appendix lists all summary statistics and data sources (p.4).

Method

I analyze the relation between corporate savings and trade union density with a panel regression. Since the data is time-series cross-sectional the Gauss Markov assumptions of standard ordinary least squares (OLS) regression analyses are likely to be violated. In particular, test statistics reveal the presence of autocorrelation and heteroskedasticity.¹¹ I thus opt for a Prais-Winsten transformation and calculate panel corrected standard errors (Beck and Katz, 2011; Wilson and Butler, 2007).¹² Further test statistics show that the data is stationary.¹³ To control for time-invariant, country-specific factors that may affect savings such as, for example, ownership concentration, I thus include country-fixed effects (Dittmar, Mahrt-Smith and Servaes, 2003).¹⁴ I include year-fixed effects in some specifications to control for common shocks across countries. As a robustness test, I also report the results from an au-

¹¹ More precisely, a Breusch-Godfrey test rejects the null hypothesis of no autocorrelation and Breusch-Pagan tests reject the null hypothesis of constant variance.

¹² As an alternative way to address autocorrelation, I also run dynamic models with a lagged dependent variable (Keele and Kelly, 2006).

¹³ Augmented Dickey-Fully tests reject the null that the data has a unit root.

¹⁴ A Breusch and Pagan Lagrangian multiplier test rejects the null hypothesis of no country-specific variance and a Hausman test confirms that estimating the model with fixed effects is preferable to random effects.

toregressive distributed lag model, which additionally controls for lagged corporate savings and the trade union density or employment protection in the previous year.¹⁵

Panel data on macroeconomic variables that cover many countries and years often suffer from missing values that do not occur completely at random (Lall, 2016). To address possible biases and reduced statistical power, I use multiple imputation as described in Honaker, King and Blackwell (2011). In the imputation model, I include all variables of the subsequent analysis and add a number of variables that have few missing values and that are likely to correlate with the covariates such as inflation, unemployment, capital openness, fiscal deficits and the share of high-tech exports as well as leads and lags of key variables (Honaker and King, 2010). I impute five data sets, which corresponds to the average missing data rate of the variables in the model (Lall, 2016). I then calculate the means of the coefficients and standard errors from these five imputations. Details on the procedure and imputation diagnostics can be found in the appendix (p.2).

Cross-Country Results and Discussion

Table 1 presents the main findings for the cross-country analysis for both trade union density and employment protection legislation. Models 1 and 4 show simple bivariate regressions with country-fixed effects, Models 2 and 4 add the relevant controls and year-fixed effects¹⁶ As a robustness test, Models 3 and 6 add a one-year lag of the dependent variable as well as the independent variable.¹⁷

As expected, trade union density and strong employment protection policies consistently correlate negatively with corporate savings. The effect is statistically significant and substantially large. To pick one example, between 1995 and 2013 trade union density in Germany declined by about 12 percentage points. According to the most conservative model (3), such

¹⁵ The combination of country fixed effects with lagged dependent variables can result in biases (Nickell, 1981). However, given my relative long time series of almost 20 years this is less of a concern(Beck and Katz, 2011).

¹⁶ To make sure that the effects are not driven by a general trend over time, I also included time-trend variable instead of fixed effects. This does not change the results.

¹⁷ Tables A.4 and A.5 in the appendix (p.9f) show that results are robust to taking 3- and 5-year averages instead of annual observations.

TABLE 1: Higher Trade Union Density and Stronger Employment Protection are associated with lower Corporate Savings

