

# **Do Multinational Firms Benefit from Weak Employment Protection**

## **Abroad? Evidence from Cash Holdings**

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*Preliminary draft. Please do not quote*

### **Abstract**

Competition for global capital is often used by policy makers to justify streamlining employment protection regulations. We assess this claim by examining whether access to lightly regulated foreign labor markets provides multinational firms with tangible financial benefits – specifically, a low cash holdings requirement. Using novel foreign subsidiary presence data to identify multinational firms, we show that they indeed hold proportionally less cash than their domestic-oriented peers. This gap narrows after a labor reform at home attenuates multinational firms’ relative advantages, especially if they have current operations in countries with weak employment protection. Our evidence suggests that multinational activities may be driven by labor regulation arbitrage.

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## 1. Introduction

One of the most profound and long-running critiques of the globalization of firms' activities is that it can trigger a "race to the bottom" in labor market standards. The concern hinges on the fact that multinational firms possess relatively mobile capital, allowing them to actively shift operations to locations with low production costs to gain competitive advantages.<sup>1</sup> As employment protection is often perceived to be an important driver of such costs, countries may be tempted to out-compete one another in deregulating their labor markets to attract foreign investments.<sup>2</sup>

Despite the increasing dominance of multinational firms as a global investor and employer,<sup>3</sup> the current evidence on their interactions with country-specific labor regulations is surprisingly limited. The costs of such regulations are often assumed in theory and practice, but in the literature, the extent to which multinational firms benefit from more flexible foreign labor markets has not been clearly established. Prior studies tend to focus on the question of whether cross-border investments gravitate towards countries with more basic employment rights, so far with somewhat inconclusive results. Although some studies document that the strictness of employment protection regulations is negatively associated with inbound FDI (Olney, 2013) and country-specific M&A activity (Dessaint *et al.*, 2017), other studies find the opposite relationship for cross-border acquisitions (Alimov, 2015b). The mixed evidence may

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<sup>1</sup> See Foley and Manova (2015) for a comprehensive review of the literature on the role that capital mobility plays in promoting multinational production.

<sup>2</sup> For example, the Indonesian government cited the need to attract foreign capital in competition with other South East Asian countries as a key reason for introducing its recent labor reform legislation to the parliament (Connors, 2020). Multinational firms, at least through their corporate lobby representatives, appear to display a clear preference for less restrictive employment protection regulations. For example, the Australia Indonesia Business Council voiced strong support for the Indonesian reform. In contrast, when China was drafting the Labor Contract Law 2007, aimed to strengthen workers' rights and make layoffs more difficult, the American Chamber of Commerce waged an intense lobby campaign against the law, suggesting that it would result in lower US investments into China (Barboza, 2006).

<sup>3</sup> According to the UN Trade Organization *World Investment Report 2019*, the number of employees in foreign affiliates of multinational firms nearly tripled from 28 to 76 million in the last three decades. Their total assets rose from 6 to 110 trillion during the same period.

reflect an alternative possibility that labor regulation costs are not sufficiently large to influence firms' foreign expansions, which generally required substantial fixed investments.

Our study contributes new insights into this important debate from a corporate finance perspective. We consider a different way to assess the merit of the “race to the bottom” hypothesis: through the manifestation of labor regulation benefits in multinational firms' *corporate financial policies*. We specifically focus on liquidity management and investigate whether multinational firms' labor market advantages allow them to adopt a less conservative cash holding policy.

Our focus reflects the growing importance of liquidity management in corporate financial decision making around the world, as demonstrated by the ratio of cash to total assets steadily increasing among firms in both the US (Bates *et al.*, 2009) and other countries (Pinkowitz *et al.*, 2015).<sup>45</sup> This trend is consistent with existing theories suggesting that firms optimally hoard cash for precautionary reasons – to avoid financial distress and to mitigate future missed investment opportunities (Almeida *et al.*, 2004; Gamba and Triantis, 2008). An emerging literature points to labor market frictions as a key factor driving such caution. In particular, high labor adjustment costs (those associated with searching, hiring, training, firing as well as productivity losses due to employee turnover) make a firm more exposed to negative cash flow shocks, which according to Acharya *et al.* (2007) and Boeri *et al.* (2018) can be hedged by hoarding cash. This is supported by recent evidence from Ghaly *et al.* (2015) that firms indeed hold large amounts of cash when their activities are skilled-labor dependent.<sup>6</sup> Thus, cash holdings constitute a clear and important financial indicator of labor market advantages.

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<sup>4</sup> Around the world, the fraction of cash and cash equivalents to total assets has on average increased from 12.9% in 1990 to 18.3% in 2011 (Fernandes and Gonenc, 2016).

<sup>5</sup> In addition, the value of cash has also increased over time (Bates *et al.*, 2018).

<sup>6</sup> The labor and finance literature also consider another hypothesis that firms strategically choose their financing policies to improve their bargaining power in wage negotiation. In particular, Klasa *et al.* (2009) show that firms actually hold less cash to defend against powerful unions.

Within the global cash retention phenomenon, multinational firms account for a significant source of cross-firm heterogeneity. Recent studies show that they tend to hold proportionally *less* cash than their domestic counterparts (Erel *et al.*, 2020; Fernandes and Gonenc, 2016).<sup>7</sup> This is a substantial advantage as multinational firms are able to deploy their capital in productive assets rather than liquidity reserves. Given the established link in the literature between labor market frictions and cash holding, it is therefore intuitive to raise the question of whether multinational firms hold less cash than domestic firms because of the former's ability to access less restrictive foreign labor markets.

We answer this question by analyzing how cash policies of multinational firms and firms with only domestic operations (henceforth, *domestic firms*) respond differently to major employment protection reforms undertaken around the world. Our analysis is underpinned by a novel and comprehensive panel dataset of multinational firms headquartered in 31 major economies over the period from 1997 to 2014. The critical advantage of our data is the ability to capture the evolution of the foreign operations of each firm, and specifically, when the firm establishes a subsidiary in another foreign country. Because of such granular variations, we can accurately define, at the time of a labor regulation reform, the multinational status of each firm as well as the current labor regulation environments of its foreign operations. The summary statistics of our data indicate that there is a large cash holdings gap between multinational and domestic firms, as documented in Fernandes and Gonenc (2016) and Erel *et al.* (2020), and that it is in fact expanding. This is confirmed in a regression analysis, which shows that multinational firms hold about 2% less cash as a proportion of assets than domestic firms with similar characteristics (compared to the sample's median cash ratio of about 13%).

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<sup>7</sup> Some studies attribute the rise in cash holdings in the US to US multinational firms parking cash in foreign low-tax jurisdictions to avoid paying tax on repatriated profits. However, Pinkowitz *et al.* (2015) show that US multinational firms do not hold more cash than non-US multinational firms with similar characteristics. They find that the high average cash holdings of US firms are driven by a small subset of research intensive firms, which maintain cash reserves to fund their R&D activities.

Our analysis focuses on variations in this cash holdings gap, rather than variations in multinational firms' cash holdings per se. This approach allows us to infer multinational firms' advantages relative to domestic firms. It also reflects the fact that multinational firms do not operate in a vacuum but a competitive environment, including the one in their home country. The financial policy responses of multinational firms to regulatory changes are likely to reflect the responses of their peers. Prior studies indeed show that firms hold more cash when they face more intense competition from rivals (Haushalter *et al.*, 2007; Hoberg *et al.*, 2014).

Our hypothesis is that, in the presence of labor market frictions, multinational firms possess a relative advantage over domestic firms because the former group tends to have foreign operations in countries with more flexible labor regulations. If this argument holds, then the observed cash holdings gap between them should change in response to a *common shock* to labor regulations. Specifically, we consider the scenario of a labor market reform in the *home* country of a multinational firm – when the country adopts significant legislative changes to its industrial relation system to lower employee rights protection with the aim of making the labor market more fluid. We argue that such a reform should have the effect of levelling the playing field, as domestic firms have *relatively* more to gain from the reform than multinational firms. Given the increase in competitive threats, multinational firms are more likely to shift their cash policies towards conservatism than their domestic peers – that is, the reform triggers a narrowing of the cash holdings gap.

