Employment Flexibility and Capital Structure: Evidence from a Natural Experiment *

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Abstract

I exploit the variation in labor market programs in Spain to show that the use of more flexible (shorter and cheaper-to-fire) employment contracts increases a firm's debt capacity by reducing its operating leverage and probability of default. I use specific institutional features to separate this explanation from the labor bargaining channel. I further show that the result is stronger for firms that suffer most in bankruptcy, and that in downturns firms downsize using flexible labor, suggesting that employment contract structure is a significant component of expected default costs and of operating flexibility. Finally, firms respond with higher flows of both credit and equity, consistent with flexible contracts also relaxing financial constraints.

Keywords: Capital Structure, Fixed-term Contracts, Operating Flexibility, Operating Leverage

JEL codes: D22, G32, J41

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1 Introduction

The seminal work of Modigliani and Miller (1958) established the irrelevance of financing structure in a perfect market, implying that firms can make operational and financial decisions independently. The introduction of market imperfections, such as bankruptcy costs of debt, opens up the scope for the interdependence between the organizational structure of a firm and its financial strategy. Given that about 60% of output pertains to labor compensation (the so called "labor share"), it is important to understand how and why the structure of labor contracts can affect the financing decisions of firms, and what the consequences of this interdependence are. My paper uses a unique natural experiment to provide causal empirical evidence exploring these questions and the economic mechanisms behind them.

Specifically, I use a panel dataset of manufacturing firms in Spain to show that firms that employ workers on more flexible (shorter and cheaper-to-terminate) contracts use more debt financing in their capital structure. I further show that this is explained by flexible labor contracts being able to effectively reduce a firm's "operating leverage" (the fixity of the firm's costs) by making its wage claim more variable and contingent on the realization of demand shocks. This, in turn, reduces the probability of distress and increases the firm's debt capacity. While a large theoretical literature has broadly discussed this operating-financial leverage trade-off,[1] my paper provides the first direct estimate of the effect of using this flexible operating strategy – employing workers on more flexible contracts – on the capital structure of the firm.

Illustrating this causal link is important for two reasons. First, it provides the management of firms with a specific policy recommendation regarding project financing in the presence of heterogenous labor contracts. And second, it opens up an additional potential channel – the one through financial leverage – for management's choice of employment strategy to have an effect on firms' survival and long-term growth in the presence of frictions to capital structure adjustments. This in turn illustrates the potential indirect and undesirable consequences that government labor policies may have.

[1] See Van Horne (1977), Dotan and Ravid (1985), and Mauer and Triantis (1994) for seminal contributions on this operating-financial leverage substitution hypothesis.

The European labor market turns out to be an appealing candidate for testing the effect of flexible operations on capital structure. Partly compensating for rigid labor markets, various European countries naturally use two types of employment contracts – permanent (regular indefinite) and temporary (fixed-term) contracts – that differ dramatically in terms of the employment flexibility that they provide for firms. In particular, temporary employment contracts have a shorter duration and are much less costly to terminate than permanent contracts, thus providing firms with a higher degree of employment flexibility, which is especially relevant during economic downturns when distress becomes a concern. While many countries have a dual labor market of this or a similar sort, I focus on Spain because several of its institutional features allow me to cleanly measure the effect of a flexible employment strategy on the financing decisions of firms, and to isolate the economic mechanism behind it.

The first institutional feature of the Spanish labor market that specifically helps in separating the operating flexibility channel from other potential interpretations (such as differences in wages, employment conditions, or bargaining power of workers) is that in Spain, collective bargaining agreements cover both types of employment contracts equally, precluding firms from discriminating between workers based on their contract type. This makes the bargaining power of labor orthogonal to the firm's contract composition. This is crucially important, because without this feature, the operating-leverage explanation is in fact observationally equivalent to the strategic-use-of-debt explanation, as illustrated by Simintzi, Vig, and Volpin (2010) in the setting of renegotiable debt.[2]

At the same time, for a firm manager, it is essential to distinguish between these two explanations, because they have very different policy implications. While in the strategic-use-of-debt theory, firms proactively change debt policy in order to induce desirable employee outcomes, in the operating leverage story, there is no additional feedback effect on employment once the changes in

[2]In this strategic-use-of-debt theory, firms issue debt to make it harder for employees to capture parts of the surplus in the form of wages or job security, and a large literature has found evidence of such a behavior. Within this paradigm, debt has been shown to reduce the bargaining power of labor by lowering the available cash flow (e.g. Matsa, 2010, Agrawal and Matsa, 2013, Ellul and Pagano, 2017, and earlier contributions by Bronars and Deere, 1991, Dasgupta and Sengupta, 1993, Perotti and Spier, 1993), and to discipline firm's relations with workers by allowing for more frequent dismissals and reliance on part-time and seasonal labor (Hanka, 1998). Additionally, Benmelech et al (2012) have recently provided empirical evidence of firms renegotiating labor contracts to extract concessions from labor during times of financial distress. Their evidence can be used to illustrate this labor bargaining channel.

employment structure have affected financing. Thus, it becomes crucial to have a setting where the labor bargaining channel is shut down if one wants to measure the operating flexibility effect. My paper is unique in this respect, and it shows that flexibility matters.[3]

An empirical challenge that arises when one looks at the effects of operating strategies (and employment structure, in particular) on financing decisions is that firms naturally tend to choose their real and financial policies jointly as part of their value-maximization objective. I overcome this endogeneity problem by using the second institutional feature: the Spanish government has implemented a series of reforms since 1996 that provided incentives to firms to convert workers on the more flexible (temporary) contracts to the less flexible (permanent) contracts. These incentives were different over time, across regions, and across worker characteristics (such as gender).

I use all these layers of variation to construct an instrumental variable, which measures the incentives to employ a less flexible contract mix for each firm, based on the combination of its location, industry and pre-reform employment patterns, and instrument the firm-level share of flexible employment contracts with it. Importantly, because most of my data in fact correspond to conversions of contracts with the *same* employees, rather than a change in the composition of workers, I can ensure that other structural characteristics of the labor force (such as female composition or skill intensity) do not change by construction.

Such a detailed level of variation also allows me to include a battery of fixed effects, some of which are impossible in cross-country studies. Specifically, besides firm fixed effects (capturing time-invariant firm heterogeneity), I also include region-year fixed effects (capturing macroeconomic effects, region-specific fiscal budgets, unemployment rates, and cost of financing, etc), industry-year fixed effects (capturing unobserved industry shocks that could affect both financing and labor policies of firms), and even region-industry-year fixed effects in my tightest specifications (capturing region-industry-specific lobby power, differential trends in female employment, as well as non-uniform distribution of industries across regions).

I find a large economic effect of the share of flexible employment contracts on capital structure.

[3] Another important contribution in this stream of literature is a contemporaneous paper by Schmalz (2016), who attempts to model these two complementary channels within the same dataset, and notes that firms' responses to unionization are heterogeneous depending on the extent of financial constraints that they face.

A thought experiment of prohibiting an average firm from hiring workers on temporary contracts (i.e. reducing their proportion from the average of 23.9% to 0%) suggests that such a firm should reduce its debt-to-capital ratio by 4 percentage points, which corresponds to about 7% of the average debt-to-capital ratio across firms. Furthermore, temporary employment explains about one-sixth of the variability in debt-to-capital ratio, in terms of within-firm standard deviations.

I next provide additional results that explore the mechanism behind this effect. First, I provide micro-level evidence that workers on temporary contracts are used as a margin of the labor force adjustment during adverse business conditions, showing that these contracts are indeed the more flexible employment arrangements in practice. Then, by exploring cross-sectional heterogeneity in the severity of bankruptcy costs, I show that the effect of flexible employment contracts on capital structure is most pronounced for firms that would suffer the most in case of financial distress. These two pieces of evidence show that the lack of flexibility afforded to firms by their labor contract composition is an economically important component of expected default costs, and also of operating leverage, which in turn substitutes for financial leverage.

To paint a broader picture of the effects of flexible labor contracts on fims' financial policies, I explore how several other variables related to financing are affected by labor contract composition. I find that an increase in the share of temporary workers in a firm leads to both a significantly higher net flow of credit and a slightly higher net flow of equity (rather than, for instance, firms swapping debt for equity), consistent with the interpretation that flexible employment contracts also relax some of the firms' financing constraints. I also find suggestive evidence that employment flexibility also allows firms to depend less on external financing, since empirically they are less likely to be part of a group of companies and somewhat less likely to be traded on an exchange.

Finally, I provide evidence that the inability to adjust capital structure to changes in employment structure is related to default. Specifically, I show that in the subsample of liquidating firms there is no adjustment of leverage to employment changes. This finding is important in light of the recent literature documenting the existence of frictions and costs of adjusting capital structure (e.g. Leary and Roberts, 2005, and Faulkender et al., 2012, among others). In particular, if firms cannot adjust debt levels to the new optimum, then an exogenous shock to their operating strategy (e.g. through

labor market reforms) may leave them overlevered for a period of time, thus impacting their survival and long-term outcomes indirectly, through the link between operating strategy and financing.

Most broadly, the results of my paper emphasize the importance of further exploration of the interplay between different organizational strategies of a firm and its financing decisions. From the applied perspective, this interplay highlights the complementarity between CEOs' and CFOs' decision-making. Specifically, the results imply that the management of the firm in fact makes operational and financial decisions jointly, despite them usually being under the responsibility of different divisions in the firm. From the policy perspective, it suggests that exogenous changes in government policies that eventually aim at certain organizational changes in firms (job security promotion in my case) will have consequences for firms' financing decisions, and possibly indirect unintended effects on long-term survival and growth, that are to be taken into account.

My paper contributes to several strands of the literature. First, it relates to the research on the interactions between labor economics and corporate finance (see Pagano and Volpin, 2008, and the most recent survey by Matsa, 2018). A large strand of this literature has focused on the effects of labor policies, typically related to unionization, on firms' real decisions and outcomes.[4] Most closely my paper connects to the two contemporaneous studies by Simintzi, Vig, and Volpin (2015) and Serfling (2016), as they look at employment-related laws and capital structure, both in the reduced-form framework. Specifically, Simintzi, Vig, and Volpin (2015) explore the changes in employment protection legislation in a panel of European countries, while Serfling (2016) uses an earlier methodology of Autor, Kerr, and Kugler (2007) to explore the passage of the "good faith exception" law by the U.S. state courts. These studies show that in countries (states) where such laws pass, firms on average decrease leverage more than those in other countires (states), after the passage of these laws.

My paper is conceptually different from all the above studies in that it explores a specific active management strategy – the one of employing workers on more flexible contracts – that firms can undertake in practice to optimally manage their operating flexibility. This is an important

[4]Example include: profitability and market values (Ruback and Zimmerman, 1984; Abowd, 1989; Hirsch, 1991; Lee and Mas, 2012), cost of equity (Chen, Kacperczyk and Ortiz-Molina, 2011), investment and economic growth (Besley and Burgess, 2004).

distinction, because while firms more or less passively adapt to the laws (or unions) that they face, they can actually proactively choose whom and and on which contracts to hire. Unlike other papers in this growing field, I actually observe the firm-level policy variable in the data – the share of flexible contracts. This, as I argue, is effectively the main observable "revealed-preference" measure of firm-level employment flexibility[5]. I can therefore calculate the magnitude of the causal effect of this management strategy on capital structure, give a policy recommendation for firms, and, as mentioned above, identify the operating flexibility channel by using a framework where labor bargaining considerations are absent.

My paper is thus also a part of a larger literature that has modeled various management strategies that a firm can undertake to actively increase its operating flexibility, and their implications for the risk of the firm and its financial policies (including capital structure and hedging behavior). Some examples include flexible production (e.g. in the form of choosing technology with lower costs of shutting down and reopening a plant, as in Mauer and Triantis, 1994, or Reinartz and Schmid, 2016), flexible pension funding (in the form of adopting a defined contribution, rather than a defined benefit, pension plan, as in Petersen, 1994), as well as using various operational hedges (e.g. in the form of geographically dispersed production, as in Allayannis et al., 2001, or matching destinations of imports and exports, as in Kuzmina and Kuznetsova, 2018). To the best of my knowledge, such active management strategies related to the choice of employment structure have not been explored in the corporate finance literature. My paper fills this gap.

As such, it also extends prior work that has developed quantitative measures of operating leverage and operating flexibility and illustrated how these measures relate to financial structure. Because firms do not disclose costs on the basis of whether they are fixed or variable in their financial statements, they have been typically quantified using more indirect approaches, such as estimating

[5]In my setup, firms with a higher proportion of flexible contracts will have unambiguously higher employment flexibility by definition of these contracts (and also empirically). This is in contrast to measures of employment protection that, although used often in the literature, may not necessarily represent this particular type of employer costs (Myant and Brandhuber, 2017). Furthermore, such measures are not fully comparable in cross-country studies, because firms in different countries have access to different sets of permanent and flexible contracts, and thus endogenously choose different levels of employment flexibility depending on the relative characteristics of these contracts. Because of this endogenous response, considering employment protection on only one type of contract (as in Serfling, 2016, for example) could also overestimate the change in actual employment flexibility when firms can adjust their contract mix towards the more flexible forms of employment.

the sensitivity of EBIT to sales (Mandelker and Rhee, 1984), growth of costs to growth of sales (Kahl et al, 2012), costs to negative sales growth (Chen et al, 2013), the share of SG&A expenses to operating costs (Du et al, 2012), or more structurally, by calibrating elasticities of substitution between different inputs and different products, and shadow rents of buildings, machinery, and workforce (MacKay, 2003). My paper provides a greater resolution to these studies by showing that the structure of employment contracts is an economically important firm fundamental that contributes to operating flexibility, and calculates that it explains about 17% of the sensitivity of EBIT to sales.

Finally, I also broadly relate to the literature studying the determinants of capital structure choice (e.g. Titman and Wessels, 1988, Rajan and Zingales, 1995), and especially in the framework of natural experiments (e.g. Vig, 2013, among others). Given that a considerable part of the variation in capital structure, both across and within firms, is yet unexplained (Lemmon, Roberts, and Zender, 2008; Frank and Goyal, 2009), my findings highlight the importance of studying operating strategy and organizational structure as integral determinants of financing decisions of firms.