	<i>Dependent variable:</i>					
	Corporate Net Lending (% GDP)					
	(1)	(2)	(3)	(4)	(5)	(6)
Trade Union Density	-0.138*** (0.041)	-0.121*** (0.031)	-0.091*** (0.026)			
Employment Protection				-3.394*** (1.009)	-2.974*** (0.863)	-2.476** (1.035)
RTI Score		0.011 (0.119)	-0.133 (0.122)		0.054 (0.111)	-0.057 (0.125)
FDI out (% GDP)		0.012 (0.012)	0.003 (0.012)		0.009 (0.011)	0.005 (0.012)
Real GDP Growth		0.014 (0.056)	0.116** (0.048)		-0.027 (0.055)	0.095** (0.046)
Real Interests		0.130** (0.064)	0.196*** (0.054)		0.077 (0.060)	0.115** (0.051)
Stock Capital.		-0.007* (0.004)	-0.002 (0.004)		-0.007* (0.004)	-0.001 (0.004)
Old Age Dep.		0.160* (0.095)	0.156*** (0.057)		0.156* (0.093)	0.146*** (0.057)
Corp. Income Tax		-0.103*** (0.032)	-0.094*** (0.024)		-0.113*** (0.032)	-0.103*** (0.024)
Net Lending Lag			0.478*** (0.052)			0.504*** (0.051)
Trade Union Density Lag			0.024* (0.014)			
Employment Protection Lag						0.789 (1.195)
Country Fixed Effects	✓	✓	✓	✓	✓	✓
Year Fixed Effects	×	✓	×	×	✓	×
Observations	474	474	474	474	474	474
R ²	0.617	0.715	0.780	0.607	0.708	0.780
Adjusted R ²	0.595	0.682	0.763	0.585	0.674	0.763
Residual Std. Error	2.350 (df = 448)	2.084 (df = 423)	1.800 (df = 439)	2.381 (df = 448)	2.110 (df = 423)	1.798 (df = 439)
F Statistic	28.834*** (df = 25; 448)	21.252*** (df = 50; 423)	45.679*** (df = 34; 439)	27.628*** (df = 25; 448)	20.519*** (df = 50; 423)	45.809*** (df = 34; 439)

Note:

*p<0.1; **p<0.05; ***p<0.01

a drop is associated with an increase in corporate saving by about 1.1 % of GDP (in total, Germany's corporate savings rose by about 2.5% of GDP in the same period). In this sense, almost 44% of Germany's increase in corporate savings could be associated with declining trade union density. Similarly, a back of the envelope calculation for Slovenia as one of the countries with the steepest decline in labor protection strictness in recent years suggests that about a third of the rise in corporate savings could be linked to labor market deregulation. To visualize these findings, Figure 2 plots the correlation between trade union density, the employment protection index and corporate savings given two-way-fixed effects and the full set of controls.

The analysis provides initial evidence for a negative relationship between labor power¹⁸ and corporate savings. However, the cross-national design also operates at a high level of

¹⁸ Robustness tests on p.11 in the appendix show that this relation also holds for bargaining coverage as an alternative measure of labor power.

aggregation, which makes it difficult to clearly identify the causal relation that my argument suggests. Whereas I control for the most relevant alternative explanations and for country- and time-specific unobservables, the development of trade union density and employment protection might still be endogenous to a range of factors that I am unable to grasp in this set-up. To counter these problems, the next section looks at a case study of corporate governance in Germany.

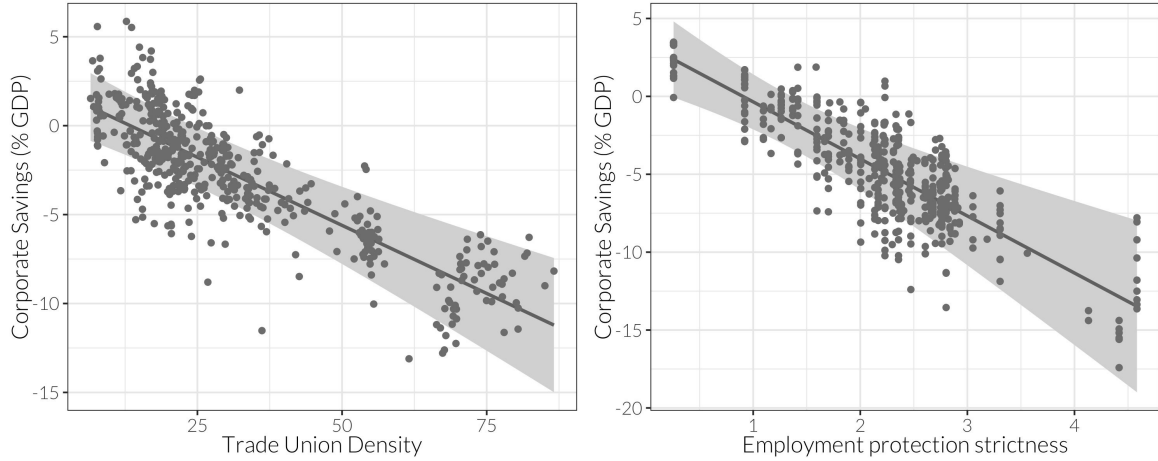


FIGURE 2: Corporate Savings & Labor Power Measures - Partial Residual Plots with 95% Confidence Intervals