Our regression results show that multinational firms indeed increase the level of cash holdings relative to domestic firms after the passage of a labor market reform in their home country. The results are economically significant. The cash holdings gap between multinational and domestic firms shrinks by a factor of one third, or 0.6% of assets, which corresponds to a change of US\$164.4 million in cash per firm-year (0.6% of the mean of total assets of US\$27,400 million). In arriving at this estimate, we control for many confounding factors

through firm fixed effects and various combinations of industry, country and year fixed effects. We also rule out the possibility that the results are driven by policy uncertainty around a major reform. In addition, we examine *counter* reforms, which are legislative changes to strengthen employee rights protection, and find the opposite results to the case of labor regulation reforms. That is, a counter reform widens the cash-to-asset ratio difference between multinational and domestic firms.

It is possible that some multinational firms do not operate in foreign countries with weak employee protection, in which case they do not hold a clear labor market advantage over their domestic peers. Therefore, to establish the effect of a reform, we distinguish multinational firms by the level of employee protection in the locations of their foreign operations immediately before the reform is introduced. We hypothesize that the increase in multinational firms' cash holdings after the labor market reform is more pronounced for those operating in countries with less stringent labor market protection. In our study, this protection is captured by the index of employment protection legislation (EPL) compiled by the OECD (covering both OECD and some non-OECD countries) as a measure of the difficulty in hiring and firing workers. The results support our main hypothesis. The effect of a home-country labor reform in narrowing the cash holdings gap is more pronounced for multinational firms whose subsidiaries are locating in countries with less rigorous employment protection laws.

Our analysis directly addresses the possibility that labor reforms and firms' cash holdings may be correlated because of certain unobservable firm characteristics and macro-level changes. For example, policy makers may perceive large corporate cash reserves as an unproductive use of capital and may change labor regulations to encourage more corporate investments. To rule out such confounding effects, we employ an identification strategy centred around labor market reforms that occur following very close elections. Following the literature on the political economy of such reforms (Pagano and Volpin, 2005), we argue that they are

driven by the electoral system of a country and the political ideology of the party in government – a right-leaning party tends to advocate for less restrictive labor regulations. Intuitively, as the outcome of a close election is difficult to anticipate in advance, its associated post-election changes in social and economic policies are unlikely to be driven or predicted by firms (Jens, 2017). Thus, the subsequent labor reform can be considered a shock to firms' relative labor market advantages that are plausibly exogenous to their cash retention decisions.

To execute this identification strategy, we rely on election data from the World Bank Database of Political Institutions, following Julio and Yook (2012), Bhattacharya *et al.* (2017), Cao *et al.* (2017) and Kim (2019). We alternatively define close elections using either the margin of popular votes or the margin of parliamentary seats attained by the winning party relative to the next (opposition) party. Using only labor reforms that follow these elections, we again find that a reform narrows the cash holdings gap between multinational and domestic firms.

Finally, we attempt to validate the two key elements of our hypothesis – the economic channels that explain why multinational and domestic firms respond differently to a common labor market reform. The first is the effect of labor adjustment costs (LACs). As previously discussed, Ghaly *et al.* (2015) show that LACs generate cross-firm heterogeneity in cash holdings. In our empirical context, the labor market advantage of a multinational firm over a domestic peer is likely to be greater when they are both in a high-LAC industry than when they are in a low-LAC industry. We therefore expect that a labor reform should have a more pronounced impact on the cash holding gap in the former scenario. Using the percentage of skilled labor in an industry compiled by Belo *et al.* (2017) as a measure of industry-level LACs, this is exactly what we find.

The second channel is the effect of competition. Under our hypothesis, the cash holdings gap is reduced because multinational firms respond to the increased competitive

threats from their domestic peers following a reform. If this is the case, the change should be more pronounced among firms in competitive industries. To test this conjecture, we split our sample firms according to the level of competition in their product market space (defined at the country-industry level). We find that multinational firms in competitive industries are indeed more likely to increase their cash holdings relative to their domestic peers, whereas the effect is less clear in uncompetitive industries.

Our results add to a growing literature on how labor market risk shapes corporate financial policies. Most studies have so far focused on US firms,<sup>8</sup> and only a few studies have sought to illustrate this relationship by exploiting variations in labor regulations around the world. They show that cross-country measures of employment protection influence leverage (Ellul and Pagano, 2019; Simintzi *et al.*, 2014), debt contracts (Alimov, 2015b), M&A activities (Dessaint *et al.*, 2017) and cash holdings (Karpuz *et al.*, 2020). None of these studies explicitly consider the differences across firms in their global operations, which expose them to diverse labor markets and regulations. Our study therefore contributes new insights to the labor and finance literature by showing that multinational firms' labor regulation advantages allow them to pursue more efficient financial strategies than domestic firms. One of our key contributions lies in the ability to observe both the locations and evolution of a firm's foreign *operations* through time, which allow us to estimate the heterogeneous effect of a labor regulation shock.

Most importantly, we provide new evidence on the issue of whether multinational firms indeed benefit from having access to foreign labor markets with weak employment protection. Prior studies such as Olney (2013) and Alimov (2015a) assess such benefits through the patterns of firms' expansions into new markets. However, because these are large irreversible investments that reflect the accumulation of many other factors (e.g. market growth

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<sup>8</sup> See (Matsa, 2010), Bae *et al.* (2011), Agrawal and Matsa (2013), Serfling (2016) and Michaels *et al.* (2018).



opportunities, tax incentives, wages, etc.), the effect of labor regulation changes may be obscured. We focus instead on cash holdings, a less lumpy corporate decision. This setting allows us to utilize multinational firms' responses to a labor regulation shock to identify their labor market advantages, without having to control for underlying reasons why firms establish foreign operations in the first place. We are thus able to provide a new way of showing that multinational firms care about labor regulations, which is notion often perpetuated by policy makers in their repertoire of labor reform justifications.

The rest of the paper is organized as follows. In Section 2, we describe the data and variables used. The main empirical results, robustness checks and endogeneity tests are discussed in Section 3. The economic channels are presented in Section 4. Section 5 contains our concluding comments.

## **2. Data and variable descriptions**

### ***2.1 Data sources and sample selection***

We source firm-level accounting data from the *Worldscope* database and foreign subsidiaries data from the Orbis and Osiris databases. We obtain international annual stock price data from *Datastream* and macroeconomic data from the *WorldBank's* World Economic Indicators. Labor market reform data are retrieved from International Monetary Fund (IMF) (Duval *et al.*, 2019) and Simintzi *et al.* (2014) and our own research of labor market laws. Our sample comprises 31 countries, including 21 OECD countries (Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Turkey, Spain, Sweden, Switzerland, the United Kingdom, and the United States) and 10 other countries (China, Egypt, Hungary, Indonesia, Mexico, Singapore, South

Africa, Sri Lanka and Thailand). The sample spans from 1997 to 2014 which is determined based on the availability of our foreign firm expansion data at the onset of this research.

Following prior studies on corporate cash holdings (Opler *et al.*, 1999), we exclude financial firms (SIC codes: 6000 and 6999) because their operations are subject to industry-specific regulations, such as capital and liquidity requirements, which differ from non-bank financial institutions. We also exclude utility companies (SIC codes: 4900-4999) because their cash holdings are regulated in a number of countries. Firms that have negative assets or negative sales are also excluded.