While there are important benefits of using the institutional setup of Spain in terms of precisely identifying the effect of interest, one may be concerned about the external validity of my results. In terms of the labor market, the Spanish setting is not only close to some other European countries that have a labor market that is flexible "on the margin",[6] but it is also broadly comparable to the U.S. First, because in terms of workers' bargaining power in bankruptcy, Spain has the same pension priority (which is the main liability in bankruptcy) as the U.S. (Ellul and Pagano, 2017). And second, because the use of temporary contracts can largely counterbalance the more rigid nature of the labor market in Europe. Furthermore, the original models of a two-tier labor market were developed in the U.S. context (see Saint-Paul, 1996, for an overview). In these models, which largely contrast "good jobs" versus "bad jobs", the upper tier is characterized by high wages and high employment security, and the lower tier by low wages and low employment security. As such, the message of my paper would also broadly apply to other types of employment arrangements

[6]Similarly to Spain, Italy, the Netherlands, Belgium, Portugal, and Sweden liberalized the use of temporary contracts in 1980s-1990s. The Netherlands and Portugal, as well as Poland, have very high temporary employment rates similar to those in Spain (above 20%, see OECD, 2017), and even the largest EU economies – Germany, France and Italy – each expresses significant shares of temporary employment (13%, 16%, and 14% respectively).

that may exist in other countries, such as formal versus informal labor markets.[7] There are several other aspects (such as renegotiation with creditors and the ways of achieving flexibility in the debt market, discussed in more detail later in the paper) that make the setting of Spain close to other European countries and the U.S., suggesting that the results of my paper would in principle apply more broadly.

The rest of the paper proceeds as follows: Section 2 outlines the details of the institutional environment; Section 3 builds on the identification strategy and describes the data; Section 4 presents the empirical results of the effect of employment flexibility on capital structure; Section 5 provides evidence of the operating-financial leverage mechanism behind these results; Section 6 presents additional results on other margins of financing; Section 7 explores how (non-)adjustment of capital structure relates to default; Section 8 concludes and discusses policy implications.

2 Institutional Environment

2.1 Dual Labor Market

A dual labor market consisting of workers who are characterized by different degrees of job security exists in virtually every country, either informally (with "under-the-table" payments) or formally (with different legal contractual arrangements with employees).[8] Spain provides an excellent laboratory to study the effects of the structure of labor contracts on financing decisions of firms for several reasons.

First of all, the labor market in Spain is a formal dual market, which enables one to accurately measure the composition of the labor force in terms of employment contracts. Second, temporary contracts are not an artifact and are commonly used in practice there. In fact, the level of temporary

[7] The latter accounting for a substantial 20% in the U.S., according to some recent estimates (e.g. Bracha and Burke, 2016).

[8] Although there is a debate on whether the U.S. have a dual labor market (see Saint-Paul, 1996, for an overview), the original models of the two tiers within regular employment were developed in the context of this country. As for non-regular employment, at least 6% of the employed in the U.S. can be classified as "temporary" workers (see Farber, 1999, and Addison and Surfield, 2006). These include agency and direct-hire temporaries, on-call workers, day laborers, and contract employees, and are on top of regular and self-employed workers. Informal employment can be also thought of having even less (virtually absent) job security, but it is harder to estimate accurately, and it is characterized by even more confounding differences from regular employment besides job security.

employment in Spain (currently at 26% of all salaried workers as of 2017) has been the highest among the European countries for a long time, followed by Poland and the Netherlands (OECD, 2017). It is still not too far from the European average of 14.2%, suggesting that temporary employment contracts are important building blocks of the labor market system in Europe.

Finally, and more importantly, these two types of contracts are very similar across most dimensions and differ only in the associated explicit and implicit firing cost, and thus employment flexibility on the side of the firm. Specifically, workers on temporary and permanent contracts often perform the same job within a firm, and they are all covered by collective bargaining agreements that preclude firms from discriminating based on the contract type, e.g. by paying them different wages or providing different employment conditions (Jimeno and Toharia, 1994). These agreements are arguably exogenous for firms, since they apply to all firms equally irrespective of whether they participated in the actual bargaining process or not, and for the vast majority of firms,[9] they are set at levels higher than the firm, such as industry provincial or industry national.[10] These features allow me to control for the bargaining environment, and this is crucial, because if higher employment flexibility on the side of the firm in fact proxies for lower bargaining power of labor, a priori, one does not know whether an empirical relationship between employment flexibility and debt is due to the bargaining explanation, or due to operating-financial leverage substitution.

The difference in firing costs between the two types of contracts is dramatic. In terms of explicit cost, when a temporary worker is dismissed (or not converted into a permanent employee after having already been employed for the maximum legal limit of three years), a firm pays up to 12 days of wages in severance payments, as opposed to 33 to 45 days of wages for permanent workers (Jimeno and Toharia, 1994). The absolute difference is even larger, since both figures are per year of seniority, and permanent workers are more likely to have worked in the firm for longer. Additionally, permanent workers if fired would often sue firms for "unfair dismissal", thereby imposing substantial administrative costs on them, while temporary workers do not have such a right. And in terms of implicit firing cost, a firm may simply choose not to renew the temporary contract upon expiration

[9] 85% of firms in manufacturing, as reported by Izquierdo et al (2003).

[10] The results of my paper (reported in Internet Appendix Table 1) are also similar for the subsamples of smaller and lower productivity growth firms that are most likely to be outside of the bargaining process.

of its term. Anecdotal evidence suggests that temporary contracts with some employees get renewed *every week*, providing the firm with exceptional flexibility through the option to downsize almost immediately, thereby reducing the wage bill for the next period, and escaping distress at the margin.

So why do firms have a mix of employment contracts, given that one type of a contract should not in principle dominate another in an equilibrium? Spain's dual labor market originated in the 1984 reform which recognized the need for flexibility in the labor market by extending largely the applicability of temporary employment contracts. After the reform, almost *all* new hires were in fact on temporary contracts (Guell and Petrongolo, 2007), suggesting that on the margin firms may have considered one type of contract to dominate the other – at least at the moment of choosing which contract to offer to a new hire.[11] Together with the pre-1984 variation in hiring cycles across firms (e.g. due to retirement of existing workers), this defined the time-series history-dependent evolution of the share of temporary workers that each firm achieved by the mid-1990s, when the new reforms, reversing the employment liberalization policy, were introduced.

In the long-run, however, the equilibrium share of temporary workers is likely to be determined by the trade-off between firing flexibility on the temporary contract side and higher productivity on the permanent contract side (Blanchard and Landier, 2002), with a few corresponding correlates identified in the literature. In particular, firms that value firing flexibility more (e.g. those that are subject to more volatile product demand, as in Abraham and Taylor, 1996, or more competition as in Aparicio-Fenoll, 2015), firms that have less need for firm-specific human capital investment, which requires employment protection (as in Jaggia and Thakor, 1994, or Wasmer, 2006), are likely to have a higher proportion of fixed-term workers on average.

Ultimately, investigating the effects of the structure of labor contracts on financing decisions of firms is very appealing in the framework of the Spanish institutional setup for several reasons. First, the difference across firms in the composition of employment contracts can fully characterize the difference in the degree of employment flexibility on the side of the firm, keeping other labor market effects, such as union-level bargaining, constant. Second, the large difference in firing costs

[11] Eventually temporary workers have to be converted to permanent contracts (or dismissed), so temporary employment is also hypothesized to work as a "stepping stone" towards regular employment – not only in Spain, but also in the U.S. (Farber, 1999) and the U.K. (Booth et al, 2002).

between the two types of contracts implies that firms operating with different contract compositions will be far apart in terms of their employment flexibility, giving more statistical power in identifying the effect. Finally, the Spanish government has implemented a number of reforms that will help in terms of causal identification.

2.2 Region-Specific Government Labor Policies in Spain

Spain's dual labor market originated with the 1984 reform which recognized the need for flexibility in the labor market by extending largely the applicability of temporary employment contracts. As a result, their use quickly rose to 35% (29% in manufacturing) by 1995. Empirical evidence for some of the European countries[12] suggests that such dualism in the labor market may have negative effects on the economy. And indeed in the late 1990s the Spanish government partially reversed the employment liberalization policy by introducing subsidies to firms for converting temporary contracts with existing workers into permanent ones and for hiring new workers from the unemployed on permanent contracts.

The Spanish government has subsidized the creation of permanent contracts at both the national and regional levels. Since national reform affects all firms equally and at the same time, one would not be able to credibly attribute within-firm changes in employment composition to the effect of the reform, rather than, for example, to some country-level macroeconomic shocks. On the other hand, the reforms at the regional level show much more variation due to the different timing of their implementation, distinct worker eligibility criteria (such as gender), and different amounts to be paid to firms in case of a new permanent contract creation.[13]

These regional subsidies were paid to the firm once at the time of creating the new permanent contract, either as a direct transfer to the firm or as a reduction of payroll taxes, per each contract.[14]

[12] Blanchard and Landier (2002) for France; a survey by Dolado, García-Serrano and Jimeno (2002) for Spain.

[13] In terms of the regional composition, Spain is one of the most decentralized countries in the OECD: there are 17 autonomous communities, each having its own executive, legislative, and judicial powers; with tax devolution in the country similar to the U.S. (OECD, 2016). The regions are quite diverse, with Catalonia, Madrid, and Andalusia being the largest in terms of both population (about 6-8 mln people each) and GRP (comparable to e.g. Greece), and Cantabria and La Rioja being the smallest (0.3-0.5 mln people each and GRP comparable to e.g. Paraguay).

[14] The scope for manipulation on the part of the firm aimed at obtaining the subsidy without any real changes in employment is limited: only workers who have held a temporary contract within the same firm (or were unemployed) for a certain period of time, usually at least a year, are eligible for subsidized permanent contract creations.

In most region-years the two types of subsidies were exactly identical; therefore I do not differentiate across the two in my empirical analysis, and record the maximum available subsidy value for each region-year-gender. Also, as Guell and Petrongolo (2007) mention, over 90% of the new permanent hires in 1994-2002 in Spain were from temporary contracts, rather than from the unemployed. This implies that the results of my paper mostly correspond to the pure experiment of the change in the terms of contract with the *same* employee, rather than of a change in the composition of employees. This is very important because it automatically ensures that other structural characteristics of the labor force (such as female composition or skill intensity) do not change in this type of experiment.

I summarize these maximum statutory subsidy amounts that a given firm could receive per contract by region, year, and gender of the worker in Table I.[15] [16] As can be seen from this table, the time profile of the policies is diverse: some regions, such as Andalucia, implemented these subsidies every year from 1997 onwards, some – only in certain years, while Catalonia, for example, did not introduce any regional-level subsidies at all during the sample period considered. One can also note a considerable variation in subsidy amounts across regions, years, and workers' genders that range from just 1653 Euros in the Baleares community to more than 15000 Euros in Madrid per contract.

2.3 Debt Market

Putting in a perspective, although the U.S. has a more flexible formal debt market (both ex-ante in the form of better firm-creditor matching, and ex-post in the form of flexible enforcement of covenants), its more regulated nature in Europe (and in Spain in particular) is to a significant extent counterbalanced by firms through, for instance, a wider use of trade credit as a means of financing. In particular, accounts payable constitute about 22-26% of assets in manufacturing firms in countries like France, Spain, Belgium – as calculated by e.g. Garcia-Teruel and Martinez-Solano

[15] More information on these regional policies may be found in García-Pérez and Rebollo-Sanz (2009) who have assembled these data from multiple public sources.

[16] Sometimes it was not clear what this maximum value in Euro could be (e.g. Valencia in 1998-2000 offered subsidies as percentages of payroll tax). For these region-years I recorded a missing value. In my empirical analysis I also did a robustness check imputing values from total wage bill information and the results were similar. Given that such imputation has to rely on additional assumptions, I opted to exclude such region-years from the main analysis.

(2010). Importantly, similar to financial debt, trade credit also involves substantial costs of financial distress that are priced both ex-post (in an extreme case such as the termination of a valuable long-term buyer-supplier relation and seizure of collateralized goods, as in Petersen and Rajan, 1997) and ex-ante (as a high implicit interest rate compensating for the default premium, as in Cuñat, 2007). The existence of this kind of debt also makes the overall market for credit more flexible. Specifically, with many firms and suppliers, a better ex-ante buyer-supplier matching would result, while ex-post long-term buyer-supplier relationships would make enforcement of trade credit even more flexible than it would be in a competitive debt market (Wilner, 2000). Accordingly, including trade credit in the measure of leverage would make the Spanish setting more comparable to the U.S. in terms of the debt market flexibility, which is what I do following the approach of Rajan and Zingales (1995), who argue that "in countries, or specific classes of firms which use trade credit as a means of financing, accounts payable should be included in measures of leverage."

3 Data and Empirical Strategy

3.1 Data Description and Variables Definition

The results in this paper are based on three sets of data. I combine firm-level data, region-level data on subsidies, and industry-level data on the gender composition of the workforce.

The firm-level data come from the *Encuesta sobre Estrategias Empresariales* (ESEE) and span the years from 1994 to 2006. This is a panel dataset of Spanish manufacturing firms collected by the Fundación SEPI (a non-government organization) and the Spanish Ministry of Industry. The ESEE is designed to be representative of the population of Spanish manufacturing firms and includes on average about 1700 firms per year. The response rate in the survey is 80% to 100% annually, and when firms disappear over time due to attrition, new firms are re-sampled to ensure that the panel remains representative.[17]

The dataset contains information on both private and public firms. 14% of firms that enter

[17] Details on the survey characteristics and data access guidelines can be obtained at https://www.fundacionsepi.es/investigacion/esee/svariables/indice.asp.

the data with more than 200 employees will at some point trade on an exchange. Among smaller firms this percentage is less than 1%. Firms in the sample represent all 17 regions (autonomous communities) and 2-digit NACE industries.

I use the ratio of total debt to total capital as a measure of leverage. It is defined as the sum of total short- and long-term debts (including bonds, debts with financial institutions, debts with affiliated companies, and accounts payable) over total capital (defined as the sum of these debts and book equity).[18] As reported in Table II, around 57% of firm financing comes from debt.[19] Although the survey is anonymous and the data cannot be matched to market values of equity, this does not pose a problem given that most firms are private anyway.