4.3 Case Study - Co-determination and Corporate Savings in Germany

Germany provides a good context to study the link between corporate savings and labor power for three reasons. First, corporate savings in Germany constitute a substantially important issue. Since the mid-2000s, German companies have accumulated large proportions of retained earnings. These savings have contributed to sluggish domestic demand and have been a main driver of the country's massive capital exports and current-account surplus, which in recent years have turned into a major issue in European and international economic politics (Klug, Mayer and Schuler, 2019; Redeker and Walter, 2020). Second, Germany still has one of the world's most sophisticated systems of firm-level co-determination with a legal set-up that allows one to causally identify the effect of firm-level labor power on corporate savings. Third, this institutional set-up exists despite the fact that Germany, like many advanced economies, has experienced a rapid decline in trade union density and labor market regulation. This makes Germany a good case to track the effect of firm-level

labor power on savings and also allows us to tease out some of the relations between different sources of labor power empirically.

Measuring Corporate Savings at the Firm Level

I obtain firm-level data on corporate savings from Compustat Global. The database provides the financial statements of publicly listed firms in most advanced economies since 1990. For Germany, the total dataset includes observations on 1390 individual firms and about 18500 firm-years. I again focus on the savings behavior of non-financial firms and exclude all banks and other financial institutions. Since Compustat only lists publicly listed firms, the sample is somewhat skewed towards larger companies. However, since these firms account for a large share of Germany's output, employment and productivity, they provide a good starting point for investigating the savings behavior of German companies.

The main dependent variable of interest is a firm's savings in a given year. While this variable is not readily available in Compustat, it can be calculated based on information in the balance sheets. I follow Chen, Karabarbounis and Neiman (2017) in defining net savings as the excess of savings over investment and deducing it from a range of variables available in Compustat. Details can be found in the appendix (p.12). The resulting variable measures corporate savings at the end of each company's fiscal year. One problem with this measure is that the balance sheet data only registers capital expenditures in the company's country of origin. Similar to the cross-country analysis above, some share of my measure of net saving could thus stem from lending to foreign affiliates and therefore constitute FDI rather than actual savings (IMF, 2014).

I circumvent this problem by focusing my analysis on a narrower definition of savings: cash and short-term investments in financial markets. This measure is the sum of the balance sheet accounts "cash and cash equivalents and short-term investments"¹⁹ It includes cash holdings in firm's deposits as well short-term financial assets such as corporate bonds, government bonds, stocks and mortgage-backed securities. It excludes corporate savings that are used for longer-term investment in financial markets or the repayment of debt obli-

¹⁹ Cash and cash equivalents refer to financial assets with a maturity of up to 90 days.

Short-term investments include financial assets that a firm intends to liquidate within a year.

gations. While providing me with a more conservative estimate of corporate savings, this approach should be taken with a grain of salt. There is no one-to-one relation between a firm's liquid assets and its net saving position. Firms could, for example, issue long-term debt and acquire liquid assets, which would boost their cash holdings without changing their savings positions. At the same time, not all speculative assets are short-term (Duchin et al., 2017). However, the two measures are tightly correlated and in the period between 2008 and 2015 more than 60 percent of the variation in firms' net savings can be explained by their holdings of liquid financial assets. More details on the correlation between the two measures can be found in the supplementary materials (p.8).

Parity Co-determination as Randomly Assigned Profit-Sharing Power

The German Co-determination Act provides a handy case to test this claim that larger profit-sharing capacities lead to lower savings. In general, companies in Germany have a two-tier board system with a management and a supervisory board. The former consists of managers and is the main body responsible for running the daily business. Members of the supervisory board, on the other hand, have the right to supervise managers, to approve major corporate strategy and investment decisions and to appoint the members of the management board for at most five years, with the possibility of re-election (Section 84 (1) of the Stock Corporation Act). Their monitoring role and the fact that supervisory board members directly appoint managers provide them with powerful means to influence decision making (Lin, Schmid and Xuan, 2018).