## ***2.2 Foreign Operations (Subsidiaries) Data***

Our study utilizes a new dataset assembled in Moshirian, Pham, Tian and Wu (2020), which captures firms' cross-border expansions into specific countries during the period from 1997 to 2014. Using the underlying subsidiaries data obtained from the annual historical versions of the Orbis and Osiris databases (provided by Bureau van Dijk, a division of Moody's Analytics), Moshirian et al (2020) compile the list of about 0.9 million foreign subsidiaries for listed firms from around the world. They then utilize a comprehensive procedure to identify whether each of these subsidiaries is acquired or incorporated (as a new entity) by the parent firm. The timing of a cross-border expansion is defined as the (acquisition or incorporation) year in which a firm establishes the first subsidiary in a given country. Compared to other studies on cross-border investments, a unique feature of this dataset is that it captures the timing of each expansion. The data thus allow us to capture the moment a firm becomes a multinational firm, as well as later expansions into other countries.

Using subsidiary establishment to mark an expansion event reflects a well-accepted view in the literature that *subsidiary presence* is a strong indicator of a country's strategic importance as a target market and/or production location. This means that the firm has to establish ground operations in the country and hire local workers. In contrast to prior studies,

most of which rely on foreign sales to define multinational firms, our subsidiaries-based dataset captures more closely the exposure of these firms to foreign labor markets.

### ***2.3 Labor market reform***

Table A2 provides the list of 26 out of 31 sample countries that passed major labor market reforms during 1996-2014. It also shows the major reform years as well as the associated employment protection legislations.<sup>9</sup> Intuitively, these major reforms track changes to the national rules and regulations governing regular and fixed term employment contracts, as well as collective dismissals. This includes procedural requirements on firing, standards for unfair dismissals, conditions on the use of temporary contracts, notice periods and severance pay requirements, and delays and costs associated with collective dismissals.

Of the 31 reforms that we identify in our sample period, 17 of the 31 reforms have led to a decrease/liberalisation in employment protection (i.e. labor market reform), whereas 14 led to an increase/tightening in employment protection (i.e. labor market counter-reform). Not every country in our sample has experienced major reforms. Canada, Denmark, Germany, Switzerland and the United States did not have any reform during 1997-2014. Consequently, these countries are always in the control groups. Some countries have two major reforms (Australia, France, Ireland, New Zealand and Portugal). The staggered nature of the reforms allows the same country to be in both treated and control groups at different times, further alleviating the concerns that our results (presented later in Section 3) could be picking up unobservable differences across countries.

For countries with two contradictory labor market reforms during 1997-2014, we determine the periods of labor market reform and counter-reform such that the reform period

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<sup>9</sup> According to the IMF, major market reforms (either reforms or counter-reforms) are those that meet at least one of three alternative criteria: (i) a narrative criterion based on OECD staff's judgement on the significance of the reform at the time of adoption; (ii) whether the reform is mentioned again in subsequent *Economic Surveys*, as opposed to only once when the measure is adopted; (iii) the magnitude of the change in the corresponding OECD indicator, when available (Duval *et al.*, 2019).

will not overlap with the counter-reform period. For example, we limit the reform period for Australia from 1997 to 2009 to exclude the enactment of 2010 Fair Work Act whose legislation is to increase employment protection (i.e. counter labor market reform).

### **2.3. Descriptive statistics**

Table 1 presents the country-level statistics of total numbers of multinational and domestic firms, median cash holdings for domestic firms and multinational firms from 1997-2014. Most countries have more domestic firms than multinational firms, except Belgium, Denmark, Finland, Ireland, Netherlands, Spain and Switzerland. The numbers of firms range from 33 in Hungary to 10,133 in the US. The median cash holdings of domestic firms are also higher than cash holdings of multinational firms in most countries. Sweden's median cash holding is the highest, accounted 0.1778 and 0.097 (of total Swedish firm's assets) for their domestic and multinational firms, respectively.

[Insert Table 1 here]

Table 2 provides the descriptive statistics of all variables used in the main analysis. In Panel A, we present the statistics for 21 OECD countries and Panel B outlines the statistics for 31 countries. For each variable, we provide information about the total number of observations, the mean and median values, the standard deviation, values at 25<sup>th</sup> and 75<sup>th</sup> percentiles. For our baseline analysis, there are 167,525 for OECD countries and 201,250 for all sample countries. *CASH* has mean of approximately 18.5%. The average firm size in our sample (mean) has a log of 19.959 and Tobin Q of 0.668. This is consistent with the descriptive statistics reported in the prior studies including (Karpuz *et al.*, 2020; Simintzi *et al.*, 2014). In addition, nearly half of our firms have multinational presence, manifested by the mean value of *MULTIFIRM* of 47.5% and 51.8% for both OECD and international samples, respectively.

[Insert Table 2 here]

### 3. Labor reform and multinational firms' cash holdings: Baseline Results

#### 3.1 Baseline regression

In this section, we investigate the effect of labor market reforms on multinational firms' cash holdings. We begin our empirical analysis by estimating the following baseline regression:

$$CASH_{i,j,t+1} = \alpha_0 + \beta_1 REFORM_{i,t} + \beta_2 MULTI\_FIRM_{i,t} + \beta_3 REFORM * MULTI\_FIRM_{i,t} + \theta_j CONTROL_{j,i,t} + \gamma Firm_i + \kappa_j Industry_j * \mu_t Year_t + \epsilon_{i,j,t+1} \quad (1)$$

The dependent variable is  $CASH_{i,j,t+1}$ , of firm  $i$  in (2 digit SIC) industry  $j$ , year  $t+1$ .  $REFORM$  is dummy variable equaling to 1 when there is a major labor market reform and 0, otherwise.  $MULTI\_FIRM$  is a dummy variable equaling to 1 if a firm has foreign subsidiaries and 0 otherwise. Following Opler *et al.* (1999), we include the following firm-control variables such as  $SIZE$ ,  $CF$ ,  $TOBINQ$ ,  $LEV$ ,  $RD$ ,  $DIV\_PAYER$ ,  $PPE$  and  $LIFE\_CIRCLE$ . To control for differences in macroeconomic conditions and income across countries, we include aggregate stock market return ( $MARKET\_RETURN$ ), GDP per capita ( $GDP\_PER\_CAPITA$ ) and GDP growth rate ( $GDP\_GROWTH$ ). In the baseline regressions, we include firm-fixed effects to control for control for time-invariant firm characteristics and industry\*year fixed effects to control for possible macroeconomic factors (e.g., financial crises and recessions) and industry-wide factors affecting cash holding decision. We cluster robust standard errors at both firm and industry\*year levels.  $\epsilon_{i,j,t+1}$  is the error term. Appendix A1 provides the detailed definitions of all variables introduced.

In Table 3, we report four different regression models using Equation (1). The first two models explore the impact of labor market reforms on multinational firms' cash holdings using OECD reform sample while the remaining two models investigate the research issue in OECD and non-OECD sample countries. The interaction terms between  $MULTI\_FIRM$  and  $REFORM$  are added in Columns (2) and (4). The coefficient terms of  $MULTI\_FIRM$  are negative and

statistically significant across all models, suggesting that on average, multinational firms hold less cash than domestic-focus firms.<sup>10</sup> The coefficient of the interaction term (*MULTI\_FIRM\*REFORM*) is 0.006 in Column (2), indicating labor market reforms have narrowed the level of cash holdings between multinational and domestic-focus firms. Specifically, the gap between their ratio of cash to assets reduces by 0.6%, which corresponds to US\$164.4 million in cash per firm-year (0.6% of the mean of total assets of US\$27,400 million). Further, the coefficients of *MULTI\_FIRM* and *MULTI\_FIRM\*ALL\_REFORM* in Column (4) remain significant and show consistent signs with Column (2) confirm our preliminary finding that multinational firms indeed increase the level of cash holdings relative to domestic firms after the passage of a labor market reform in their home country.

<Insert Table 3 here>

We then calculate the median value of our dependent variable  $CASH_{t+1}$  by year and plot the time series evolution of both multinational and domestic-focus firms' median cash holdings over 1994-2014. Figure 1 presents the evolution of firm cash holdings for OECD sample countries while the OECD and non-OECD sample countries are outlined in Figure 2. In overall, the graphs show that multinational firms hold less cash than domestic firms. Firm cash holding ratio also increases gradually from 10% in 1994 to 15% in 2014 for OECD countries.