This is a unique dataset in that, on top of the basic balance sheet information and the total number of employees, it contains information on their contracts. In particular, I can directly measure the fraction of workers employed on temporary contracts at an annual basis. As shown in Table II, 269 employees work in an average firm, 24% of whom have temporary contracts in the year the firm enters the data.

Firm size, measured as the natural logarithm of the firm's real sales, is equal to 16, which corresponds to approximately 8.8 million in real 2006 Euros. Average profitability, measured by a firm's operating profit margin (defined as the ratio of sales net of purchases and labor expenses, to sales), equals 23%. To proxy for growth opportunities, I also measure research and development intensity defined as the ratio of R&D expenditures over sales. Finally, I use the modified Altman z-score to account for the financial distress status of the firm.[20] These variables are typically found to be determinants of capital structure choice (Titman and Wessels, 1988, Rajan and Zingales, 1995, Frank and Goyal, 2009) and will be used as firm control variables in some of the analysis. Some

[18] This measure specifically excludes pensions, deferred taxes and other provisions. It does, however, include trade credit, consistent with the argument in Rajan and Zingales (1995). Yet, due to data limitations, it is not possible to separate it out empirically to see which component of debt is potentially more important and sensitive to labor contract composition.

[19] With accounts payable included this number exactly corresponds to the one for the U.S. reported in Rajan and Zingales (1995).

[20] The modified Altman's z-score is $3.3\frac{EBIT}{Total\ Assets} + 1.0\frac{Sales}{Total\ Assets} + 1.2\frac{Working\ Capital}{Total\ Assets} + 1.4\frac{\text{Re}tained\ Earnings}{Total\ Assets}$ (Altman, 1984, MacKie-Mason, 1990). Because ESEE does not separately provide retained earnings, I use the first three components of the z-score as a control. I capture the forth component in the regressions by using various sets of fixed effects. For example, using industry-year fixed effects assumes that this ratio varies similarly across firms in the same industry over time.

specifications will also include tangibility (measured by the share of gross buildings and land in total assets)[21] and average wage (defined as gross wages and salaries, compensation, social security and supplementary pensions contributions, and other social spending, per employee, in real 2006 Euros), as control variables.

All firms report the location of their industrial plants, and I use the region of the largest plant in terms of employment to merge firm-level data with the data on regional subsidies. Given that 85% of firms have just one plant and an additional 6% of firms have two plants, both in the same region, this constitutes the exact merge for the majority of firms (with the results robust to estimating everything using the sample of these firms). Table II also reports the average values of maximum statutory subsidy amounts per eligible worker (i.e. per each new permanent contract created), as well as the expected subsidy per employee (the instrument, defined below in Section 3.4), which are equal to 3523 and 816 Euros, respectively. Given the average yearly wage of about 29 thousand Euros, this corresponds to a one-time subsidy covering about 8 weeks of salary for a worker who was actually converted from temporary to permanent, roughly corresponding to the numbers reported in García-Pérez and Rebollo-Sanz (2009).[22]

Finally, I use the data on the proportion of women and men across all types of workers by industry, as provided by the Spanish Labor Force Survey. These gender intensities will be used to construct the instrument in Section 3.4. They are measured as of the 4th quarter of 1993 and are listed in Table III, showing a considerable cross-industry variation. For example, more than three quarters of all employees in the "Apparel" industry are female, while women constitute less than 5% of all workers in the "Other transport equipment" industry. These industry ratios are quite stable over time, but in order to mitigate endogeneity concerns, they are kept fixed at the pre-sample year in the analysis.

[21] As ESEE records only the total value of depreciation and amortization across all types of assets, I cannot construct a more common measure of tangbility, such as e.g. net fixed assets over total assets. I opted to define it in terms of buildings and land only, since these assets typically do not lose their collateral value when depreciated and they are more readily redeployed than equipment, which is essentially what matters in determining the amount of debt. The results in the paper are, however, robust to allocating all accumulated D&A to tangible assets, as well as proportionally to gross tangible and intangible assets.

[22] The averages reported in Table II correspond to all years from 1994 to 2006, so also include a period when regional subsidies were equal to zero. Conditioning on the period after 1997, these averages become 4288 and 994, respectively. The one-time subsidy thus covers $52 \cdot 4288/28790 = 8$ weeks of salary .

3.2 Panel Framework

The main hypothesis of the paper is that a more flexible composition of employment contracts increases the debt capacity of a firm, through changing its operating leverage, the corresponding probability of default, and expected bankruptcy costs. Hence I estimate the following relationship:

$$D_{it} = \alpha_{rt} + \alpha_{st} + \beta Temp_{it-1} + X'_{it}\gamma + \eta_i + \epsilon_{it}, \tag{1}$$

where D_{it} is the ratio of total debt to total capital of firm i in year t, α_{rt} are the region-year fixed effects, α_{st} are the industry-year fixed effects, $Temp_{it-1}$ is the proportion of workers on temporary contracts in the prior year[23], X'_{it} are various firm-level control variables included in some specifications to account for firm-specific shocks, and η_i are firm fixed effects.

The panel structure of the dataset allows me to explore what drives within-firm changes in financing decisions by holding constant time-invariant heterogeneity across firms. Some examples include whether the firm in general has a more variable cash flow, whether it is a small business with a distrust of credit and banking, or whether its tasks generally require more human capital specificity.

In addition, including region-year and industry-year fixed effects makes sure that the differences in leverage ratios are not explained by firms potentially having differential access to credit over time induced by their location in more or less credit-abundant regions, macroeconomic effects driving the cost of financing, or any cross-industry variations over time. Also, if there is generally more pressure from the society against firing workers in regions with higher unemployment rates and firms take more conservative debt policies there, region-year fixed effects will also capture such differences.

Although the specification in equation (1) accounts for many sources of confounding variation, there is still a possibility for the time-varying unobserved component of the error term being correlated with the firm's choice of employment composition. Below I provide several potential reasons for such a correlation, discuss the direction of the bias in the panel OLS estimate, and explain how

[23] I have allowed for a one-year lag in the independent variable, because it may take time for the firm to change its capital structure policy upon changes in employment policy, given that these decisions are likely to be made by different divisions in the company. Empirically contemporaneous and lagged values of Temp are highly correlated, and the results are qualitatively similar to using contemporaneous values.

I address this endogeneity.

3.3 Endogenous Choice of Employment Flexibility

There are many reasons why firms may choose the composition of employment contracts endogenously. One of them is the firm's investment opportunity set, whereby firms that have a large range of uncertain projects can prefer to hire workers under more flexible contract arrangements. At the same time, if investors rationally anticipate potential project substitution, they will supply less debt. Another idea, brought about by Caggese and Cuñat (2008) points out that financially constrained firms may hire more temporary workers, thereby generating a "demand for flexibility". If such firms are also less levered, this would also show up as a spuriously low correlation between flexible labor contracts and debt.

Another important unobserved factor could be the firm's time-varying desire to stimulate human capital investment. Jaggia and Thakor (1994) argue that since firm-specific human capital is lost in bankruptcy, firms that wish to induce employees to invest in human capital can offer longer-term contracts and precommit to more conservative debt policies.[24] If the reason for offering permanent employment contracts is the need for firm-specific human capital investment and firms take less debt, we would observe a spurious positive correlation between flexible employment and debt.[25]

Finally, suppose that firms indeed adjust their labor force by laying off temporary workers in order to meet their debt obligations when faced with negative shocks – the very mechanism behind the operating-financial leverage substitution. Then, when they do so in response to bad economic conditions, the debt-to-capital ratio will increase mechanically, since equity in the denominator will be hurt by the same negative shock. This implies that if the hypothesis of this paper is true, then estimating (1) by OLS will bias the coefficient of interest downwards. To this extent, finding that

[24] A similar conclusion is reached by Graham et al (2014), who show that corporate bankruptcy leads to significant earnings losses. Wasmer (2006) also models the idea that that employment protection in the form of longer-term contracts stimulates investment in firm-specific human capital.

[25] A similar concern arises if workers willing to invest into human capital self-select into permanent contracts only when firms carry relatively low debt levels. Given high unemployment rates in Spain during the period considered, it is unlikely that workers had much bargaining power in choosing the type of the contract under which they were employed. Still, even if they did, the instrumental variable approach that I use further on in the paper would alleviate this concern as well.

the magnitude of the panel OLS coefficient is lower than the true effect provides some indirect evidence towards the mechanism of this paper.

These and similar reasons illustrate the importance of using the variation in the proportion of temporary employment that would be orthogonal to firm's investment opportunity set, financial constraints, demand for human capital investments, unobserved product demand shocks, and other reasons. In my paper, this variation is provided by the regional government subsidies, discussed in Section 2.2. I now proceed with a brief description of how I use these subsidies in the instrumental variable framework.

3.4 Implementation of the Identification Strategy

To establish the relationship between employment flexibility and the capital structure of a firm, I estimate β in equation (1) through IV-2SLS using government labor policies as the source of variation. Firms were affected by these policies differentially depending on both the statutory amount of the subsidy in their region and the number of eligible temporary workers these firms had according to that particular region's criteria.

To exemplify the source of identification, let's consider, for example, a firm located in Baleares autonomous region. In 2000, such a firm was eligible to receive a one-time 1653 Euro subsidy for every female worker it converted from a temporary employment contract to a permanent contract. But if the firm did not employ women on temporary contracts in the first place, this subsidy would not affect its proportion of temporary workers.

The intuition behind the identification strategy can be further illustrated by the similarity with a difference-in-differences approach. A given increase in the statutory subsidy amount brings a larger increase in incentives to substitute away flexible contracts to firms that employ more workers that are eligible for subsidization (women on temporary contracts in the above example). The effect of the reduction of flexible employment can then be estimated by comparing capital structures across firms that have high and low eligibility to substitute flexible contracts. Inasmuch as the cross-sectional variation in the proportion of eligible workers is driven by predetermined firm characteristics, their potential direct effect on capital structure can be controlled for with firm fixed

effects. At the same time, region-year fixed effects capture all time-series variation in temporary employment within regions, which could be related to the relative size of regional budgets and corresponding governmental choices of subsidy amounts, as well as region unemployment rates and other macroeconomic conditions.

The identification assumption of such a test is that the remaining variation is not correlated with things such as a firm's investment opportunity set, financial constraints, or other firm-specific shocks. Importantly, this also means that the actual amounts of subsidies received by firms would not constitute a valid instrument, since firms may endogenously self-select into participating in the regional subsidy program depending on their current unobservable characteristics. The expected amount of subsidy that a given firm in a given region was eligible to receive in a given year, on the other hand, is by construction unrelated to the firm's current conditions.[26] In other words, one can use the following expected subsidy amount to predict the shift in a firm's use of temporary labor:

$$ExpectedSubsidy_{it} = \sum_{g} w_{i0}^{T,g} \cdot Subsidy_{grt} \ , \tag{2}$$

where $Subsidy_{grt}$ is the maximum statutory subsidy allowed by the government in region r in year t for a worker of gender $g \in \{\text{female; male}\}$ (as listed in Table I), and $w_{i0}^{T,g}$ is the firm-specific proportion of temporary workers by gender (which is held constant at the year the firm enters the data to avoid any endogenous gender substitution; that year is subsequently dropped from the estimation).[27] I also express the subsidy amount in real 2006 Euros by deflating it using the industry-level producer price index and use its lagged value in the analysis.[28]

This instrument calculates the expected total real Euro value of subsidies that a given firm

[26] A similar dichotomy between expected and actual values is present in Paravisini (2008) who studies the effect of bank financial constraints on lending: although actual amounts of external bank financing are endogenous, the expected amounts can be used as a valid instrument for bank sources of capital.

[27] ESEE allows me to observe only the overall proportion of temporary workers (which is already an improvement upon other datasets). Therefore, in order to predict the firm-level proportion of female and male temporary workers, I assume that firm-level contract composition is independent of industry-level gender composition, i.e. that $w_{i0}^{T,g} = w_{i0}^{T} \cdot w_{s0}^{g}$, where w_{i0}^{T} is the firm-specific proportion of temporary workers at the year it enters the data and w_{s0}^{g} is the industry-specific use of female and male employees as of pre-sample 1993 year. Even if there is a measurement error involved in this assumption, as long as it is uncorrelated with the error term of the main equation and the first stage is strong, the inference is consistent.

[28] The subsidy is either received in the year of the actual conversion, or it reduces the payroll tax to be paid next year. Thus, there is no presumption on whether the lagged or contemporaneous value should be used. The lagged value, however, turns out to be more significant in the reduced form estimation.

would receive per employee if it converted all of its temporary contracts into permanent contracts. It can be further described as the expected wage bill reduction per employee.[29] As summarized in Table II under "Expected Subsidy per Employee" this expected per-employee wage reduction amounted, on average, to 816 Euros. Although this variable may appear to implicitly assume that all eligible workers are converted, this does not have to be the case for the instrument to work, since it can also be interpreted in the intention-to-treat framework. The expected subsidy plausibly constitutes a valid instrument since it combines predetermined firm eligibility (defined by its pre-existing practices and the intrinsic characteristics of its industry to be filtered out by firm fixed effects) with the variation in government interventions that is orthogonal to firms conditional on the region-year characteristics.

4 The Effect of Employment Flexibility on Capital Structure

4.1 Main Results

Before turning to formal analysis, I first use ESEE data to explore the relationship between the fraction of temporary contracts and capital structure graphically. Figure 1 plots the averages of the two variables across different industries for the period from 1994 to 2006. As indicated by this figure, the industries that employ larger proportions of temporary workers, such as "Leather and Footwear" and "Timber", are also characterized by higher debt-to-capital ratios than are industries that have a lower fraction of flexible contracts, such as "Chemicals" and "Beverages".