Since the end of World War II German trade unions actively pushed for boosting the role of workers on these supervisory boards. The first models of co-determination were established under Allied rule in the late 1940s but remained restricted to the steel and coal industries (Schneider, 1989). In subsequent years, the German Trade Union Federation (DGB) successfully fended off several attempts to revoke co-determination rights in these industries and employed their growing membership base to advocate an extension of co-determination rights to the whole economy. Its case gained momentum when the Social Democratic Party (SPD) as its main political ally took office in the late 1960s. While trade unions used their growing political clout in the social democratic government to push for far-reaching reforms, resistance from employer associations and the SPD's Liberal coalition

partner also forced them into compromises including the fact that the final Co-determination Act in 1976 only established parity co-determination solely in big companies (Fetzer, 2010).

So far, this law stipulates that German firms with more than 500 employees have to allocate one third of their supervisory board seats to workers. The potency of co-determination, however, significantly increases when it comes to larger firms. The supervisory boards of firms with more than 2000 employees have to consist of an equal number of owner and employee representatives (Kim, Maug and Schneider, 2018). The law thus constitutes a prime example of profit-sharing capacities in the form of institutionalized labor rights. Managers in firms with parity co-determination have to justify their savings decisions to labor representatives and fear the prospect of failing to be re-elected if their strategies hurt workers' interests. While this power differs from firm to firm and is affected by institutional factors such as specific board voting rules, I assume that, all else being equal, the jump to fully fledged parity co-determination provides a significant increase in labor's profit-sharing capacities at the firm level.

To identify the causal effect of labor parity co-determination (LPC) on corporate savings, I apply a regression discontinuity design around the threshold of 2000 employees (Eggers et al., 2018; Sekhon et al., 2016). In a more formal way, German law stipulates that:

$$(1) \quad LPC_{i,t} = \begin{cases} 1 & \text{if } X_{i,t} > 2000 \\ 0 & \text{if } X_{i,t} \leq 2000, \end{cases}$$

where i indicates firms, t years and X the number of employees. Naturally, I can never observe both potential outcomes for the same unit (i.e. the exact same firm in the same year having parity co-determination *and* not having parity co-determination). However, the arbitrary statutory threshold allows me to analyze firms that are very close to this cut-off point and that should therefore be similar on most dimensions except for their respective level of labor power (Imbens and Lemieux, 2008).²⁰ The main model reads as:

²⁰ Gorton and Schmid (2004) and Lin, Schmid and Xuan (2018) use a similar design to analyze the effect of co-determination on firm valuation and working capital.

$$(2) \quad Y_{i,t} = \alpha + \tau \cdot D_{i,t} + \beta \cdot (X_{i,t} - c) + \gamma \cdot (X_{i,t} - c) \cdot D_{i,t} + \nu \cdot \Gamma_{i,t} + \epsilon_{i,t},$$

where $Y_{i,t}$ represents savings of firm i at time t , $X_{i,t}$ is the forcing variable and denotes the number of employees in firm i at time t , c represents the mandatory threshold of 2000 employees, D is a dummy that switches to one if a firm is across the threshold and $\Gamma_{i,t}$ constitutes a vector of control variables (e.g. year and industry fixed effects). The local difference between the intercepts of the regressions at both sides of the cut-off point constitutes the LATE. In the specification above, it is given by the coefficient τ of the treatment dummy $D_{i,t}$.

Identifying Assumptions

It is important to rule out two factors that could harm the set-up of the RDD design: Contamination by other treatments and sorting around the threshold. First, in order to pin down the effect of parity co-determination it is crucial that it is the *only* firm characteristic that changes at the 2000 employee threshold. I checked for a range of alternative regulations such as capital and corporate tax rates, financial disclosure rules and other corporate governance institutions. To the best of my knowledge, there are no institutionalized factors but parity co-determination that are affected by this particular threshold.