Figure 3 compares graphically the variation in cash holdings of both multinational and domestic-focus firms over the eleven-year period (i.e., the  $[t-5, 0, t+5]$ ) around the labor market reform. We observe the following noticeable patterns. First, firm cash holdings increase before the labor market reform and starts to decline immediately during and after the passage of labor market reform. The cash level also decreases more after two-year post reform, despite a slight increase in cash level in year one. This figure further confirm our baseline findings that on

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<sup>10</sup> Table A5 in the Appendix further confirms this empirical observation.

average, multinational firms hold less cash than domestic focus firms and labor market reform narrows the cash holdings between domestic-focus and multinational firms.

[Insert Figure 1 here]

[Insert Figure 2 here]

[Insert Figure 3 here]

We supplement the baseline regression results in Table 3 with additional tests to ensure that our results are not sensitive to specific models or samples. We first re-run Equation (1) by employing counter-reform samples for both OECD countries and OECD and non-OECD sample countries and present the results in Table 4. Second, we regress Equation 1 using alternative models such as: (1) firm and year fixed effect, (2) firm fixed effect and year\*country fixed effect or (3) firm fixed effect and year\*industry\*country fixed effect. These model specifications help account for unobservable characteristics within firms, industry and country or any unobservable factors that vary over time that may effect on firms' decision to expand internationally, cash holdings and labor market reform. Duong *et al.* (2020) find that when firms face with greater difficulty in accessing the external financial markets when economic policy uncertainty; they tend to have more precautionary incentives to reserve cash. Thus, we also control for the effect of economic policy uncertainty on firm cash holdings. The results confirm our primary findings that the gap between multinational firms' and domestic-focus firms' cash holdings narrows after the passage of labor market reforms.<sup>11</sup>

<Insert Table 4 here>

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<sup>11</sup> The results are presented in Table A3 and A4 of the Appendix.

### ***3.2 Variations in the relation between labor market reform and multinational firms' cash holdings***

We conduct additional analysis to show the cross-sectional variations in the relation between labor market reform and multinational firms' cash holdings. We split multinational firms according to level of labor market protections that in the locations of their foreign operations immediately before the reform is introduced. We predict that an increase in multinational firms' cash holding after the labor market reform is more pronounced for those operating in countries with less stringent labor market protection. To find a measure of labor regulation that varies across countries and over time, we employ the employment protection law (EPL) index developed by the OECD. This EPL index is available for both OECD and some non-OECD countries from 1985 to 2019. This index measures a set of regulations concerning the conditions for hiring workers on regular, temporary or fixed-term contracts and the conditions for workers' dismissal for economic reasons. The values of the index range from zero to six with a higher score representing stricter employee protection. We employ two versions of the index alternatively. *EPL\_INDEX\_VER1* incorporates 8 data items concerning regulations for individual dismissals. *EPL\_INDEX\_VER2* is the weighted sum of sub-indicators concerning the regulations for individual dismissals (weight of 5/7) and additional provisions for collective dismissals (2/7). It incorporates 12 detailed data items.

We calculate a firm's weighted average location EPL, which is the aggregation of the EPL of all of the firm's subsidiary locations (countries), with each location's EPL being weighted by its GDP relative to the GDP of all the firm's locations. To illustrate, let's say firm A (in country C) has 2 foreign locations X and Y in year 2004. The weighted average location ELP for firm A is  $(ELP\_X * GDP\_X + ELP\_Y * GDP\_Y) / (GDP\_X + GDP\_Y)$ . *GDP\_AVERAGE\_EPL1* is firm weighted average location EPL calculated using *EPL\_INDEX\_VER1*. *GDP\_AVERAGE\_EPL2* is firm weighted average location EPL



calculated using *EPL\_INDEX\_VER2*. We then define *MULTI\_FIRM\_HIGHEPL1* (*MULTI\_FIRM\_LOWEPL1*) as a dummy variable that equals to 1 if a multinational firm's *GDP\_AVERAGE\_EPL1* is greater (lower) than the median value of all firms' *GDP\_AVERAGE\_EPL1* in the same country and 0 otherwise. Similarly, *MULTI\_FIRM\_HIGHEPL2* (*MULTI\_FIRM\_LOWEPL2*) is a dummy variable that equals to 1 if a multinational firm's *GDP\_AVERAGE\_EPL2* is greater (lower) than the median value of all firms' *GDP\_AVERAGE\_EPL2* in the same country and 0 otherwise. We then interact these variables with labor market reform dummy (*REFORM*) and regress on corporate cash holdings. The results are reported in Table 5.

<Insert Table 5 here>

In Columns (1) and (2) of Table 5, we find that multinational firms whose subsidiaries are locating in countries with less rigorous employment protection law (adjusted for GDP) hold more cash than their counterparts. The results remain consistent for OECD and non-OECD sample countries, manifested by the positive and statistically significant coefficients of *MULTI\_FIRM\_LOWEPL1\*REFORM* and *MULTI\_FIRM\_LOWEPL2\*REFORM* in Columns (3) and (4) of Table 5.

### **3.3 Endogeneity tests**

One possible concern with our baseline regression results is that they may be driven by omitted variables because certain unobservable country characteristics may affect both labor market reform and multinational firms' cash holdings. This could potentially bias our estimation and make correct statistical inferences inherently difficult to draw. Thus, to address this concern, we employ those major labor market reforms that were amended as a result of a close elections or a close margin of majority as alternative events of interest. Intuitively, a close (parliamentary or presidential) election is an election where the margin victory (the difference between the fraction of votes won by the victor and that garnered by the runner-up) is less than

10%. A close margin of majority election is an election where the fraction of seats held by the government below its sample median. Effectively, a close election or those with close margin of majority has greater uncertainty regarding the election outcome (Jens, 2017). We argue that if an outcome of an election is not anticipated well in advance, its associated change in social and economic policy may be difficult for firms to predict or manipulate, thus making the subsequent labor market reform more exogenous to firm cash holding decisions. Therefore, a strong positive relation between labor market reforms post-close election and multinational firm's cash holding would imply their stronger causal effect. To investigate this research issue, we employ the following regression equation:

$$\begin{aligned}
 CASH_{i,j,t+1} = & \alpha_0 + \beta_1 REFORM\_CLOSE\_ELECTION_{i,t} + \beta_2 MULTI\_FIRM_{i,t} + \\
 & \beta_3 REFORM\_CLOSE\_ELECTION * MULTI\_FIRM_{i,t} + \theta_j CONTROL_{i,j,t} + \gamma_i Firm_i + \kappa_j Industry_j * \\
 & \mu_t Year_t + \epsilon_{i,j,t+1}
 \end{aligned} \tag{2}$$

All the variables are defined earlier in Equation (1), except for *REFORM\_CLOSE\_ELECTION* which is either *REFORM\_10%MARGIN* or *REFORM\_50%MAJ*. *REFORM\_10%MARGIN* is a dummy variable equalling to 1 if margin victory of an election is less than 10% and 0 otherwise. *REFORM\_50%MAJ* is a dummy variable if the fraction of seats held by the government below its sample median at the election year. The results of these regression analysis are reported in Table 6. Particularly, Columns (1) and (2) report the results of OECD sample countries while the associated results of all sample countries are outlined in Columns (3) and (4). We find that, across all models, the interaction terms between firms with multinational presence and a close election's labor market reform are statistically significant and positive at both 5% (Columns 1 and 2) and 1% levels (Columns 3

and 4). The results of these identification tests confirm the positive impact of labor market reform on multinational firms' cash holdings.

[Insert Table 6 here]

#### **4. Economic channels**

We now investigate the underlying economic channels that influence the positive impact of labor market reform on multinational firms' cash holdings. These include firm labor adjustment cost and industry concentration.