Figure 2 plots the time-series relationship between the two variables, and again, a positive relationship can be deduced. A striking drop in the use of temporary labor force is noticeable starting around 1997. One of the possible explanations for this drop is the country-wide implementation

[29] One can argue that firms that are more labor-intensive (e.g. have a higher employment-to-assets ratio) are more likely to be affected in the aggregate, as they can receive a higher total value of the subsidy per dollar of assets. My instrument captures this idea fully, as long as these firms convert proportionately more workers than the less labor-intensive firms, as a result of these higher incentives. Additionally, I find that the effects are also similar when using the dollar value of subsidy per dollar of assets (rather than per employee) as an instrument, or both instruments at the same time (the results are reported in Internet Appendix Table 4).

of subsidies promoting the use of permanent employment contracts, as described in Section 2.2. Interestingly – and consistent with my hypothesis – the drop in temporary employment is also accompanied by a fall in the average debt-to-capital ratio. Although these figures provide interesting suggestive correlations, I now turn to a more systematic regression analysis.

Table IV shows the OLS and IV-2SLS estimates of the coefficient of interest in different specifications. The standard errors throughout the paper are two-way clustered at the firm and region-year levels, so that all statistics are robust to heteroskedasticity and arbitrary within-firm and within-region-year correlation. This specification accounts for time-invariant firm heterogeneity and region-year fixed effects, so that the results illustrate within-firm differences in leverage and are not driven by region-specific variables, such as credit abundance across and within regions, or macroeconomic effects.

Column 2 adds several firm-level control variables that have been identified in the literature as determinants of capital structure: size, average profitability, share of R&D expenses over sales, and modified Altman's z-score. Both the magnitude and the significance of the coefficient of interest stay similar. Although these specifications already pick up time-invariant differences across firms and the effects of size, profitability, growth and distress status, employment composition and capital structure are still likely to be chosen endogenously due to within-firm shocks. To identify the causal effect and its economic magnitude I now exploit the exogenous variation induced by the differential implementation of government labor policies and report the IV-2SLS results in columns 3 to 6.[30]

Columns 3 and 5 report the results of regressing the proportion of temporary employment on the expected subsidy instrument, firm, region-year, and industry-year fixed effects, and additional firm-level controls (in column 5). These regressions correspond to the first stage of the IV-2SLS estimation of (1) and are given by

$$Temp_{it} = \alpha_{rt} + \alpha_{st} + \delta ExpectedSubsidy_{it-1} + X'_{it}\gamma + \eta_i + \epsilon_{it}, \tag{3}$$

[30] For completeness, I report the reduced-form regression results (debt on subsidy) for all specifications from Tables IV and V in Table A.1. They all have predicted coefficient signs and are significant at conventional levels. The estimates suggest that an expected subsidy of 1000 Euro per-worker leads to 0.51-0.87 percentage point reduction in the debt-to-capital ratio.

The estimate of δ in column 3 is significant at the 1% level and shows that an expected per-worker subsidy of 1000 Euro incentivizes a firm to reduce its proportion of temporary workers by 3.6pp. To corroborate the exclusion restriction and add more power to the estimation, in column 5, I add a range of firm-level control variables (the model is even further saturated in the robustness tests). The estimate of δ remains similar and is still significant at the 1% level, suggesting that the instrument is uncorrelated with the range of included variables.

The coefficients in columns 4 and 6 report the corresponding second-stage IV-2SLS estimates of β. Consistent with the downward bias in the OLS estimate of β discussed in detail in Section 3.3, I find that the magnitude of the IV-2SLS estimates is larger. The preferred estimate of β in column 6 (0.167 with a standard deviation of 0.0584) means that a one within-firm standard deviation increase in the proportion of flexible employment (10.78% in my data) leads to a 1.8pp higher leverage ratio (i.e. an increase of a 1/6 of within-firm standard deviation of debt-to-capital). This result is statistically significant at the 1% level. Its economic magnitude means that prohibiting an average firm from hiring temporary employees (i.e. reducing their proportion from the average of 23.9% to 0%) would lead to a 4pp reduction in debt level, or about 7% of the average. This suggests that employment flexibility is an important component of default costs.

Finally, under the assumption that temporary workers represent variable costs, and permanent workers represent fixed costs, I calculate that the degree of operating leverage (i.e. the sensitivity of EBIT to sales) of an average firm that employs temporary workers would increase by about 17% if it were prohibited from hiring flexible labor force.[31] This suggests that the ability to hire workers on temporary contracts constitutes a significant part of a firm's operating flexibility.

4.2 Robustness: Additional Specifications

To show robustness of the results, I further saturate my empirical specification in Table V. Columns 1 and 2 introduce additional control variables of tangibility and average wage. If the instrument

[31] I arrive at this figure by assuming that the only other variable costs are purchases of materials, and then taking the average of the percentage change in the degree of operating leverage ($\frac{DOL_0 - DOL_{Temp}}{DOL_{Temp}} = \frac{Temp \cdot TC_{labor}}{Sales - Purchases - Temp \cdot TC_{labor}}$, where $DOL_{Temp} = \frac{Sales - Purchases - Temp \cdot TC_{labor}}{Sales - Purchases - TC_{labor}}$), across firms that employ at least one temporary worker. If other costs, besides purchases, are considered variable, the effect on the DOL would be only larger.

were in fact picking up some of the firm-level time-varying shocks related to the nature of a firm's assets or wages (e.g. arising from a new skill mix or a new bargaining agreement), then we would not observe a significant and large effect in the first stage of this specification. Both the first-stage and second-stage results are the same in both magnitude and significance to the main results, providing evidence against tangibility and wage effects.

In columns 3 and 4, I take another approach and saturate the model with region-industry-year (rather than separate region-year and industry-year) fixed effects. This specification provides a very tight identification. In particular, it allows me to control for industry-region-specific variation in female employment over time (which can affect the conservancy of financial decisions, as in Sapienza et al, 2009), as well as time-region-specific industry-level lobby power (which could affect the amounts and timing of subsidy introduction), as well as captures the non-uniform distribution of industries across regions. The coefficient of interest can still be identified because even within the same region-industry-year firms with higher pre-determined proportions of temporary workers on average benefit more from the same statutory level of subsidies. It remains similar in magnitude and is significant at the 5% level.

In columns 5 and 6 I combine the previous two approaches by having both the additional control variables and the additional fixed effects in the specification. In this most saturated specification the coefficient of interest is significant at the 1% level.

In columns 7 and 8 I explore the subset of firms that were present in the data in 1994. This refutes a potential concern that the results are driven by firms that were sampled by ESEE in later years when the government policies had already been announced or implemented. The results are robust. I find that even for firms that determined their employment practices years in advance of government policies, the instrument is a good predictor of post-reform employment flexibility, and the magnitude of the coefficient of interest is similar to those in previous specifications.

One may still worry that the instrument is not fully exogenous since it includes a firm-specific pre-determined term w_{i0}^{T}.[32] As is also discussed in Section 2.1, firms that value the firing flexibility

[32] Part of this variation is likely to be close to random due to the variation in pre-1984-reform hiring cycles across firms. In particular, as almost all of new hires were on temporary contracts, the higher the exogenous separation rate from a firm was (e.g. due to the retirement of previously existing workers or other reasons), the more temporary workers it would have by a certain date.

more (e.g. that are subject to more volatile product demand as in Abraham and Taylor, 1996, or more competition as in Aparicio-Fenoll, 2015), or firms that have less need for firm-specific human capital investment, which requires employment protection (as in Jaggia and Thakor, 1994, or Wasmer, 2006), are likely to have a higher proportion of temporary workers. To the extent that these fluctuations are mostly industry- (or industry-region-) based, in the presence of industry (industry-region) fixed effects, the major part of the remaining variation in w_{i0}^T is likely to be quasi-random. If they are not, however, then having captured the average differences across firms by firm fixed effects, one may still be concerned about the remaining interacted variation with the subsidy. While, based on real life examples, its correlation with leverage seems unlikely, as a robustness check, I also include interactions with all of the abovementioned variables with the subsidy in the IV specifications from Tables IV and V, as controls. The results are robust and reported in Internet Appendix Table 2.

Finally, in Table X Panel A, I reestimate these specifications with a different dependent variable – the net flow of credit – defined as the change in debt, normalized by lagged total capital. The results are also robust, suggesting that firms indeed respond with changes in financial policy – by issuing/retiring debt – and not that I am picking some fluctuations in asset values. They are also large in terms of the economic magnitude: a one within-firm standard deviation increase in the proportion of flexible employment leads to about 3pp higher flow, which equals about half of the average of this variable or 1/8 of its standard deviation.

4.3 Robustness: The Role of Cash

One important consideration to be analyzed is that a subsidy not only influences the composition of labor contracts, but also provides the firm with a cash inflow. Firms may potentially use this cash to issue even more debt (Blanchard et al, 1994) or to retire the existing debt (Bates, 2005). In this respect, the exclusion restriction of the instrument would not be satisfied. Given that the estimated effect of flexible contracts on debt is positive, we should be concerned mostly about its upward bias, i.e. about the situation when cash from the subsidy is used to retire debt.

First of all, I examine the effect of employment flexibility on capital structure for firms that can

be considered relatively cash-abundant. For these firms, it is unlikely that a marginal increase in cash from the subsidy could trigger debt retirement, since they could have done so without receiving the subsidy if they wanted to. Therefore, finding a significant effect of the use of temporary contracts on capital structure for the subsample of cash-abundant firms, would provide evidence against this potential concern.

Since ESEE does not contain a separate entry for cash and cash equivalents, I use a proxy based on profit and loss items. Specifically, I calculate an approximation of operating cash flow as sales plus other income (e.g. from leasing and services provided) less material, personnel, and other costs (e.g. advertising, R&D and external services), less the 35% corporate tax rate, and less net capital expenditures. Then I classify firms as being relatively cash-abundant based on this measure and estimate specification (1) for subsamples of these firms.

The results are reported in Table VI, where the even- and odd-numbered columns correspond to specifications with and without firm-level controls, respectively. In columns 1 and 2 I define firms as being cash-abundant if their cash flow over total assets was above the industry median two years in advance. This corresponds to the time structure used throughout the paper when firms first receive the subsidy, then adjust their labor force, and then change their capital structure. Since firms are classified relative to the yearly industry median, the results are not driven by accidentally capturing whole industries that were positively affected by shocks in a particular year. Additionally, using total assets in the denominator adjusts for potential size differences across firms. The coefficient in column 1 suggests that among cash-abundant firms, a 10pp decrease in the proportion of temporary workers leads to a 2.76pp lower debt ratio. This coefficient is statistically significant at the 5% significance level and robust to including firm-level controls.

I perform a series of robustness checks by considering alternative definitions of cash-abundant firms. Columns 3 and 4 classify a firm as being cash-abundant if its cash flow over total assets is above the industry median in the current year, i.e. when debt adjustment takes place. The results are robust. Finally, in columns 5 and 6 I classify firms as having relatively high cash holdings if their ratio of cash flows accumulated over three years, over total assets, is higher than the corresponding industry median. This mitigates the effects of transitory shocks and enables me to look at firms

which have performed better than their peers over several years. Again, the results are similar across these specifications. Overall, they indicate that even among cash-abundant firms, a flexible labor force has a large and significant effect on capital structure, thereby providing evidence against firms simply using subsidies to retire debt.

Another approach to looking at the direct effect of cash inflow is to compare the magnitudes of changes in debt to the magnitudes of cash inflow from subsidies. I do a back-of-the-envelope calculation of these magnitudes to quantify how much of the total change in debt levels, implied by my main results, can be attributed to purely paying off using cash received from subsidies.

In my data, the average within-firm change in the percentage of the temporary labor force is equal to 1.08 percentage points per year. Given the average size of the total labor force (269 from Table II) and the maximum subsidy for each eligible worker (3523 from Table II), this amounts to receiving $0.01078 \cdot 269 \cdot 3523 = 10206$ Euro per year in subsidies. At the same time, the preferred estimate of 0.167 (Table IV column 6) implies that such a change in the temporary labor force leads to $1.078 \cdot 0.167 = 0.18$ percentage points change in debt-to-capital ratio per year, or given the average total assets of 64.4 million Euro (from Table II), to $0.01078 \cdot 0.167 \cdot 66.4 \cdot 10^6 = 119674$ Euro average change in debt level per year. These two numbers suggest that about $10206/119674 = 8.5\%$ of the found effect can be due to cash considerations, i.e. the true causal coefficient is not 0.167, but about 0.153.

I also perform a similar calculation at the firm level, rather than for the overall averages. In particular, for each firm I calculate how much of the actual change in debt level can be mechanically explained by the received subsidies. Only for 2% of firms, this implied maximum subsidy amount is comparable in magnitude to the change in debt levels. For more than 90% of firms, subsidies can explain at most 10% of the change in debt levels, which is consistent with the mean comparison. These results altogether indicate that cash considerations should not play a big role in the main results of the paper.

5 Flexible Employment Contracts Reduce Operating Leverage and Default Risk

The results so far provide evidence of a positive effect of flexible employment contracts on financial leverage, but the exact mechanism is not yet identified. In this section I use further analysis to first demonstrate that flexible employment reduces operating leverage by providing a margin of adjustment when economic conditions turn bad. Then I present the most direct test by exploring the cross-sectional heterogeneity and comparing firms with different magnitudes of ex ante bankruptcy costs.

5.1 Temporary Employees as a Margin of Adjustment

The underlying assumption behind interpreting the effect of flexible employment as operating-financial leverage substitution is that a flexible labor force lowers default risk by providing a margin for adjusting labor when the firm faces negative shocks.[33] Recent evidence across a range of European countries suggests that temporary workers absorb a higher share of the volatility of the output (Blanchard and Landier, 2002, for France; Holmlund and Storrie, 2002, for Sweden; Alonso-Borrego et al., 2005, for Spain; Kugler and Pica, 2004, for Italy). My data can corroborate this assumption by providing micro-level evidence of firms laying off temporary workers in response to negative shocks.[34]

To test this assumption, I use ESEE to measure the current state of the firm's main product market, proxying for demand shocks to its product. In particular, every year firms report whether the market for their good is in expansion, stable, or in recession. Then I define a dummy variable ($NegativeShock_{it}$) that equals 1 if the firm reports that the market is in recession, and 0 otherwise. The idea behind this measure is that when a firm's product market is in recession, the average

[33] As Bentolila et al (2012) note: "[E]mployees under very flexible contracts are better thought of as being part of the outsiders because, given that their role is precisely to bear the brunt of employment adjustments, their attachment to the job is fragile."