Second, firms should not strategically manipulate their number of employees in order to avoid having to establish LPC. If such sorting occurred, firms would self-select into treatment and control groups and treatment assignment would not be as good as a random. Two theoretical considerations mitigate these concerns. First, Lin, Schmid and Xuan (2018) argue that keeping the number of employees artificially small would imply that both managers and owners are willing to forgo future growth. Since firms close to the 2000 employee mark know that expansion at some point will mean that they have to implement co-determination, the actual benefit of reducing growth in order to postpone this point seems relatively small. Second, the fact that I am focusing on listed firms makes strategic sorting unlikely since the interests of managers, owners and shareholders may not be aligned. In particular, shareholders may object to situations in which they give up firm growth in order to manipulate the composition of supervisory boards. In line with these arguments, neither Lin, Schmid

and Xuan (2018) nor Kim, Maug and Schneider (2018) find any evidence for systematic clustering around the threshold and a Government Commission set up in 2005 to review the law on co-determination reported "only very few cases of companies avoiding board-level representation". As a sorting formal test, I use a McCrary (2008) density test to investigate the distribution of employment numbers around the threshold. If firms manipulated their number of employees to circumvent co-parity determination, we should, for example, see an uptick in the number of firms with just below 2000 employees. Figure B.6 in the appendix (p.13) plots the result. Visual expectation and statistical tests find no evidence for systematic clustering around the threshold (McCrary Test: $p\text{-value} = 0.37$).

As another indirect test of sorting, I perform a balance test, to check that covariates which might affect firms' saving behavior are continuous at the cut-off. Table B.1 in the appendix (p.14) shows the result of these tests for different measures of ownership concentration, sectoral composition and years for the sample. None of these firm characteristics are affected by crossing the threshold. It thus appears that business and operational considerations are the driving determinants of employment decisions for mid-sized firms.²¹

Analysis - Regression Discontinuity

To choose a bandwidth in which the assignment of the treatment is plausibly random, I rely on the data-based bandwidth selection method proposed by Cattaneo, Calonico and Titiunik (2015). To obtain the optimal bandwidth, I use a subsample of all firm-year observations with more than 1500 and less than 2500 employees. The result is an optimal bandwidth of about 165 employees on each side of the threshold, which includes 103 firms and 242 firm-year observations.²² However, since the optimal bandwidth calculations are not without criticism, I conduct sensitivity checks by varying the chosen bandwidth.

²¹ To fully rule out that my findings are driven by specific violations of the identifying assumptions of RDDs, I also exploit the panel structure of the data for a difference-in-differences design and find similar effects (see robustness checks and p.20 in the appendix).

²² I choose the subsample of firms with between 1500 and 2500 firms, rather than the full sample (ranging from companies with 10 to 60 000 workers) because the above-mentioned optimal bandwidth algorithms otherwise choose bandwidths that are too large (e.g., 1000 employees) to make credible causal inferences.

Figure 3 plots the cash holdings of firms with between 1835 and 2165 employees. My argument would expect a discontinuity in savings around the 2000 employee threshold (indicated by dashed vertical line). In line with this expectation, firms in which workers have a larger say in the supervisory board indeed seem to hoard less cash and liquid financial assets. This finding holds independent of whether I employ linear (a) or quadratic fitting (b) around the threshold.

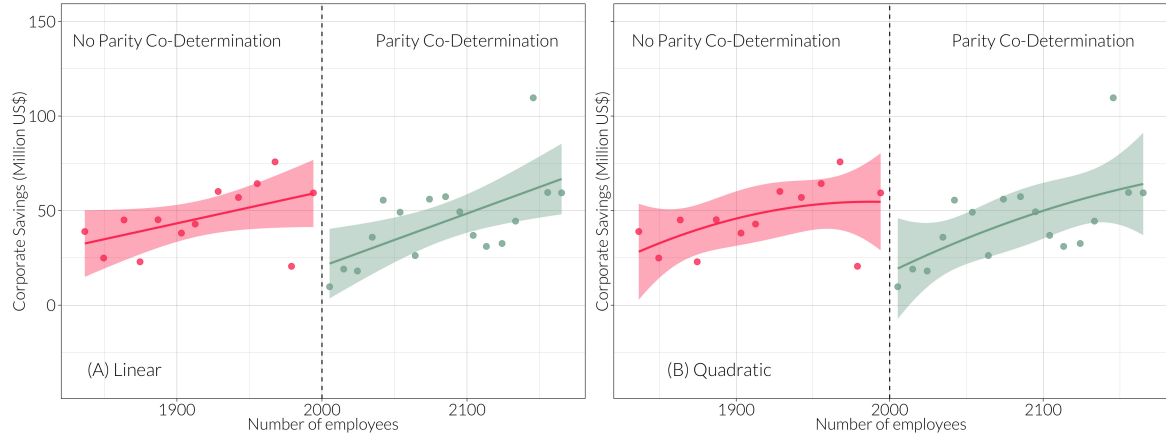


FIGURE 3: Regression Discontinuity Plots (95% Confidence Intervals) - Establishment of parity co-determination has a negative effect on corporate savings at the firm level