##### ***4.1 Labor adjustment cost***

The theoretical link between labor market reform and multinational firms' cash holdings is based on an important friction in the labor market, namely, the costs of labor adjustment. Labor adjustment costs include the cost of firing, search, selection, hiring, training as well as productivity losses that incur when firms adjust their labor demand. Thus, firms should avoid making costly labor adjustments by optimally retaining their employees. This inflexible labor retention policy, however, may expose them to the risk of future cash flow shocks (Ghaly *et al.*, 2015). We expect that firms with higher labor adjust cost will have greater incentive to hold precautionary cash because cash reserves act as a buffer that safeguards against future cash flow uncertainty (Almeida *et al.*, 2004; Han and Qiu, 2007).

The passage of a labor market reform makes the firing and hiring less difficult and costly, thereby reducing firms' labor adjustment costs. Thus, we anticipate that domestic focus firms would hold less cash than multinational firms as the former exposes to lesser labor adjustment costs after the labor market reforms in domestic markets. To test this conjecture, we employ labor skill index of Belo *et al.*, (2017) as a measure of labor adjustment costs. The index is computed using the percentage of workers that work on occupations that require a high level of training and preparation using the Specific Vocational Preparation index from the

Dictionary of Occupational Titles (DOT), available from the Department of Labor, and employee data from the Bureau of Labor Statistics (BLS), Occupational Employment Statistics (OES) program.

Although the index is based on US firms' employee characteristics, we argue that, at the industry level, the labor skill dependency of US firms and international firms should be similar. Returning to our empirical setting, we further argue that multinational firms in high-skill industry face higher labor adjustments. This is because the costs of retaining and recruiting high-quality employees are more expensive (Ghaly *et al.*, 2015). Thus, multinational firms in industries with higher percentage of skilled employees will hold more cash due to greater labor adjustment costs.

To investigate this research issue, we regress firm cash holdings (*CASH*) on the interaction terms between multinational firms in industry with high/low skill labors (*MULTI\_FIRM\_HIGH\_LAC*/*MULTI\_FIRM\_LOW\_LAC*) and labor market reforms for both OECD and OECD and non-OECD samples. *MULTI\_FIRM\_HIGH\_LAC* (*MULTI\_FIRM\_LOW\_LAC*) is a dummy variable equalling to 1 if multinational firms located in industries whose labor skill index is greater (lower) than the median value of industry labor adjustment cost and zero otherwise. The results of this regression are reported in Table 7.

<Insert Table 7 here>

Table 7 reports the results of multinational firms located in industries with high/low skill labors for both OECD (from Columns 1 to 2) and OECD and non-OECD country samples (from Columns 3 to 4), respectively. The positive and statistically significant coefficients for *MULTI\_FIRM\_HIGH\_LAC\*REFORM* in Columns (1) and (2), implying that multinational firms in industries with higher percentage of skilled labors hold more cash than their counterparts. These results further strengthen our proposition that multinational firms hold

more cash their domestic-focus counterparts as they face with greater labor adjustment cost after the passage of labor market reform in the domestic markets.

#### ***4.2 Industry competition***

We further postulate that product market competition is another nexus that centres around the association between labor market reform and multinational firms' cash holdings. Tirole (2006), Irvine and Pontiff (2009) and Hoberg *et al.* (2014) find that product market competition has detrimental effect on firm expected profits and exacerbates their cash flow risk. Thus, the risk-increasing effect of competition are more likely to increase firm precautionary motives by encouraging them to pay less dividend and hold more cash (Hoberg *et al.*, 2014; Xu, 2012). To measure the effect of product market competition on domestic and multinational firms' cash holdings, we employ a market concentration measure, the Herfindahl-Hirschman Index (HHI), which is calculated as the sum of squared market shares of each firm in 2 digit SIC industry in each year. Intuitively, higher market concentration in the domestic markets means that domestic firms will face less product market competition. This implies that in higher concentrated industry, cash flow risk is reduced for domestic-focus firms but increased for multinational firms and thus result in the latter firms holding more cash. Thus, we hypothesise that multinational firms in industries with higher market concentration will hold more cash due to greater cash flow uncertainty.

To investigate this research issue, we regress firm cash holdings (*CASH*) on the interaction terms between multinational firms in highly/low concentrated markets (*MULTI\_FIRM\_HIGH\_HHI*/*MULTI\_FIRM\_LOW\_HHI*) and labor market reforms for both OECD and OECD and non-OECD country samples. *MULTI\_FIRM\_HIGH\_HHI* (*MULTI\_FIRM\_LOW\_HHI*) is a dummy variable equalling to 1 if multinational firms located

in industries whose HHI is greater (lower) than the median value of 2 digit SIC industry concentration and zero otherwise. The results of this regression are reported in Table 8.

<Insert Table 8 here>

Table 8 reports the results of multinational firms located in highly/low concentrated markets for both OECD (from Columns 1 to 2) and OECD and non-OECD country samples (from Columns 3 to 4), respectively. The positive and statistically significant coefficients for *MULTI\_FIRM\_HIGH\_HHI\*REFORM* in Columns (2) and (4) suggest that multinational firms in highly concentrated industries are holding more cash than domestic-focus firms. These results further strengthen our proposition that multinational firms hold more cash their domestic-focus counterparts as they face with greater cash flow uncertainty after the passage of labor market reforms.

## **5. Conclusion**

Do multinational firms reap significant benefits from operating in foreign countries with lower employment protection standards than their home countries? Our study seeks to answer this question by examining their corporate financial policies, drawing on the well-established fact in the literature that labor market frictions force firms to be financially conservative. Specifically, we compare how cash holdings policies of multinational firms and their domestic-oriented peers respond differently to a common labor regulation shock.

We find a strongly positive association between home-country labor market reforms and multinational firms' corporate cash holdings during the 1997-2014 period using a sample of firms from 31 countries, including 21 OECD countries and 10 non-OECD countries. Our analysis reveals that, around the world, multinational firms can afford to be hold less cash for precautionary reasons than domestic firms. Importantly, this gap is related to the relative advantage that they possess in terms of having access to lightly regulated foreign labor markets.

A reform at home, which effectively attenuates this advantage, also reduces the observed cash holdings gap. This result is robust to alternative counter-reform samples, various combinations of industry, country and year fixed effects and economic policy uncertainty. We also find consistent results when we use major labor market reforms that were amended as a result of a close elections or a close margin of majority as alternative events of interest. Our cross-sectional tests further show that multinational firms' cash holding after the labor market reform is more pronounced for those operating in countries with less stringent labor market protection. We then examine labor adjustment cost and industry competition as two economic channels underlying the relation between labor market reform and multinational firms' cash holdings. We find that multinational firms hold more cash than their domestic counterparts because labor market reforms increase their labor adjustment cost and cash flow uncertainty.

By documenting these findings, our research extends the current understanding on the impact of labor market risk on shaping corporate financial policies. More importantly, we show that multinational firms benefit from operating in foreign labor markets that are less restrictive than their home countries. Understanding such benefits is highly relevant to addressing the concern that multinational activities may be driven labor regulation arbitrage, fueling a “race to the bottom” among countries. The point that global labor regulation advantages can manifest in firms' liquidity management is particularly salient. To attract foreign capital, policy makers may thus need to look beyond location-specific investment returns, and take into account financial policies implemented at multinational firms at their headquarters.