[34] Notably, to test this assumption one could not simply use a measure of the overall risk of the company (e.g. volatility of cash flows or probability of going bankrupt) as the dependent variable in a regression similar to (1), because of endogenous leverage adjustment. Since temporary workers affect neither marginal benefit of debt, no the severity of bankruptcy costs, the probability of default at the new optimum level of debt should be the same as before.

product of labor falls – so by firing some of its temporary workers a firm can save on labor costs and enjoy a higher profit than it could have if it had kept these workers employed.

I estimate the following specification:

$$Temp_{it} = \alpha_{st} + \lambda NegativeShock_{it} + \eta_i + \epsilon_{it}. \quad (4)$$

Inclusion of industry-year fixed effects α_{st} implies that $NegativeShock_{it}$ measures the firm-specific demand shock over and above any industry-level shocks in the same year, while firm fixed effects η_i capture time-invariant heterogeneity across firms.

The results of estimating (4) are presented in Table VII column 1, while column 2 further saturates this specification with region-industry-year fixed effects. The latter identifies this correlation very tightly, because firm-specific demand shocks are now measured over and above any shocks to other firms in the same industry in the region where the firm is located. The coefficients in both specifications are highly statistically significant and imply that when the market for a firm's main product is in recession, it employs a lower proportion of temporary workers. In particular, during an average firm-specific negative demand condition, the proportion of workers employed on temporary contracts is 1.8pp lower than it is during normal demand conditions; this roughly corresponds to firing about one tenth of the total flexible labor force. [35]

To the extent that firms may have several product markets, measuring firm-specific demand shock based only on the main market may be noisy. Column 3 estimates specification (4) for a subsample of firms with only one product, while column 4 does so for a subset of firms that sell only one product and have a low share in that market (less than 5%). For these latter firms, the extent to which a given firm can affect the state of its product market is very limited, making it reasonably exogenous for them. The results are robust. Overall, the micro-level evidence presented in Table VII is consistent with the prevailing view of the literature that temporary workers provide a margin of labor adjustment to negative demand shocks. This corroborates the assumption behind

[35] This result is robust to clustering standard errors at the industry level, as well as to using a lagged, rather than contemporaneous, indicator of firm-specific negative demand shock. In addition, I also tried including a leading indicator of $NegativeShock_{it}$. This was not statistically different from zero, minimizing the concerns about reverse causality.

the mechanism of why flexible labor force affects capital structure.

5.2 Cross-Sectional Heterogeneity in Bankruptcy Costs

First, it should be noted that to test the assumption that temporary workers reduce operating leverage and default risk one cannot simply use a measure of the overall risk of the company (e.g. volatility of cash flows or probability of going bankrupt) as the dependent variable in a regression similar to (1). The reason is simple: in such a test one needs to keep all other variables constant (including financial leverage), since this assumption implies that flexible employment reduces operating leverage and probability of bankruptcy *for a given level of financial leverage*. In other words, the realized probability of default would also necessarily reflect the endogenous adjustment of capital structure, that has been shown to adjust in Section 4. In fact, if companies, as hypothesized, trade off operating and financial leverage, then empirically we should see no effect of the flexible labor force on the realized probability of default (under the assumptions of no effect of temporary workers on survival other than through capital structure, and perfect adjustment of debt to the optimal level).[36]

To overcome this empirical challenge, I use a different approach. If a flexible labor force indeed reduces operating leverage and the probability of default, then firms with a relatively high *severity* of bankruptcy costs should value the option of firing workers more, because for them the corresponding change in expected costs of default would be higher. In this case, we would expect to find a larger effect of flexible labor on corporate financing for these firms.

In order to test this direct prediction I estimate the following equation using the instrumental variables approach:

$$D_{it} = \alpha_{rt} + \alpha_{st} + \beta^H High_{i0} \cdot Temp_{it-1} + \beta^L Low_{i0} \cdot Temp_{it-1} + X'_{it}\gamma + \eta_i + \epsilon_{it}, \qquad (5)$$

where $High_{i0}$ and Low_{i0} are the indicator variables corresponding to firms with high and low

[36] Formally, the optimal level of debt equates marginal benefit of debt (e.g. in the form of interest tax shield) and marginal cost of debt (in the form of expected bankruptcy costs comprising of probability of default and default severity). Since temporary workers affect neither marginal benefit of debt, no the severity of bankruptcy costs, the probability of default at the new optimum level of debt should be the same as before.

levels of severity of bankruptcy costs[37]. Based on the above prediction, β^H should be higher than β^L in the above specification.

What remains is to identify the subsamples of firms that would incur higher and lower bankruptcy costs if they were to go bankrupt. Williamson (1988) and Shleifer and Vishny (1992) have emphasized that the degree to which debt-holders can recover their assets in liquidation depends on the nature of these assets: when assets can be easily redeployed for other purposes, the loss of value from liquidation is low, and so is the cost of default. Based on the balance sheet data that I have, the least specific assets appear to be buildings and land (as compared to e.g. work-in-progess, inventory, and specific machinery). I therefore first classify firms as having lower levels of bankruptcy costs ($Low_{i0} = 1$) if they have buildings or land on their balance sheets – in the year they enter the data (to mitigate endogenous asset substitution over time). Likewise, firms with no buildings and land are classified as having higher levels of bankruptcy costs ($High_{i0} = 1$).

The results of these regressions are presented in Table VIII columns 1 to 4, with odd- and even-numbered columns corresponding to first- and second-stage results, respectively, with columns 3 and 4 reporting the results with firm-level control variables.[38] Consistent with temporary workers reducing operating leverage and the probability of default, the positive effect of a flexible workforce is most pronounced within the higher bankruptcy costs firms. The coefficient in column 4 means that for these firms, a one standard deviation increase in the proportion of workers on temporary contracts leads to 4.1pp higher debt ratio. Furthermore, the implied difference in the coefficients between high and low bankruptcy cost firms (0.314 with a standard error of 0.122) is large and statistically significant at the 5% level, suggesting that firms with higher levels of bankruptcy costs are significantly more likely to adjust their capital structure in response labor flexibility shocks.

Importantly, the first-stage results indicate that both types of firms change their composition of labor contracts in response to subsidy incentives. However, only firms for whom this flexibility does matter retire debt upon a reduction in the proportion of temporary workers. This cross-sectional

[37] Each of $High_{i0} \cdot Temp_{it}$ and $Low_{i0} \cdot Temp_{it}$ variables is intrumented with both $High_{i0} \cdot ExpectedSubsidy_{it-1}$ and $Low_{i0} \cdot ExpectedSubsidy_{it-1}$; for brevity I report only one respective first-stage coefficient for each equation in the table; full 2*2 coefficients for each specification are available upon request.

[38] There are two first-stage equations corresponding to each specification, with coefficients reported in one first-stage column for brevity.

comparison provides direct evidence that the mechanism behind the effect of interest goes through operating leverage.

As a robustness check, I also reestimate specification (5) for a different definition of high and low bankruptcy costs firms. In order to take into account potential differences across industries in their usage of buildings and land, I now classify firms as having high (low) level of bankruptcy costs if they have less (more) buildings and land than the industry median in the year they enter the data. The results of these specifications are reported in columns 5 to 8 of Table VIII, demonstrating similar patterns.[39]

6 The Effect of Employment Flexibility on Other Margins of Financing

To paint a broader picture of the way labor contract structure affects firms' financial policies, I now explore several other variables related to sources of funding and report the results in Table IX Panels B, C, and D. The dependent variables are: the net flow of equity (Panel B, defined as the ratio of the change in equity to lagged total capital), a dummy variable for equity traded on an exchange (Panel C), and a dummy variable for being part of a group of companies (Panel D). Although this evidence is not exceptionally strong, it looks consistent with the general message of the paper.

As for equity itself, the ratio of equity to capital drops significantly with the employment of a more flexible labor force – but this is just mechanical, as equity-to-capital ratio equals one minus debt-to-capital ratio. As for the net flow of equity, firms are slightly more likely to issue new equity, but of course they are still more likely to issue new debt, so that the ratio of debt to capital still goes up, as is shown in the main results. This net flow of equity result is statistically significant at the 5% level in the specification with originally-sampled firms (last column), with p-values in other columns ranging from 16% to 28%, thus not allowing me to make very strong conclusions. However,

[39] This heterogeneity could be explained by other variables correlated with bankruptcy costs. In Internet Appendix Table 3 I also control for additional cross-sectional splits by size, profitability, and competition. The difference between firms with high and low bankruptcy costs is still significant in all specifications.

taken together with a significantly higher net flow of credit (Panel A), the results broadly imply that flexible employment contracts may also help relax some of the firms' financing constraints (rather than, for instance, a potentially different story behind firms swapping debt for equity).

Interestingly, however, firms are somewhat less likely (albeit insignificantly) to become traded on an exchange when using more flexible labor contracts. This suggests that the above net flow of equity presumably comes from non-public sources. Also, firms that use more flexible contracts are less likely to be part of a group of companies. This result is significant at the 5% level in several specifications, with economic magnitudes of 2-4pp increase in probability (about 1/10 of the mean) per each 10pp increase in temporary labor. Overall, these results taken together are consistent with the interpretation that the use of more flexible labor contracts also allows firms to depend less on external funds.

7 Firms in Liquidation

As already noted in Section 5.2, in a frictionless setting with perfect adjustment of debt, there is no effect of temporary contracts on probability of default, and the capital structure channel becomes irrelevant to long-term firm outcomes. However, recent literature (e.g. Leary and Roberts, 2005, and Faulkender et al., 2012, among others) documents the existence of significant costs of adjusting capital structure, which means that exogenous shocks to a firm's operating strategy (e.g. through labor market reforms) can leave it with too much debt for a period of time, increasing their risk and probability of default, and hence affecting long-term outcomes through the capital structure link.

I now take this prediction to the data and explore whether the inability to adjust capital structure in response to shocks to employment flexibility is indeed associated with default. To do that I compare the adjustment of debt in firms that liquidate to that of surviving firms by estimating the following equation:

$$D_{it} = \alpha_{rt} + \alpha_{st} + \beta^S Stay_i \cdot Temp_{it-1} + \beta^E Exit_i \cdot Temp_{it-1} + X'_{it}\gamma + \eta_i + \epsilon_{it}, \tag{6}$$

where $Exit_i$ is an indicator variable that equals 1 if the firm exits the data by the end of

the sample (due to liquidation or switching to non-manufacturing activity), and 0 otherwise; and $Stay_i = 1 - Exit_i$.[40]

The results are reported in Table X, with odd- and even-numbered columns corresponding to first- and second-stage results, respectively. Interestingly, column 1 indicates that exiters and survivors equally respond to subsidy incentives by reducing the fraction of temporary contracts. However, as column 2 shows, the effect of employment flexibility on capital structure is only present among survivors. In other words, although firms that eventually liquidate do change the composition of their labor force following subsidized contract conversions, they do not retire debt – unlike firms that survive. The implied difference in the effect across the two subsets of firms is large and statistically significant at the 10% significance level. The results are similar when including firm-level controls (columns 3 and 4).

Given that firms that enter the data later in the sample are statistically more likely to survive by any given date (and by the end of 2006 as they are currently measured), as a robustness check, I replicate the above analysis focusing on the subset of firms that are in the data in 1994 in columns 5 to 8. The results are again very similar.

These results are consistent with the existence of unobserved time-varying reasons, such as adjustment costs of debt and/or poor quality of management, that preclude firms from retiring debt upon permanent contract conversions, and that at the same time correlate with liquidation. This suggests that in the presence of frictions and adjustment costs of leverage that prevent firms from adjusting capital structure perfectly, real government policies may have both the desired direct effects on employment and operations, as well as additional unintended consequences through the link between operations and financing.

[40] Each of $Stay_i \cdot Temp_{it}$ and $Exit_i \cdot Temp_{it}$ variables is instrumented with both $Stay_i \cdot ExpectedSubsidy_{it-1}$ and $Exit_i \cdot ExpectedSubsidy_{it-1}$; for brevity I report only one respective first-stage coefficient for each equation in the table; full 2*2 coefficients for each specification are available upon request.

8 Concluding Remarks

In this paper, I explore how the structure of employment contracts affects the financing decisions of firms. The attractive setting of the Spanish dual labor market allows me to measure the actual "fixity" of each firm's labor expenses by the proportion of workers that it employs under temporary contracts. At the same time, the inter-temporal and cross-regional variation in government policies helps me to evaluate the causal effect of employment flexibility on debt financing in a natural-experiment setting.

I show that an increase in a firm's employment flexibility leads to a large increase in its debt-to-capital ratio, providing a greater resolution of two broad facts in the capital structure literature. First, much research has shown that expected default costs are important for financial policy, and I demonstrate that the adjustment cost of labor is a significant component of them. And second, many papers have hypothesized the crowding out of financial leverage by operating leverage, while I illustrate that the lack of employment flexibility is a significant component of operating leverage. To provide additional evidence of this mechanism behind my results, I show that temporary workers are used as a margin of labor force adjustment during downturns and that the effect of interest is pronounced mostly for firms that would lose more if they were to go bankrupt. I also find some evidence consistent with flexible employment contracts also relaxing the financial constraints of firms.

While I focus on the duration and firing cost aspects of different types of labor contracts (which fully explain the difference in the Spanish case), other components of labor compensation structure, such as wage seniority profile, currency of compensation, the existence and the structure of incentive pay, and others, may have different effects on capital structure choice (if any), and the economic mechanisms behind them. Exploring them is beyond the scope of my paper and is left for future research.

Most generally, the results of my paper emphasize the interdependence between the different organizational strategies of a firm and its financing decisions. From the business perspective, it illustrates the complementarity of CEOs' and CFOs' decision-making. From the policy perspective,

it reflects the indirect consequences of exogenous changes in government policies that originally aim at certain organizational changes in firms. Additionally, in a setting with imperfect capital structure adjustment, this documented channel has implications for which firms are less likely to survive in the long run and for industry allocative efficiency ,with quantitative predictions potentially achieved by incorporating frictions into a joint model of a firm's organizational structure and corporate financing.