Table 3 displays the results of the main regression discontinuity analysis. Following Cattaneo, Calónico and Titiunik (2015), I report the bias-corrected local average treatment effect of LPC on corporate savings. Model 1 reports the baseline estimates. For mid-sized firms close to the 2000 employee threshold, those that are legally mandated to occupy half of their supervisory boards with worker representatives display significantly lower levels of corporate savings. The effect is statistically significant and large in substance. On average, firms with LPC hold about \$US 50 million less in cash and short-term investments than similar firms without labor representation. Model 2 adds industry- and year-fixed effects and model 3 furthermore clusters standard errors at the individual firm level. This does not change the results substantially.

Robustness Checks

I conduct a range of robustness checks. As the law on co-determination only applies to domestic employees, I reduce the sample to firms which have no foreign affiliations to make sure that the number of total employees listed in Compustat does not include workers outside

TABLE 2: The effect of labour parity co-determination on firm-level cash-holdings

RD Effect of Parity-Codeterminaiton on Corproate Savnigs					
Outcome: Corporate Savings					
	Estimate	95% CI	p-value	controls	clustered SE
(1) Parity Co-determination	--47.381	[-87.946, --6.816]	0.022	No	No
(2) Parity Co-determination	--52.696	[-90.129, -15.262]	0.006	Yes	No
(3) Parity Co-determination	- -52.513	[-92.074, -12.951]	0.009	Yes	Yes

The dependent variable of all models are firm-year observations of corporate savings, measured as the sum of cash holdings and short-term investments (in millions). Estimate is the bias-corrected average treatment effect at the cutoff of 2000 estimated with local linear regression with triangular kernel and a common MSE-optimal bandwidth of 165 employees at each side of the cutoff. Controls include fixed effects for years and sectors (manufacturing, service, trade and IT) and different measures of ownership concentration. Standard cluster at the individual firm level.

of Germany. As shown in Table B.2 (p.16) in the supplementary materials, this increases the magnitude of the effect while not affecting its statistical significance. As cash holdings are not normally distributed across firms, I rerun the RDD with logged savings as the dependent variable and also calculate the effect of parity co-determination on savings as a share of total assets. This does not change the results substantially and on average firms at the cut-off hold about 4.2 percentage points less in savings if they have to implement LPC (see Table B.3 (p.16) in supplementary materials). Moreover, the results also hold for standardizing savings by workers (Table B.4, p.17). To further corroborate this finding, I conduct placebo tests with arbitrarily chosen alternative cut-offs. If corporate savings are actually decreased by the implementation of LPC, negative effects should *only* occur at the mandatory threshold of 2000 employees. As Figure 4 displays, I find no indication that the level of corporate savings changes at randomly chosen alternative thresholds. To further rule out that the negative effect of crossing the threshold stems from something else than increased labor power, I rerun the RDD in countries which do not have similar changes of regulation at this cut-off. As Figure B.7 in the supplementary materials (p.18) shows, negative effects occur only in Germany. Furthermore, Figure B.8 in the appendix (p.19) shows the that my findings are not sensitive to the size of the bandwidth chosen.

As a final robustness check, I also change the identification strategy. Exploiting the panel structure of my data, I use a difference-in-difference design to compare the average change in savings in firms that cross the 2000 employee threshold to those that remain beneath it. Even in this very different set-up I find that adopting co-determination has a negative effect