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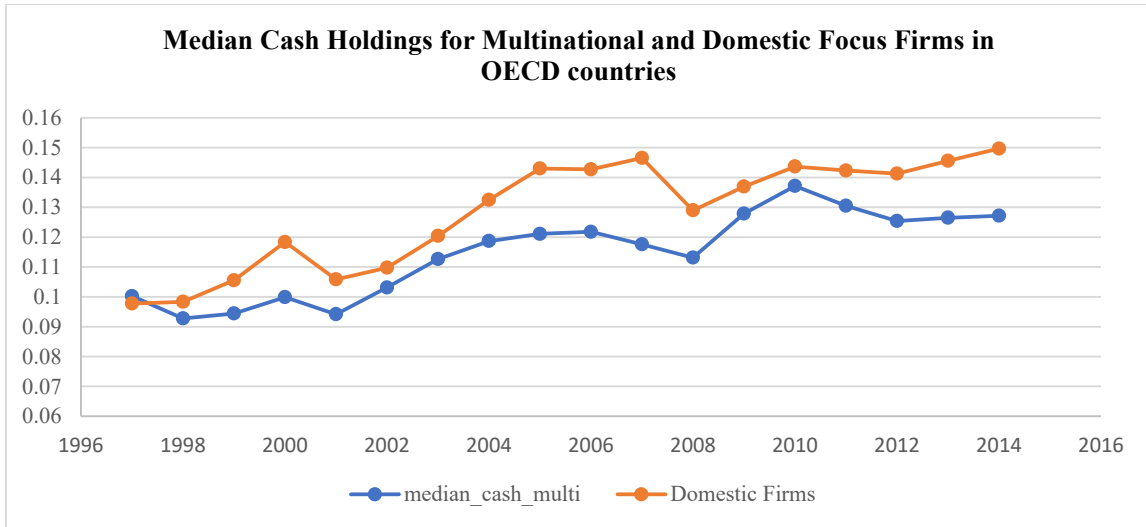


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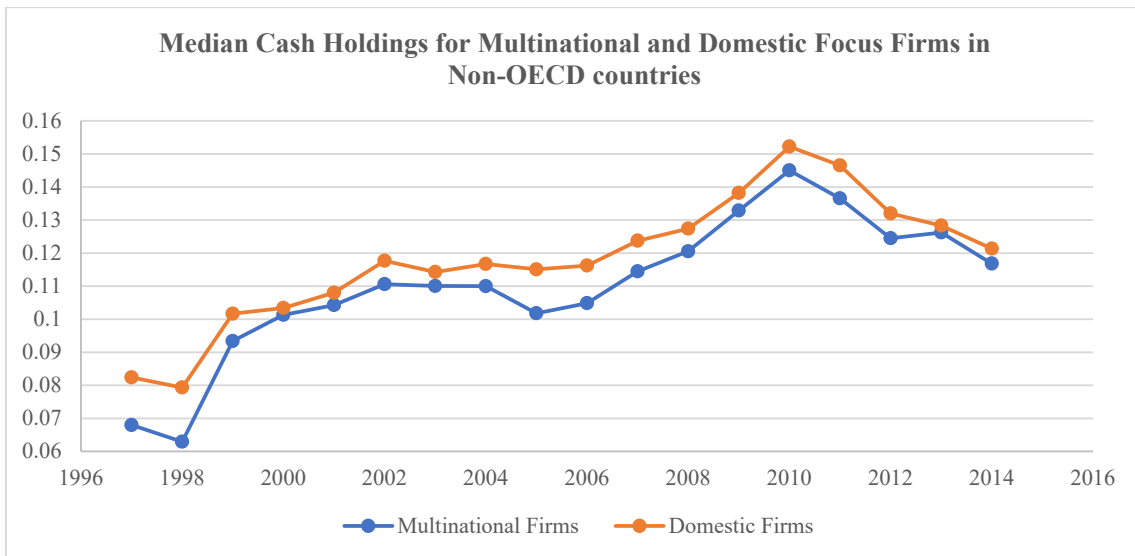
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**Figure 1: Evolution of Firm Cash Holdings Over 1994-2014 – OECD countries**



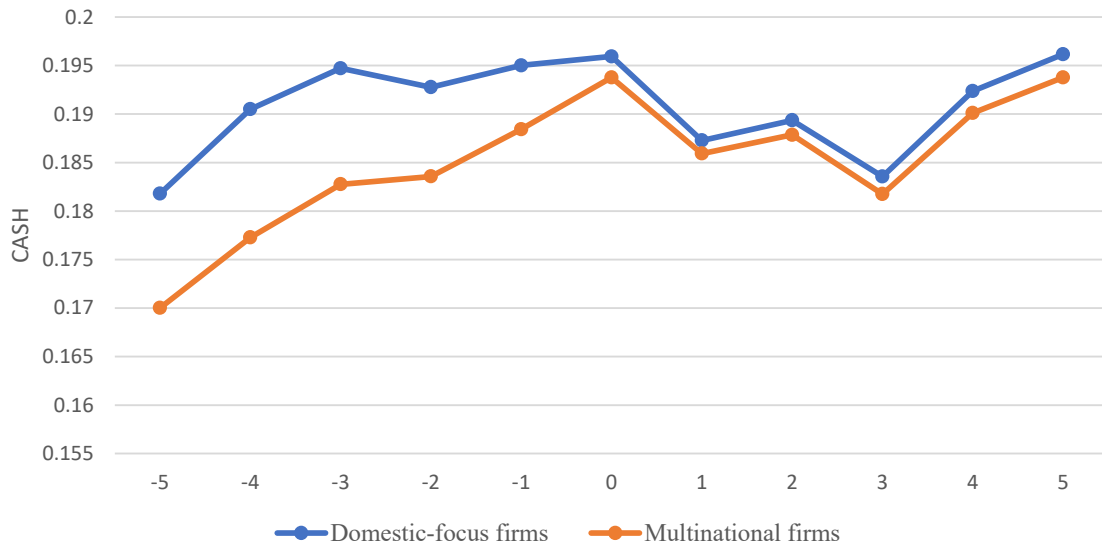
These figures plot the evolution of firm-level cash holdings (cash-to-assets ratio, *CASH*) over 1994-2014 for all OECD sample countries.

**Figure 2: Evolution of Firm Cash Holdings Over 1994-2014 – OECD and non-OECD countries**



These figures plot the evolution of firm-level cash holdings (cash-to-assets ratio, *CASH*) over 1994-2014 for all OECD and non-OECD sample countries.

**Figure 3: Cash Holdings During Labor Market Reform – Domestic-focus Firms *versus* Multinational Firms**



This figure plots the evolution of firm-level cash holdings (cash-to-assets ratio, *CASH*) over the eleven-year period, including 5 year before and 5 year after the major Labor Market Reforms for domestic-focus firms and multinational firms.

**Table 1: Country-Level Descriptive Statistics**

No.	Country	Total Numbers of Firms	No of Multinational Firms	Numbers of Domestic Firms	Median Cash of Domestic Firms	Median Cash of Multinational Firms
<b>Panel A: OECD Countries</b>						
1	Australia	1,549	344	1,205	0.1745	0.1212
2	Austria	109	62	47	0.0862	0.0516
3	Belgium	139	72	67	0.0841	0.0719
4	Canada	1,861	512	1,349	0.1119	0.1058
5	Denmark	169	104	65	0.081	0.0597
6	Egypt	102	7	95	0.1438	0.1068
7	Finland	147	81	66	0.086	0.0776
8	France	1,098	404	694	0.1055	0.1047
9	Germany	985	393	592	0.1081	0.0693
10	Greece	299	30	269	0.0652	0.0429
11	Ireland	54	37	17	0.1118	0.0755
12	Italy	271	100	171	0.0814	0.0670
13	Japan	4,315	1,062	3,253	0.1406	0.1494
14	Netherlands	178	125	53	0.0645	0.058
15	New Zealand	134	61	73	0.043	0.0211
16	Norway	303	150	153	0.1122	0.1072
17	Portugal	94	26	68	0.0454	0.0225
18	Spain	142	77	65	0.0704	0.0532
19	Sweden	483	234	249	0.1778	0.097
20	Switzerland	216	156	60	0.1269	0.0603
21	Turkey	262	35	227	0.0622	0.0447
22	United Kingdom	2,654	982	1,672	0.0963	0.0947
23	United States	10,133	2,612	7,521	0.1257	0.1060
<b>Panel B: Non-OECD Countries</b>						
24	China	2,194	56	2,138	0.1549	0.1514
25	Hungary	33	9	24	0.0744	0.0459
26	Indonesia	322	26	296	0.099	0.0596
27	Mexico	121	30	91	0.0728	0.0441
28	Singapore	612	192	420	0.1445	0.1435
29	South Africa	472	81	391	0.103	0.0756
30	Sri Lanka	161	18	143	0.06	0.0426
31	Thailand	345	30	315	0.0701	0.0474

This table reports the numbers of firms, numbers of domestic and international firms as well as their median cash value for each country in 31 OECD and non-OECD countries during 1997-2014.