Finally, given that a large part of the variation in capital structure remains unexplained, we may seek to further explore the fundamental factors related to production processes, boundaries of the firm, and organizational structure as essential drivers of corporate financing policies. As Zingales (2000) points out, 'Corporate finance is the study of the way *firms* are financed. Theory of the firm, thus, has a tremendous impact on the way we think about corporate finance, the way we do empirical research, the policy implications we derive, and the topics we choose to study.'

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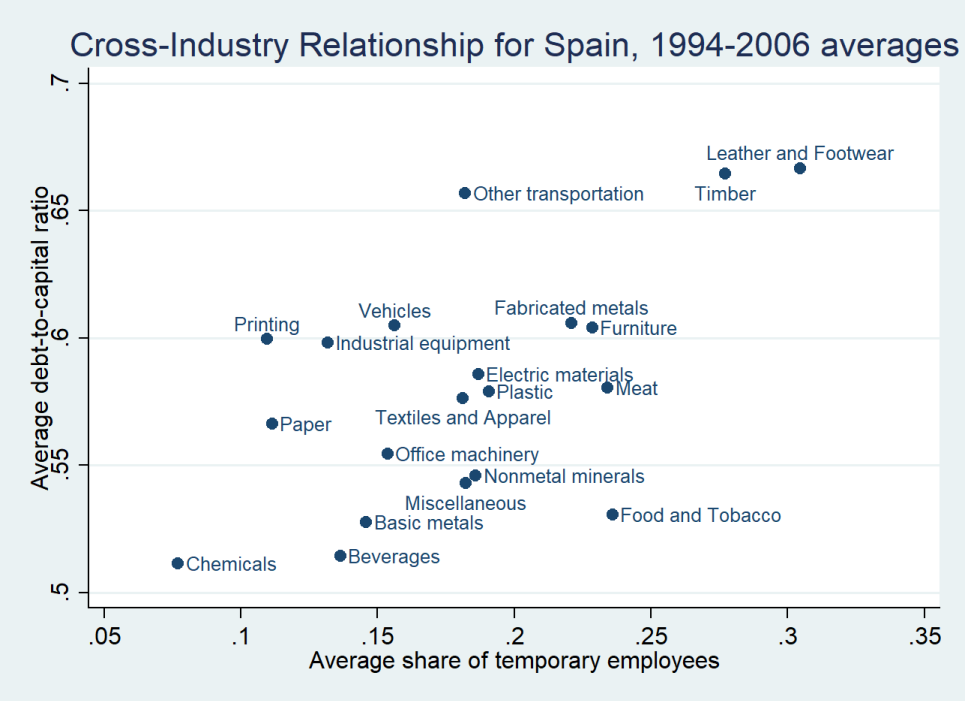
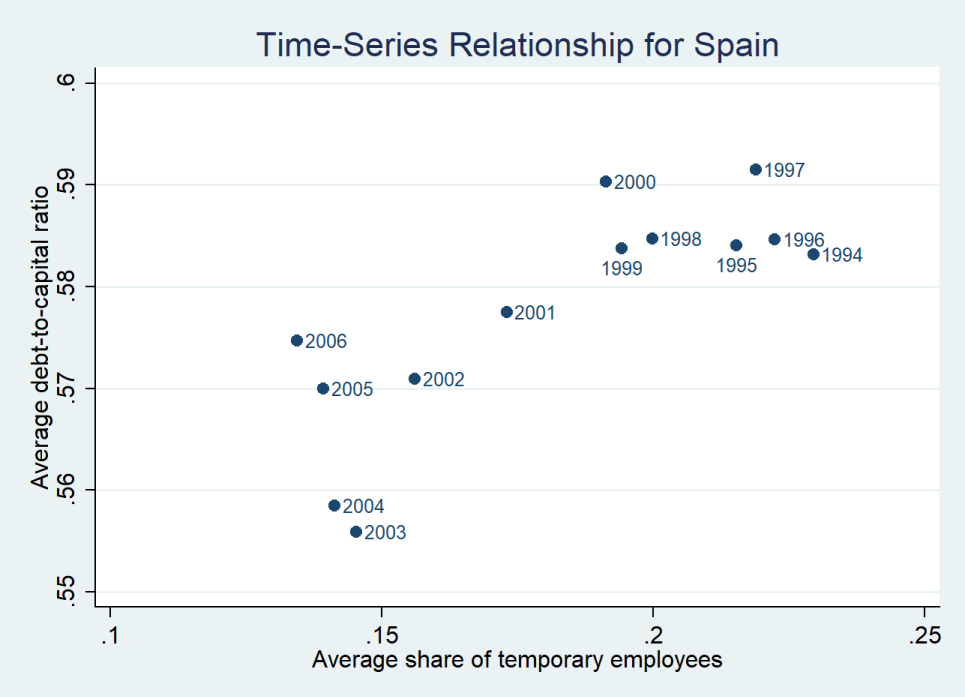
Figures and Tables

Figure 1



Note: This figure plots the relationship between average firm-level leverage (defined as the ratio of total debt to capital) and average firm-level share of temporary employees, computed for different industries across all firm-years in ESEE. The time period covers 1994-2006.

Figure 2



Note: This figure plots the relationship between average firm-level leverage (defined as the ratio of total debt to assets) and average firm-level share of temporary employees, computed for different years across all firms in ESEE.

Table I. Maximum Statutory Subsidies per Eligible Worker by Region, Year and Gender of the Worker

This table lists the maximum statutory amounts of region-specific subsidies for creating a permanent employment contract ($Subsidy_{grt}$) by region, year and gender of the worker, in current Euro amounts, excluding the special treatment provinces and disabled workers. The missing value indicates that the maximum amount is not available.

Year / Region	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Andalucia	0			4200					6012			4750	
Aragon	0				4200	5280			5500		3750 if male, 5280 if female	5280 if male, 4500 if female	4000 if male, 5280 if female
Asturias	0			4350	4500	0	4200				4500 if male, 5400 if female		
Baleares	0						0 if male, 1653 if female		0 if male, 1800 if female	0 if male, 4808 if female		0	3000
Canarias	0				3600		0						
Cantabria	0				3900	0	4507	4207 if male, 4808 if female					
Castilla-La Mancha	0				3000 if male, 3600 if female	0	3000 if male, 3600 if female				3000 if male, 4200 if female		
Castilla-Leon	0				5112	5115	4508				4000 if male, 4500 if female		
Catalonia	0												
Valencia	0				.			1875 if male, 2000 if female	1875 if male, 2250 if female	4400	2500 if male, 5000 if female	2000 if male, 4600 if female	4000 if male, 5000 if female
Extremadura	0			13402	14027	14028	4296 if male, 5217 if female	4455 if male, 5410 if female	6010	.	4500		
Galicia	0				4200	4207 if male, 4808 if female	4200 if male, 4808 if female	6000		3600 if male, 4200 if female	5400 if male, 6000 if female	3300 if male, 3900 if female	5000 if male, 7500 if female
Madrid	0				6000	7800	6600 if male, 9000 if female	12000	13824 if male, 15027 if female	12000	0 if male, 3000 if female	9100 if male, 10000 if female	7000 if male, 7800 if female
Murcia	0				6000		6000 if male, 9000 if female		4800 if male, 6000 if female	5400 if male, 6000 if female	5400		
Navarra	0				3000	4800						.	
Basque country	0				3600	7512 if male, 9014 if female					6000 if male, 7500 if female		
Rioja	0				4500	4491	6011					4508 if male, 5109 if female	

Table II. Descriptive Statistics

Notes: The sample includes all firms in the ESEE (1994-2006) with non-missing debt-to-assets ratio. Total Assets is book value of total assets of the firm, in 2006 Euros. Total Debt / Total Capital s is the ratio of total debt (which is the sum of short-term and long-term debts) to total capital (those debts plus book equity). Total Employment is firm's total employment at the end of the year. Temp is the ratio of workers on temporary contracts relative to total employment. $Temp_0$ is the ratio of workers on temporary contracts relative to total employment in the first year the firm is in the data. Maximum Statutory Subsidy and Expected Subsidy per Employee are the maximum and expected subsidy amounts a firm is eligible to receive (defined in Section 2), in 2006 Euros. Size is the natural logarithm of firm's real sales, in 2006 Euros. All amounts are deflated using the industry-level producer price index – Indice de Precios Industriales. Profitability is the operating profit margin of the firm, which is defined as the ratio of sales net of purchases and labor expenses to sales. R&D is the ratio of total expenses on research and development to sales. z-score is the modified Altman's z-score (see also the corresponding footnote in the text). Tangibility is the share of gross land and buildings in total assets. Average wage is the total wage bill per employee, in 2006 Euros. Net flow of credit is the ratio of the change in total debt to lagged total capital. Net flow of equity is the ratio of the change in total equity to lagged total capital. Trading on an Exchange is a dummy that equals 1 if the firm's equity trades on an exchange, and 0 otherwise (available every 4 years). Being Part of a Group is a dummy that equals 1 if the firm is part of a group of companies, and 0 otherwise (available every 4 years) All firm-level control variables are winsorized at 1% tails.

Variable	Mean	Std. deviation	N
Capital Structure:			
Total Assets	64.4mln	288mln	18365
Total Debt / Total Capital (D_{it})	0.571	0.230	18365
Employment:			
Total Employment	269	783	18365
Temp ($Temp_{it}$)	0.174	0.210	18365
$Temp_0$	0.237	0.250	18364
Subsidies:			
Maximum Statutory Subsidy per Eligible Worker ($Subsidy_{grt}$)	3523	4011	17488
Expected Subsidy per Employee ($ExpectedSubsidy_{it}$)	816	1538	17488
Control Variables:			
Size	16.013	2.014	18347
Profitability	0.225	0.134	18346
R&D	0.007	0.017	18246
z-score	2.237	1.326	18132
Tangibility	0.139	0.152	18228
Average Wage	28790	12278	18365
Other Dependent Variables:			
Net Flow of Credit	0.069	0.281	15258
Net Flow of Equity	0.038	0.121	15258
Trading on an Exchange	0.026	0.159	4975
Being Part of a Group	0.357	0.479	4970

Table III. Gender Distribution of Employees in Manufacturing Industries

Notes: This table lists total number of employees, in thousands of people, in different manufacturing industries and the corresponding proportion of women, measured as of the 4th quarter of 1993. The data come from Encuesta de Población Activa. *Petroleum refinery firms are not included in ESEE, but reported here for completeness.

	Total	Men	Women	% Women
Total in manufacturing	2105.4	1638.4	466.9	**28.5%**
Food and beverages	331.1	242.7	88.4	**26.7%**
Tabacco	9.4	5.0	4.4	**46.8%**
Textiles	105.4	62.1	43.3	**41.1%**
Apparel	119.2	29.8	89.5	**75.1%**
Leather and Footwear	64.0	43.2	20.8	**32.5%**
Timber	59.0	54.1	4.9	**8.3%**
Paper	39.6	32.4	7.1	**17.9%**
Printing and publishing	113.4	82.7	30.7	**27.1%**
Petroleum refinery*	12.2	10.6	1.6	**13.1%**
Chemicals	128.4	93.9	34.5	**26.9%**
Plastic and rubber products	82.1	68.3	13.8	**16.8%**
Other nonmetal mineral products	140.6	124.5	16.1	**11.5%**
Basic metal products	99.4	92.1	7.3	**7.3%**
Fabricated metal products	169.8	156.2	13.6	**8.0%**
Industrial and agricultural equipment	130.8	120.2	10.6	**8.1%**
Office machinery	12.3	9.4	2.9	**23.6%**
Electric materials and equipment	59.7	44.6	15.1	**25.3%**
Radio and TV equipment	36.3	26.8	9.5	**26.2%**
Medical equipment and precision instruments	25.6	15.3	10.3	**40.2%**
Vehicles and accessories	178.1	162.0	16.2	**9.1%**
Other transport equipment	57.9	55.1	2.8	**4.8%**
Furniture and other manufacturing	126.3	102.7	23.6	**18.7%**
Recycling	4.8	4.6	0.2	**4.2%**

Table IV. Capital Structure and Employment Flexibility: Main Results

This table reports the results of estimating the following specification using the OLS and IV-2SLS frameworks:

$$D_{it}=\alpha_{rt}+\alpha_{st}+\beta Temp_{it-1}+X_{it}'\gamma+\eta_i+\varepsilon_{it}\ ,$$

where D_{it} is the leverage (ratio of total debt to capital) of firm *i* in year *t*, $Temp_{it-1}$ is its proportion of workers on temporary contracts, lagged one year, α_{rt} are region-year fixed effects, α_{st} are industry-year fixed effects, η_i are firm fixed effects, and X_{it} are firm-level controls (log of sales, operating profit margin, R&D expenses over sales, and modified Altman's z-score; included in specifications 2, 5, and 6). Lagged2 Expected Subsidy is the expected subsidy amount, defined in Section 2, lagged two years and measured in thousand Euro. Standard errors are two-way clustered at the region-year and firm levels and are reported below the coefficients. The first year the firm appears in the sample is dropped from all regressions. The number of firms and observations excludes singletons. * indicates 10% significance; ** 5% significance; *** 1% significance.