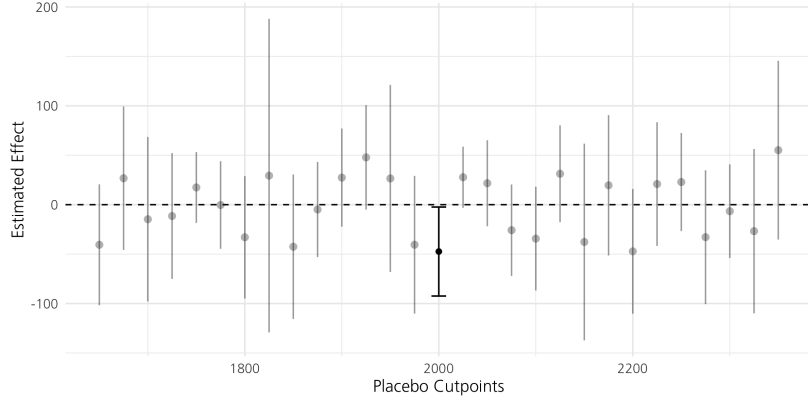


FIGURE 4: Placebo Tests with 95% Confidence Intervals - The negative treatment effect occurs only at the 2000 employee threshold.

on savings, which turns significant two years after the establishment of LPC. Details of the estimation and the full results can be found in the appendix (p.18).

Mechanisms

I also look into the mechanisms that my argument suggests. In theory, firms could decrease savings either by paying higher dividends to shareholders, by increasing remuneration for employees or by investing more. I argue that greater labor power leads to lower savings, as it enables employees to pressure firms into using revenues in ways that benefit their interests - above all for labor expenses and productive investment.

TABLE 3: Mechanisms: Effect on firms' spending behaviour

RD Effect of Parity-Codeterminaiton on Spending Behaviour						
	Dividends, Staff Expenses & Investment					
	Estimate	95% CI	p-value	bandwidth	controls	clustered SE
Dividends	-0.026	[-0.045, -0.007]	0.008	165	Yes	Yes
Staff Expenses (Wages & Salaries)	0.093	[-0.028, 0.215]	0.132	115	Yes	Yes
Staff Expenses (Other)	0.047	[0.025, 0.067]	0.001	144	Yes	Yes
Investment	0.084	[0.006, 0.165]	0.040	158	Yes	Yes

Dividends compromise the total amount of dividends declared on all equity capital of the company. Staff expenses (wages & salaries) include all labor expenses that are linked to the direct remuneration of workers. Staff expenses (other) captures forms of indirect remuneration of labor such as employee benefits plans and other social expenditure, pension and retirement expenses as well as social security contributions. The items are scaled by firm size measured in total assets. Investment is defined as the capital growth rate measured in annual changes of total investment (Peters and Taylor, 2017) divided by lagged total assets. Estimate is the bias-corrected average treatment effect at the cutoff of 2000 estimated with local linear regression with triangular kernel and MSE-optimal bandwidths. Controls include fixed effects for years and sectors (manufacturing, service, trade and IT). Standard errors are clustered at the firm level.

Compustat data on corporate expenditures is more limited than for savings. Nonetheless, Table 4 shows evidence in line with these arguments. While the establishment of parity-co-determination does significantly lower payouts to shareholders, it has positive but non-significant effect on expenses for wages and salaries. However, other labor-related expenses - which include employee benefit plans and other social expenditures as well as pension and retirement expenses - significantly increase at the threshold. Similarly, increased labor power also seems to have the expected positive effect on firm-level investment, measured as the annual change in total capital growth. The finding that investments increase in parity co-determined firms but wages do not may seem counter-intuitive but is in line with recent work by Heining, Jäger and Schoefer (2019). One possible explanation is that workers, especially in coordinated market economies such as Germany, often build long-term relations with their employers and, therefore, prefer productive investment that increases their job security over short-term rent extraction. Similarly, Germany's long history of cooperative labor-capital relations may tame workers' desire to use their increased leverage solely for wage hikes (Thelen and Turner, 1999). In any case, the fact that data on these items is patchier than for savings warrants caution in interpretation. Nonetheless, these results buttress the argument that higher labor power makes it more likely that surplus revenues are used in ways that benefit employees instead of being stashed in liquid assets.

In a final step, we can use the German data to link the macro- and the micro level results. Germany seems to experience two opposite trends. On the one hand, the firm-level analysis shows that co-determination decreases savings. On the other hand, the macro-level results suggest that declining tradeunion density has led to an increase of savings. How do these different trends relate to each other? To compare the different effects at the firm level, section C in the appendix (p. 22) constructs sectoral trends in trade-union density based on data from the German Socio-Economic Panel (SOEP). Though the data comes with several caveats, I am able to replicate the country-level results at the firm-level. On average, firms accumulate more savings the greater the decline in the associational power of trade unions in their sectors. Moreover, the magnitude of the effect of declining trade-union membership seems to dominate the effect of persistent co-determination. Though it is difficult to compare effect sizes across these very different models, this renders it plausible that the trend towards declining labor power and rising savings was somewhat mitigated but not stopped through co-determination.