<b>Table 2 Summary Statistics</b>						
<b>Variables</b>	<b>Obs.</b>	<b>Mean</b>	<b>Std.</b>	<b>P25</b>	<b>P50</b>	<b>P75</b>
<i>Panel A: OECD countries</i>						
<i>CASH</i>	167,525	0.188	0.205	0.044	0.117	0.254
<i>MULTI_FIRM</i>	167,525	0.518	0.500	0.000	1.000	1.000
<i>REFORM</i>	167,525	0.194	0.396	0.000	0.000	0.000
<i>SIZE</i>	167,525	19.959	3.610	17.317	19.633	23.021
<i>CF</i>	167,525	-0.174	1.095	-0.041	0.040	0.095
<i>TOBINQ</i>	167,525	0.753	0.560	0.011	1.000	1.000
<i>LEV</i>	167,525	0.270	0.476	0.023	0.175	0.351
<i>RD</i>	167,525	0.079	0.381	0.000	0.000	0.017
<i>DIV_PAYER</i>	167,525	0.510	0.500	0.000	1.000	1.000
<i>PPE</i>	167,525	0.279	0.234	0.085	0.226	0.413
<i>LIFE_CIRCLE</i>	167,525	-0.001	0.064	-0.002	0.003	0.007
<i>MEAN_RETURN</i>	167,525	3.393	8.464	0.109	0.507	2.478
<i>GDP_PER_CAPITA</i>	167,525	81.824	168.028	15.669	29.499	62.830
<i>GDP_GROWTH</i>	167,525	1.889	2.169	0.998	2.000	3.513
<i>Panel B: OECD and non-OECD countries</i>						
<i>CASH</i>	201,250	0.185	0.197	0.047	0.119	0.249
<i>MULTI_FIRM</i>	201,250	0.475	0.499	0.000	0.000	1.000
<i>REFORM</i>	201,250	0.166	0.372	0.000	0.000	0.000
<i>SIZE</i>	201,250	20.135	3.444	17.660	20.055	22.780
<i>CF</i>	201,250	-0.119	0.854	-0.021	0.046	0.099
<i>TOBINQ</i>	201,250	0.668	0.556	0.012	0.859	1.000
<i>LEV</i>	201,250	0.260	0.388	0.031	0.184	0.354
<i>RD</i>	201,250	0.059	0.279	0.000	0.000	0.011
<i>DIV_PAYER</i>	201,250	0.516	0.500	0.000	1.000	1.000
<i>PPE</i>	201,250	0.289	0.232	0.096	0.240	0.427
<i>LIFE_CIRCLE</i>	201,250	-0.001	0.055	-0.001	0.003	0.007
<i>MEAN_RETURN</i>	205,601	2.872	7.831	0.071	0.414	1.800
<i>GDP_PER_CAPITA</i>	201,250	86.593	189.463	13.614	27.714	57.704
<i>GDP_GROWTH</i>	201,250	2.821	3.229	1.420	2.449	4.127

This table reports descriptive statistics for the main variables used in the baseline regression analysis for the OECD country sample (Panel A) and OECD and non-OECD sample countries (Panel B). The data extends from 1997-2014.

**Table 3**  
**Labor Market Reform, Cash Holdings and Multinational Firms**

Variables	OECD Sample		OECD and non-OECD Sample	
	(1)	(2)	(3)	(4)
	<i>CASH</i> ( <i>t+1</i> )	<i>CASH</i> ( <i>t+1</i> )	<i>CASH</i> ( <i>t+1</i> )	<i>CASH</i> ( <i>t+1</i> )
<i>MULTI_FIRM</i>	-0.017*** [0.00]	-0.018*** [0.00]	-0.015*** [0.00]	-0.016*** [0.00]
<i>MULTI_FIRM * REFORM</i>		0.006** [0.00]		0.006** [0.00]
<i>REFORM</i>	0.001 [0.00]	-0.002 [0.00]	-0.001 [0.00]	-0.004* [0.00]
<i>SIZE</i>	-0.030*** [0.00]	-0.030*** [0.00]	-0.030*** [0.00]	-0.030*** [0.00]
<i>CF</i>	0.001 [0.00]	0.001 [0.00]	0.001 [0.00]	0.001 [0.00]
<i>TOBINQ</i>	-0.006 [0.01]	-0.006 [0.01]	-0.015*** [0.01]	-0.015*** [0.01]
<i>LEV</i>	-0.012*** [0.00]	-0.012*** [0.00]	-0.017*** [0.00]	-0.017*** [0.00]
<i>RD</i>	0.009*** [0.00]	0.009*** [0.00]	0.012*** [0.00]	0.012*** [0.00]
<i>DIV_PAYER</i>	0.005*** [0.00]	0.005*** [0.00]	0.004*** [0.00]	0.004*** [0.00]
<i>PPE</i>	-0.195*** [0.01]	-0.195*** [0.01]	-0.195*** [0.01]	-0.195*** [0.01]
<i>LIFE_CIRCLE</i>	-0.017* [0.01]	-0.017* [0.01]	-0.010 [0.01]	-0.010 [0.01]
<i>MEAN_RETURN</i>	0.000** [0.00]	0.000** [0.00]	0.000*** [0.00]	0.000*** [0.00]
<i>GDP_PER_CAPITA</i>	-0.000*** [0.00]	-0.000*** [0.00]	-0.000 [0.00]	-0.000 [0.00]
<i>GDP_GROWTH_RATE</i>	-0.002*** [0.00]	-0.002*** [0.00]	-0.000 [0.00]	-0.000 [0.00]
Constant	0.871*** [0.03]	0.872*** [0.03]	0.926*** [0.03]	0.912*** [0.03]
Observations	167,525	167,525	201,250	201,250
Adjusted R-squared	0.684	0.684	0.674	0.674
Firm FE	Yes	Yes	Yes	Yes
Year*Industry FE	Yes	Yes	Yes	Yes
Firm Cluster	Yes	Yes	Yes	Yes
Year* Industry Cluster	Yes	Yes	Yes	Yes

In this table, we regress firm cash holdings (cash-to-assets ratio, *CASH*) on multinational firms (*MULTI\_FIRM*, i.e. a dummy variable equalling to 1 if a firm has foreign subsidiaries and 0 otherwise) and labor market reform (*REFORM*, i.e. a dummy variable equalling to 1 when there is a major change in labor market law and 0 otherwise). Columns (1) and (2) report the results for OECD sample while Columns (3) and (4) are for OECD and non-OECD sample. In Columns (2) and (4), we include the interaction term between multinational firms and labor market reform. All variable definitions are outlined in Appendix A. All continuous variables are winsorized at 1% levels. In all regressions, we include firm and year\*industry (4-digit SIC) fixed effects. Robust firm and year\*industry clustered standard errors are reported in the brackets. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively.