	OLS		IV-2SLS			
			First Stage	Second Stage	First Stage	Second Stage
	1	2	3	4	5	6
Lagged Temp	0.0543***	0.0481***		0.140**		0.167***
	(0.0119)	(0.0115)		(0.0607)		(0.0584)
Lagged2 Expected Subsidy			-0.0362***		-0.0358***	
			(0.00574)		(0.00563)	
Firm-level controls	No	Yes	No	No	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Region-year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes
Number of firms	2241	2219	2226	2226	2203	2203
Observations	17673	17340	16889	16889	16562	16562
Within R^2	0.049	0.140	0.173		0.176	
F-statistic			39.88		40.55	

Table V. Capital Structure and Employment Flexibility: Robustness

This table reports the results of estimating the following specification using the IV-2SLS framework:

$$D_{it}=\alpha_{rt}+\alpha_{st}+\beta Temp_{it-1}+X_{it}'\gamma+\eta_i+\varepsilon_{it},$$

where D_{it} is the leverage (ratio of total debt to capital) of firm *i* in year *t*, $Temp_{it-1}$ is its proportion of workers on temporary contracts, lagged one year, α_{rt} are region-year fixed effects, α_{st} are industry-year fixed effects, η_i are firm fixed effects, and X_{it} are firm-level controls (log of sales, operating profit margin, R&D expenses over sales, and modified Altman's z-score; included in specifications 1 to 4). Lagged2 Expected Subsidy is the expected subsidy amount, defined in Section 2, lagged two years and measured in thousand Euro. Specifications 1, 2 and 5,6 additionally include firm-level controls for tangibility and average wage. Specifications 3, 4 and 5,6 additionally include region-year-industry fixed effects. Specifications 7 and 8 estimate the results using only the firms that are present in the sample in 1994. Standard errors are two-way clustered at the region-year and firm level and are reported below the coefficients. The first year the firm appears in the sample is dropped from all regressions. The number of firms and observations excludes singletons. * indicates 10% significance; ** 5% significance; *** 1% significance.

	IV-2SLS							
	First Stage	Second Stage	First Stage	Second Stage	First Stage	Second Stage	First Stage	Second Stage
	Additional controls (tangibility and average wage)		Additional FE		Additional controls and FE		Originally-sampled firms	
	1	2	3	4	5	6	7	8
Lagged Temp		0.164***		0.146**		0.166***		0.230***
		(0.0582)		(0.0655)		(0.0611)		(0.0846)
Lagged2 Expected Subsidy	-0.0359***		-0.0374***		-0.0368***		-0.0379***	
	(0.00561)		(0.00668)		(0.00652)		(0.00586)	
Firm-level controls	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region-year FE	Yes	Yes	No	No	No	No	Yes	Yes
Industry-year FE	Yes	Yes	No	No	No	No	Yes	Yes
Region-industry-year FE	No	No	Yes	Yes	Yes	Yes	No	No
Number of firms	2203	2203	2226	2226	2203	2203	1530	1530
Observations	16562	16562	16889	16889	16562	16562	12563	12563
Within R^2	0.178		0.312		0.318		0.180	
F-statistic	40.86		31.33		31.84		41.97	

Table VI. Capital Structure and Employment Flexibility: Cash-Abundant Firms

This table reports the results of estimating the following specification using the IV-2SLS framework for different subsamples of firms:

$$D_{it}=\alpha_{rt}+\alpha_{st}+\beta Temp_{it-1}+X_{it}'\gamma+\eta_i+\varepsilon_{it},$$

where D_{it} is the leverage (ratio of total debt to capital) of firm *i* in year *t*, $Temp_{it-1}$ is its proportion of workers on temporary contracts, lagged one year, α_{rt} are region-year fixed effects, α_{st} are industry-year fixed effects, η_i are firm fixed effects, and X_{it} are firm-level controls (log of sales, operating profit margin, R&D expenses over sales, and modified Altman's z-score; included in specifications 2, 4, and 6). Specifications 1 and 2 (3 and 4) estimate the above specification for firms with cash flow over total assets above industry median in year t-2 (t). Specifications 5 and 6 estimate the above specification for firms with the ratio of cash flows, accumulated over three years from t-2 to t, over total assets in yeat t-2, above industry median. Standard errors are two-way clustered at the region-year and firm level and are reported below the coefficients. The first year the firm appears in the sample is dropped from all regressions. The number of firms and observations excludes singletons. * indicates 10% significance; ** 5% significance; *** 1% significance.

	IV-2SLS					
Sample	Operating Cash Flow / Assets above industry median in year t-2		Operating Cash Flow / Assets above industry median in year t		Accumulated OCF / Assets above industry median in year t-2	
	1	2	3	4	5	6
Lagged Temp	0.276**	0.277**	0.194**	0.206**	0.213*	0.205
	(0.125)	(0.126)	(0.0888)	(0.0855)	(0.125)	(0.141)
Firm-level controls	No	Yes	No	Yes	No	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Region-year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes
Number of firms	1546	1532	1720	1699	1441	1425
Observations	7005	6895	8220	8062	6948	6834
1st stage F-statistic	17.10	17.88	29.72	30.81	18.00	18.13

Table VII. Flexible Labor Force and Firm-Specific Negative Shocks

This table reports the results of estimating the following specification using the OLS framework:

$$Temp_{it}=\alpha_{st}+\lambda NegativeShock_{it}+\eta_i+\varepsilon_{it},$$

where $Temp_{it}$ is the proportion of workers on temporary contracts, α_{st} are industry-year fixed effects, $NegativeShock_{it}$ is the indicator variable that equals 1 if the firm reports that the market for its main product is in recession, and 0 otherwise, and η_i are firm fixed effects. Specification 2 additionally includes region-industry-year fixed effects. Specification 3 estimates the results using firms with one product only. Specification 4 estimates the results using firms with one product only that have less than 5% of the market share in that product. Standard errors are two-way clustered at the region-year and firm level and are reported below the coefficients. The number of firms and observations excludes singletons. * indicates 10% significance; ** 5% significance; *** 1% significance.

	OLS			
Sample	All firms	All firms	Firms with only one product	Firms with only one product and a small share in it
	1	2	3	4
Negative Shock	-0.0176***	-0.0177***	-0.0210***	-0.0185**
	(0.00317)	(0.00346)	(0.00493)	(0.00877)
Firm FE	Yes	Yes	Yes	Yes
Industry-year FE	Yes	No	Yes	Yes
Region-industry-year FE	No	Yes	No	No
Number of firms	2989	2989	1507	398
Observations	22022	22022	10609	3529
Within R^2	0.118	0.253	0.122	0.157

Table VIII. Capital Structure and Employment Flexibility: Cross-Sectional Heterogeneity in Bankruptcy Costs

This table reports the results of estimating the following specification using the IV-2SLS framework:

$$D_{it}=\alpha_{rt}+\alpha_{st}+\beta^{H}High_{i0}Temp_{it-1}+\beta^{L}Low_{i0}*Temp_{it-1}+X_{it}'\gamma+\eta_i+\varepsilon_{it}\ ,$$

where D_{it} is the leverage (ratio of total debt to capital) of firm *i* in year *t*, $Temp_{it-1}$ is its proportion of workers on temporary contracts, lagged one year, α_{rt} are region-year fixed effects, α_{st} are industry-year fixed effects, η_i are firm fixed effects, and X_{it} are firm-level controls (log of sales, operating profit margin, R&D expenses over sales, and modified Altman's z-score; included in specifications 3, 4, 7 and 8). $High_{i0}$ is the dummy variable that equals 1 if the firm is classified as a high bankruptcy cost firm, defined as having no buildings and land on its balance sheet (columns 1 to 4) or as having less buildings and land that the industry median (columns 5 to 8), both in the year the firm enters the data, and 0 otherwise. Low_{i0} is equal to 1-$High_{i0}$. Lagged2 Expected Subsidy is the expected subsidy amount, defined in Section 2, lagged two years and measured in thousand Euro. Standard errors are two-way clustered at the region-year and firm level and are reported below the coefficients. The first year the firm appears in the sample is dropped from all regressions. The number of firms and observations excludes singletons. * indicates 10% significance; ** 5% significance; *** 1% significance.

	IV-2SLS							
	First Stage 1	Second Stage 2	First Stage 3	Second Stage 4	First Stage 5	Second Stage 6	First Stage 7	Second Stage 8
$High_{i0}$ * Lagged Temp		0.261**		0.379***		0.318***		0.400***
		(0.119)		(0.116)		(0.0966)		(0.0976)
Low_{i0} * Lagged Temp		0.0679		0.0651		-0.00863		-0.00544
		(0.0680)		(0.0634)		(0.0758)		(0.0687)
$High_{i0}$ * Lagged2 Expected Subsidy	-0.0265***		-0.0264***		-0.0280***		-0.0277***	
	(0.00560)		(0.00577)		(0.00574)		(0.00578)	
Low_{i0} * Lagged2 Expected Subsidy	-0.0393***		-0.0395***		-0.0376***		-0.0379***	
	(0.00580)		(0.00564)		(0.00545)		(0.00543)	
Firm-level controls	No	No	Yes	Yes	No	No	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of firms	2141	2141	2121	2121	2141	2141	2121	2121
Observations	16291	16291	16039	16039	16291	16291	16039	16039
1st stage F-statistic	12.21		11.77		12.50		11.99	
Implied estimate of the difference		0.193		0.314**		0.327***		0.405***
standard deviation of the difference		(0.128)		(0.122)		(0.116)		(0.112)

Table LX. Capital Structure and Employment Flexibility: Other Dependent Variables

This table reports the results of estimating the following specification using the IV-2SLS framework:

$$Y_{it}=\alpha_{rt}+\alpha_{st}+\beta Temp_{it-1}+X_{it}'\gamma+\eta_i+\varepsilon_{it}\ ,$$

where Yit are different dependent variables of firm i in year t, Tempit-1 is its proportion of workers on temporary contracts, lagged one year, αrt are region-year fixed effects, αst are industry-year fixed effects, ηi are firm fixed effects, and Xit are firm-level controls (log of sales, operating profit margin, R&D expenses over sales, and modified Altman's z-score; included in specifications Table IV Col 6 and Table 5 Col 2, Col 6, and Col 8). Specifications Table V Col 2 and Col 6 additionally include firm-level controls for tangibility and average wage. Specifications Table V Col 4 and Col 6 include region-year-industry fixed effects. Specification Table V Col 8 estimates the results using only the firms that are present in the sample in 1994. Standard errors are two-way clustered at the region-year and firm level and are reported below the coefficients. The first year the firm appears in the sample is dropped from all regressions. The number of firms and observations excludes singletons. * indicates 10% significance; ** 5% significance; *** 1% significance.

All panels	Table IV		Table V			
	Col 4	Col 6	Col 2	Col 4	Col 6	Col 8
Firm-level controls	No	Yes	Yes	No	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Region-year FE	Yes	Yes	Yes	No	No	Yes
Industry-year FE	Yes	Yes	Yes	No	No	Yes
Region-industry-year FE	No	No	No	Yes	Yes	No
Panel A	Net Flow of Credit					
Lagged Temp	0.229***	0.304***	0.272***	0.224***	0.267***	0.230***
	(0.0833)	(0.0931)	(0.0936)	(0.0792)	(0.0951)	(0.0846)
Number of firms	2223	2181	2181	2223	2181	1512
Observations	16878	16352	16352	16878	16352	12394
Panel B	Net Flow of Equity					
Lagged Temp	0.0506	0.0597	0.0523	0.0427	0.0512	0.115**
	(0.0401)	(0.0430)	(0.0426)	(0.0398)	(0.0437)	(0.0507)
Number of firms	2201	2181	2181	2201	2181	1512
Observations	16669	16352	16352	16669	16352	12394
Panel C	Trading on an Exchange (dummy)					
Lagged Temp	-0.0154	-0.0168	-0.0170	-0.0590	-0.0485	-0.0658
	(0.0450)	(0.0441)	(0.0436)	(0.0626)	(0.0583)	(0.0729)
Number of firms	1493	1413	1413	1493	1413	976
Observations	3765	3550	3550	3765	3550	2510
Panel D	Being Part of a Group (dummy)					
Lagged Temp	-0.409**	-0.246	-0.245	-0.399**	-0.235	-0.503**
	(0.181)	(0.165)	(0.167)	(0.197)	(0.190)	(0.246)
Number of firms	1492	1412	1412	1492	1412	975
Observations	3763	3548	3548	3763	3548	2508

Table X. Capital Structure and Employment Flexibility: Firms in Liquidation

This table reports the results of estimating the following specification using the IV-2SLS framework:

$$D_{it}=\alpha_{rt}+\alpha_{st}+\beta^{S}Stay_{i}Temp_{it-1}+\beta^{E}Exit_{i}*Temp_{it-1}+X_{it}'\gamma+\eta_{i}+\varepsilon_{it}\ ,$$

where D_{it} is the leverage (ratio of total debt to capital) of firm *i* in year *t*, $Temp_{it-1}$ is its proportion of workers on temporary contracts, lagged one year, α_{rt} are region-year fixed effects, α_{st} are industry-year fixed effects, η_i are firm fixed effects, and X_{it} are firm-level controls (log of sales, operating profit margin, R&D expenses over sales, and modified Altman's z-score; included in specifications 3, 4, 7 and 8). $Exit_i$ is the dummy variable that equals 1 if the firm exits the data by the end of the sample (due to liquidation or switching to non-manufacturing activity), and 0 otherwise. $Stay_i$ is equal to 1-$Exit_i$. Lagged2 Expected Subsidy is the expected subsidy amount, defined in Section 2, lagged two years and measured in thousand Euro. Specifications 5 to 8 estimate the results using only the firms that are present in the sample in 1994. Standard errors are two-way clustered at the region-year and firm level and are reported below the coefficients. The first year the firm appears in the sample is dropped from all regressions. The number of firms and observations excludes singletons. * indicates 10% significance; ** 5% significance; *** 1% significance.