Overall, these various tests support the argument. Since the strategy of hoarding cash and liquid assets on financial markets is at odds with the direct interests of workers, firms that are legally required to establish parity representation in their supervisory boards have significantly lower levels of savings. These findings support the notion that the broader erosion of profit-sharing capacities has contributed to the global rise of corporate savings.

5 Conclusion

The rise in corporate savings constitutes a silent but fundamental transformation in the functioning of some advanced economies. Firms in many developed countries seem increasingly reluctant to use their profits as a means to expand their business, to increase payouts to shareholders or to raise wages. Instead, they retain large shares of their revenues, accumulate big portfolios on financial markets and have turned into a net lender to other sectors. This development is not only economically puzzling. It also contributes to a long list of political and economic problems, ranging from rising inequality to excess financial fragilities and an actuation of global imbalances.

Much of the existing research ascribes the surge in corporate savings to macroeconomic and structural factors. This paper has argued that political factors play an important role in mitigating the trend. It suggests that stashing surplus profits on financial markets is at odds with the material interests of workers and employees. The erosion of political institutions and environments that strengthen the profit-sharing capacities of labor, therefore, has substantially contributed to the emergence of the corporate savings glut.

I test this claim using panel data from 25 OECD countries as well as by exploiting a natural experiment provided by the German law on co-determination. At the cross-national level, I find a robust association between the decline of trade-union power and the rise of corporate savings. In addition, the firm level provides causal evidence that increasing the profit-sharing capacities of workers leads to reduced savings and an increase of labor related expenses and investments.

As regards theory, these findings contribute to a burgeoning literature on the domestic sources of global imbalances and financial fragilities (e.g. Ahlquist, 2010; Baccaro and Pontusson, 2016) as well as to research on the political and economic consequences of declining labor power in advanced economies (e.g. Becher, Stegmueller and Käppner, 2018). They

also complement research on falling labor shares. Whereas economists point to rising market concentration (Autor et al., 2017, e.g.) and structural economic change (Karabarbounis and Neiman, 2012; Elsby, Hobijn and Sahin, 2013) as key reasons for declining labor shares, research in political economy has recently emphasized the role of declining trade unionism (Dao et al., 2017; Sung, Owen and Li, 2019). To the extent that rising savings are the flipside of larger profits, my findings add to this literature. However, the paper makes an important addition. It shows that declining labor power not only affects the division of the economic pie between capital and labor. It also influences how rising profits are used and whether growing capital shares are spent in ways that stipulate growth and employment or end up in short-term portfolios on financial markets. For policy, the finding that strengthening employee voices in corporate decision making has important implications for firms' saving and spending behavior can help to inform ongoing debates about possible policy strategies for strengthening the link between capital profits and general welfare.²³ While the specific effects of co-determination rights could differ depending on national legacies in labor-capital relations and the general institutional context, the finding that German co-determination helps funnel revenues into productive investments even in a context of declining profit-sharing capacities in other areas seems encouraging from a

policy perspective.

However, three caveats should be addressed in future work. First, skeptics of my approach might point out that the forms of profit-sharing capacities I investigate at the cross-country and the firm levels are quite different. While I would argue that trade unionism and parity co-determination are both factors that strengthen workers ability to champion their interests, future research could take a more systematic look into how specific profit-sharing capacities hold back corporate savings. Second, while most savings are still held in cash and short-term investments, not all forms of retained profits necessarily fall into these categories. It will then be important to find ways to include long-term financial assets within the measurement of savings. Finally, this paper has focused on the distributional conflict between workers and management. However, for an all-embracing picture of the rise in corporate savings, future research should further unpack the capital side of the story. Especially as regards listed

²³ For a recent example, see debates about Sen. Warren's Accountable Corporatism Act in the US (Klein, 2018).

firms, it is still striking that equity holders refrain from insisting on higher payouts. Future research should thus investigate the political conditions that alters owners' preferences or enable management to pursue saving strategies against the interests of owners.

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