	IV-2SLS							
	First Stage	Second Stage	First Stage	Second Stage	First Stage	Second Stage	First Stage	Second Stage
	All firms				Originally-sampled firms			
	1	2	3	4	5	6	7	8
$Stay_i$ * Lagged Temp		0.188***		0.209***		0.240***		0.279***
		(0.0616)		(0.0605)		(0.0897)		(0.0897)
$Exit_i$ * Lagged Temp		-0.0316		0.0180		-0.0263		0.0489
		(0.120)		(0.109)		(0.153)		(0.151)
$Stay_i$ * Lagged2 Expected Subsidy	-0.0358***		-0.0355***		-0.0376***		-0.0367***	
	(0.00636)		(0.00622)		(0.00649)		(0.00617)	
$Exit_i$ * Lagged2 Expected Subsidy	-0.0298***		-0.0294***		-0.0338***		-0.0326***	
	(0.00572)		(0.00574)		(0.00722)		(0.00726)	
Firm-level controls	No	No	Yes	Yes	No	No	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of firms	2226	2226	2203	2203	1549	1549	1530	1530
Observations	16889	16889	16562	16562	12843	12843	12563	12563
1st stage F-statistic	15.18		14.68		11.87		11.00	
Implied estimate of the difference		0.220*		0.191*		0.266*		0.230
standard deviation of the difference		(0.122)		(0.111)		(0.159)		(0.155)

Table A.1. Capital Structure and Subsidies: Reduced Form Analysis

This table reports the results of the following specification:

$$D_{it}=\alpha_{rt}+\alpha_{st}+\beta ExpectedSubsidy_{it-2}+X_{it}'\gamma+\eta_i+\varepsilon_{it},$$

where D_{it} is the leverage (ratio of total debt to capital) of firm *i* in year *t*, Expected $Subsidy_{it-2}$ is the expected subsidy amount, defined in Section 2, lagged two years and measured in thousand Euro, α_{rt} are region-year fixed effects, α_{st} are industry-year fixed effects, η_i are firm fixed effects, and X_{it} are firm-level controls (log of sales, operating profit margin, R&D expenses over sales, and modified Altman's z-score; included in specifications Table IV Col 6 and Table V Col 2, Col 6, and Col 8). Specifications Table V Col 2 and Col 6 additionally include firm-level controls for tangibility and average wage. Specifications Table V Col 4 and Col 6 include region-year-industry fixed effects. Specification Table V Col 8 estimates the results using only the firms that are present in the sample in 1994. Standard errors are two-way clustered at the region-year and firm level and are reported below the coefficients. The first year the firm appears in the sample is dropped from all regressions. The number of firms and observations excludes singletons. * indicates 10% significance; ** 5% significance; ***

	Table IV		Table V			
	Col 4	Col 6	Col 2	Col 4	Col 6	Col 8
Lagged2 Expected Subsidy	-0.00506**	-0.00599***	-0.00587**	-0.00546*	-0.00609**	-0.00873***
	(0.00241)	(0.00231)	(0.00230)	(0.00292)	(0.00270)	(0.00325)
Firm-level controls	No	Yes	Yes	No	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Region-year FE	Yes	Yes	Yes	No	No	Yes
Industry-year FE	Yes	Yes	Yes	No	No	Yes
Region-year-industry FE	No	No	No	Yes	Yes	No
Number of firms	2226	2203	2203	2226	2203	1530
Observations	16889	16562	16562	16889	16562	12563
Within R^2	0.048	0.140	0.142	0.195	0.280	0.145

Internet Appendix: Not for Publication

Internet Appendix Table 1. Capital Structure and Employment Flexibility: Firms outside of the bargaining process

This table reports the results of estimating the following specification using the IV-2SLS framework:

$$D_{it}=\alpha_{rt}+\alpha_{st}+\beta Temp_{it-1}+X_{it}'\gamma+\eta_i+\varepsilon_{it}\ ,$$

where Dit is the leverage (ratio of total debt to capital) of firm i in year t, Tempit-1 is its proportion of workers on temporary contracts, lagged one year, αrt are region-year fixed effects, αst are industry-year fixed effects, ηi are firm fixed effects, and Xit are firm-level controls (log of sales, operating profit margin, R&D expenses over sales, and modified Altman's z-score; included in specifications Table IV Col 6 and Table V Col 2 and Col 6). The instrument is Lagged2 Expected Subsidy, defined in Section 2. Specifications Table V Col 2 and Col 6 additionally include firm-level controls for tangibility and average wage. Specifications Table V Col 4 and Col 6 include region-year-industry fixed effects. Specification Table 5 Col 8 estimates the results using only the firms that are present in the sample in 1994. Panel A estimates the specifications for small firms (those below industry median by sales). Panel B estimates the specifications for firms with low productivity growth (those below industry median by the growth of sales per worker). Standard errors are two-way clustered at the region-year and firm level and are reported below the coefficients. The first year the firm appears in the sample is dropped from all regressions. The number of firms and observations excludes singletons. * indicates 10% significance; ** 5% significance; *** 1% significance.

Panel A: Small firms	Table IV		Table V			
	Col 4	Col 6	Col 2	Col 4	Col 6	Col 8
Lagged Temp	0.0810	0.139*	0.139*	0.114	0.168**	0.242**
	(0.0809)	(0.0773)	(0.0765)	(0.0887)	(0.0831)	(0.106)
Firm-level controls	No	Yes	Yes	No	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Region-year FE	Yes	Yes	Yes	No	No	Yes
Industry-year FE	Yes	Yes	Yes	No	No	Yes
Region-industry-year FE	No	No	No	Yes	Yes	No
Number of firms	1183	1170	1170	1183	1170	795
Observations	8116	8000	8000	8116	8000	5846
F-statistic	33.84	33.89	34.09	23.84	23.57	22.78

Panel B: Low-productivity-growth firms	Table IV		Table V			
	Col 4	Col 6	Col 2	Col 4	Col 6	Col 8
Lagged Temp	0.186**	0.216**	0.211**	0.165*	0.229**	0.308**
	(0.0834)	(0.0862)	(0.0866)	(0.0965)	(0.102)	(0.131)
Firm-level controls	No	Yes	Yes	No	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Region-year FE	Yes	Yes	Yes	No	No	Yes
Industry-year FE	Yes	Yes	Yes	No	No	Yes
Region-industry-year FE	No	No	No	Yes	Yes	No
Number of firms	1885	1862	1862	1885	1862	1323
Observations	8128	7979	7979	8128	7979	6036
F-statistic	38.32	38.40	39.23	24.85	25.94	29.45

Internet Appendix Table 2. Capital Structure and Employment Flexibility: Robustness to Additional Interactions

This table reports the results of estimating the following specification using the IV-2SLS framework:

$$D_{it}=\alpha_{rt}+\alpha_{st}+\beta Temp_{it-1}+X_{it}'\gamma+\eta_i+\varepsilon_{it}\ ,$$

where Dit is the leverage (ratio of total debt to capital) of firm i in year t, Tempit-1 is its proportion of workers on temporary contracts, lagged one year, αrt are region-year fixed effects, αst are industry-year fixed effects, ηi are firm fixed effects, and Xit are firm-level controls (log of sales, operating profit margin, R&D expenses over sales, and modified Altman's z-score; included in specifications Table IV Col 6 and Table V Col 2 and Col 6). The instrument is Lagged2 Expected Subsidy, defined in Section 2, times employment-to-assets ratio (1st-year value kept constant) in Panel A, and both this one and Lagged2 Expected Subsidy in Panel B. Specifications Table V Col 2 and Col 6 additionally include firm-level controls for tangibility and average wage. Specifications Table V Col 4 and Col 6 include region-year-industry fixed effects. Specification Table V Col 8 estimates the results using only the firms that are present in the sample in 1994. All specifications additionally inlcude the interactions between $Subsidy_{it-2}$ (the subsidy amount, defined similarly to the one in Section 2, but without the wTi0 component, lagged two years and measured in thousand Euro) with the volatility of firm product demand (measured as the standard deviation of the three-valued indicator for the condition of the main market), competition (share in the main market), human capital specificity (share of personnel training costs in total labor costs), productivity (log sales per worker). Standard errors are two-way clustered at the region-year and firm level and are reported below the coefficients. The first year the firm appears in the sample is dropped from all regressions. The number of firms and observations excludes singletons. * indicates 10% significance; ** 5% significance; *** 1% significance.

	Table IV		Table V			
	Col 4	Col 6	Col 2	Col 4	Col 6	Col 8
Lagged Temp	0.135**	0.159***	0.155**	0.146**	0.165**	0.212**
	(0.0628)	(0.0608)	(0.0605)	(0.0698)	(0.0657)	(0.0872)
Firm-level controls	No	Yes	Yes	No	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Region-year FE	Yes	Yes	Yes	No	No	Yes
Industry-year FE	Yes	Yes	Yes	No	No	Yes
Region-industry-year FE	No	No	No	Yes	Yes	No
Additional interactions with $Subsidy_{it-2}$ as controls	Yes	Yes	Yes	Yes	Yes	Yes
Number of firms	14802	14566	14566	14802	14566	10861
Observations	1670	1667	1667	1670	1667	1090
F-statistic	38.43	39.05	39.46	29.15	29.53	43.08

Internet Appendix Table 3. Capital Structure and Employment Flexibility: Cross-Sectional Heterogeneity in Bankruptcy Costs

This table reports the results of estimating the following specification using the IV-2SLS framework:

$$D_{it}=\alpha_{rt}+\alpha_{st}+\beta^{H}High_{i0}Temp_{it-1}+\beta^{L}Low_{i0}*Temp_{it-1}+\delta HighVar_{i0}Temp_{it-1}+X_{it}'\gamma+\eta_i+\varepsilon_{it},$$

where D_{it} is the leverage (ratio of total debt to assets) of firm *i* in year *t*, $Temp_{it-1}$ is its proportion of workers on temporary contracts, lagged one year, α_{rt} are region-year fixed effects, α_{st} are industry-year fixed effects, η_i are firm fixed effects, and X_{it} are firm-level controls (log of sales, operating profit margin, R&D expenses over sales, and modified Altman's z-score; included in specifications 3, 4, 7 and 8). $High_{i0}$ is the dummy variable that equals 1 if the firm is classified as a high bankruptcy cost firm, defined as having less buildings and land that the industry median, in the year the firm enters the data, and 0 otherwise. Low_{i0} is equal to 1-$High_{i0}$. $HighVar_{i0}$ is the dummy variable that equals 1 if the firm has sales above the industry median (columns 3 and 4), profitability above the industry median (columns 5 and 6), is in highly-competitive environment (columns 7 and 8), all three together (columns 9 and 10), all in the year the firm enters the data, and 0 otherwise. Standard errors are two-way clustered at the region-year and firm level and are reported below the coefficients. The first year the firm appears in the sample is dropped from all regressions. The number of firms and observations excludes singletons. * indicates 10% significance; ** 5% significance; *** 1% significance.

	Base		With additional splits							
	Table VIII Col 6	Table VIII Col 8	High LnSales		High Profitability		High Competition		All three together	
	1	2	3	4	5	6	7	8	9	10
$High_{i0}$ * Lagged Temp	0.318***	0.400***	0.339***	0.428***	0.329***	0.415***	0.340**	0.376**	0.371**	0.423**
	(0.0966)	(0.0976)	(0.0948)	(0.0952)	(0.107)	(0.106)	(0.170)	(0.160)	(0.173)	(0.165)
Low_{i0} * Lagged Temp	-0.00863	-0.00544	0.0601	0.0907	0.00608	0.0154	-0.114	-0.130	-0.0404	-0.0127
	(0.0758)	(0.0687)	(0.102)	(0.0952)	(0.0881)	(0.0817)	(0.145)	(0.138)	(0.209)	(0.207)
Firm-level controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of firms	2141	2121	2140	2120	2139	2119	1341	1326	1339	1324
Observations	16291	16039	16279	16027	16271	16019	11150	10964	11130	10944
Implied estimate of the difference	0.327***	0.405***	0.278**	0.337**	0.322***	0.400***	0.454***	0.505***	0.411*	0.435**
standard deviation of the difference	(0.116)	(0.112)	(0.136)	(0.134)	(0.114)	(0.111)	(0.175)	(0.168)	(0.211)	(0.210)

Internet Appendix Table 4. Capital Structure and Employment Flexibility: Robustness to Alternative Instruments

This table reports the results of estimating the following specification using the IV-2SLS framework:

$$D_{it}=\alpha_{rt}+\alpha_{st}+\beta Temp_{it-1}+X_{it}'\gamma+\eta_i+\varepsilon_{it}\ ,$$

where Dit is the leverage (ratio of total debt to capital) of firm i in year t, Tempit-1 is its proportion of workers on temporary contracts, lagged one year, αrt are region-year fixed effects, αst are industry-year fixed effects, ηi are firm fixed effects, and Xit are firm-level controls (log of sales, operating profit margin, R&D expenses over sales, and modified Altman's z-score; included in specifications Table IV Col 6 and Table V Col 2 and Col 6). The instrument is Lagged2 Expected Subsidy, defined in Section 2, times employment-to-assets ratio (1st-year value kept constant) in Panel A, and both this one and Lagged2 Expected Subsidy in Panel B. Specifications Table V Col 2 and Col 6 additionally include firm-level controls for tangibility and average wage. Specifications Table V Col 4 and Col 6 include region-year-industry fixed effects. Specification Table V Col 8 estimates the results using only the firms that are present in the sample in 1994. Standard errors are two-way clustered at the region-year and firm level and are reported below the coefficients. The first year the firm appears in the sample is dropped from all regressions. The number of firms and observations excludes singletons. * indicates 10% significance; ** 5% significance; *** 1% significance.

Panel A	Table IV		Table V			
	Col 4	Col 6	Col 2	Col 4	Col 6	Col 8
Lagged Temp	0.200	0.340***	0.333***	0.176	0.297***	0.480***
	(0.122)	(0.119)	(0.119)	(0.115)	(0.111)	(0.182)
Firm-level controls	No	Yes	Yes	No	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Region-year FE	Yes	Yes	Yes	No	No	Yes
Industry-year FE	Yes	Yes	Yes	No	No	Yes
Region-industry-year FE	No	No	No	Yes	Yes	No
Number of firms	2223	2200	2200	2223	2200	1527
Observations	16848	16521	16521	16848	16521	12522
F-statistic	25.24	25.71	25.63	18.89	19.17	16.08

Panel B	Table IV		Table V			
	Col 4	Col 6	Col 2	Col 4	Col 6	Col 8
Lagged Temp	0.132**	0.147**	0.143**	0.143**	0.153**	0.203**
	(0.0599)	(0.0574)	(0.0572)	(0.0665)	(0.0617)	(0.0844)
Firm-level controls	No	Yes	Yes	No	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Region-year FE	Yes	Yes	Yes	No	No	Yes
Industry-year FE	Yes	Yes	Yes	No	No	Yes
Region-industry-year FE	No	No	No	Yes	Yes	No
Number of firms	2223	2200	2200	2223	2200	1527
Observations	16848	16521	16521	16848	16521	12522
F-statistic	19.07	19.44	19.55	15.12	15.40	20.68