**Table 4**  
**Labor Market Counter-Reform, Cash Holdings and Multinational Firms**

VARIABLES	Counter-Reform OECD Countries		Counter-Reform OECD and non-OECD countries	
	(1) <i>CASH</i> ( <i>t+1</i> )	(2) <i>CASH</i> ( <i>t+1</i> )	(3) <i>CASH</i> ( <i>t+1</i> )	(4) <i>CASH</i> ( <i>t+1</i> )
<i>MULTI_FIRM * CREFORM</i>		<b>-0.010*</b> <b>[0.01]</b>		<b>-0.009***</b> <b>[0.00]</b>
<i>CREFORM</i>	-0.011*** [0.00]	-0.004 [0.01]	-0.001 [0.00]	0.004 [0.00]
<i>MULTI_FIRM</i>	-0.019*** [0.00]	-0.018*** [0.00]	-0.017*** [0.00]	-0.015*** [0.00]
Control variables	Yes	Yes	Yes	Yes
Observations	167,355	167,355	201,083	201,083
Adjusted R-squared	0.687	0.687	0.676	0.676
Firm FE	Yes	Yes	Yes	Yes
Year* Industry FE	Yes	Yes	Yes	Yes
Firm Cluster	Yes	Yes	Yes	Yes
Year*Industry Cluster	Yes	Yes	Yes	Yes

In this table, we regress firm cash holdings (cash-to-assets ratio, *CASH*) on multinational firms (*MULTI\_FIRM*, i.e. a dummy variable equalling to 1 if a firm has foreign subsidiaries and 0 otherwise) and labor market counter-reform (*CREFORM*, i.e. a dummy variable equalling to 1 when there is a major change in labor market counter-reform and 0 otherwise). All variable definitions are outlined in Appendix A. All continuous variables are winsorized at 1% levels. In all regressions, we include firm and year\*industry (4-digit SIC) fixed effects. Robust firm and year\*industry clustered standard errors are reported in the brackets. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively.

**Table 5**  
**Cross-sectional Test: Weighted Average Location EPL**

Variables	OECD Sample		OECD and non-OECD sample	
	(1) <i>CASH (t+1)</i>	(2) <i>CASH (t+1)</i>	(3) <i>CASH (t+1)</i>	(4) <i>CASH (t+1)</i>
<b><i>MULTI_FIRM_HIGHEPL1*REFORM</i></b>	<b>0.003</b>		<b>0.003</b>	
	<b>[0.00]</b>		<b>[0.00]</b>	
<i>MULTI_FIRM_HIGHEPL1</i>	-0.016***		-0.013***	
	[0.00]		[0.00]	
<i>REFORM</i>	-0.001	-0.001	-0.003	-0.003
	[0.00]	[0.00]	[0.00]	[0.00]
<b><i>MULTI_FIRM_LOWEPL1* REFORM</i></b>	<b>0.007**</b>		<b>0.007**</b>	
	<b>[0.00]</b>		<b>[0.00]</b>	
<i>MULTI_FIRM_LOWEPL1</i>	-0.019***		-0.017***	
	[0.00]		[0.00]	
<b><i>MULTI_FIRM_HIGHEPL2* REFORM</i></b>		<b>0.002</b>		<b>0.002</b>
		<b>[0.00]</b>		<b>[0.00]</b>
<i>MULTI_FIRM_HIGHEPL2</i>		-0.012***		-0.011***
		[0.00]		[0.00]
<b><i>MULTI_FIRM_LOWEPL2* REFORM</i></b>		<b>0.007**</b>		<b>0.007**</b>
		<b>[0.00]</b>		<b>[0.00]</b>
<i>MULTI_FIRM_LOWEPL2</i>		-0.015***		-0.014***
		[0.00]		[0.00]
Constant	0.870***	0.871***	0.871***	0.872***
	[0.03]	[0.03]	[0.02]	[0.02]
Control variables	Yes	Yes	Yes	Yes
Observations	167,525	167,525	201,250	201,250
Adjusted R-squared	0.684	0.684	0.674	0.674
Firm FE	Yes	Yes	Yes	Yes
Year*Industry FE	Yes	Yes	Yes	Yes
Firm Cluster	Yes	Yes	Yes	Yes
Year*Industry Cluster	Yes	Yes	Yes	Yes

In this table, we regress firm cash holdings (cash-to-assets ratio, *CASH*) on the interaction terms between multinational firms located in high (low) locational average EPL *MULTI\_FIRM\_HIGHEPL* (*MULTI\_FIRM\_LOWEPL*) and labor market reform (for OECD and OECD and non-OECD sample countries). All variable definitions are outlined in Appendix A. All continuous variables are winsorized at 1% levels. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively.

**Table 6**  
**Endogeneity tests: Close Election and Margin of Majority**

VARIABLES	CLOSE ELECTION		MARGIN OF MAJORITY	
	OECD Sample	OECD and non-OECD Sample	OECD Sample	OECD and non-OECD Sample
	(1)	(2)	(3)	(4)
	<i>CASH (t+1)</i>	<i>CASH (t+1)</i>	<i>CASH (t+1)</i>	<i>CASH (t+1)</i>
<i>MULTI_FIRM*REFORM_10%MARGIN</i>	<b>0.015**</b> [0.01]	<b>0.004**</b> [0.00]		
<i>MULTI_FIRM*REFORM_50%MAJ</i>			<b>0.023***</b> [0.01]	<b>0.021***</b> [0.01]
<i>MULTI_FIRM</i>	-0.022*** [0.00]	-0.018*** [0.00]	-0.024*** [0.00]	-0.023*** [0.00]
<i>REFORM_10%MARGIN</i>	-0.004 [0.01]	0.005 [0.00]		
<i>REFORM_50%MAJ</i>			-0.007 [0.01]	-0.005 [0.00]
Constant	0.904*** [0.03]	0.912*** [0.03]	0.903*** [0.03]	0.871*** [0.03]
Control variables	Yes	Yes	Yes	Yes
Observations	95,136	120,970	97,961	107,176
Adjusted R-squared	0.666	0.657	0.666	0.665
Firm FE	Yes	Yes	Yes	Yes
Year*Industry FE	Yes	Yes	Yes	Yes
Firm Cluster	Yes	Yes	Yes	Yes
Year*Industry Cluster	Yes	Yes	Yes	Yes

In this table, we regress firm cash holdings (cash-to-assets ratio, *CASH*) on the interaction terms between multinational firms (*MULTI\_FIRM*, i.e. a dummy variable equalling to 1 if a firm has foreign subsidiaries and 0 otherwise) and labor market reform enacted after a close presidential election (*REFORM\_10%MARGIN*) or close margin of majority (*REFORM\_50%MAJ*). A close presidential election is a dummy variable equalling to 1 if margin victory (the difference between the fraction of votes won by the victor and that garnered by the runner-up) is less than 10%. A close margin of majority is a dummy variable if the fraction of seats held by the government below its sample median at the election year. All variable definitions are outlined in Appendix A. All continuous variables are winsorized at 1% levels. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively.

**Table 7**  
**Economic Channels: Labor Adjustment Costs**

Variables	OECD Sample		OECD and non-OECD Sample	
	(1)	(2)	(3)	(4)
	<i>CASH</i> (t+1)	<i>CASH</i> (t+1)	<i>CASH</i> (t+1)	<i>CASH</i> (t+1)
<i>MULTI_FIRM_HIGH_LAC*REFORM</i>	<b>0.007**</b>		<b>0.007**</b>	
	<b>[0.00]</b>		<b>[0.00]</b>	
<i>MULTI_FIRM_HIGH_LAC</i>	-0.012***		-0.010***	
	[0.00]		[0.00]	
<i>MULTI_FIRM_LOW_LAC *REFORM</i>		0.003		0.003
		[0.00]		[0.00]
<i>MULTI_FIRM_LOW_LAC</i>		-0.005*		-0.006**
		[0.00]		[0.00]
<i>REFORM</i>	0.005	0.007	0.000	0.002
	[0.01]	[0.01]	[0.01]	[0.01]
Constant	0.870***	0.870***	0.872***	0.872***
	[0.04]	[0.04]	[0.04]	[0.04]
Observations	169,706	169,706	203,252	203,252
Adjusted R-squared	0.686	0.686	0.675	0.675
Firm FE	Yes	Yes	Yes	Yes
Year*Industry FE	Yes	Yes	Yes	Yes
Firm Cluster	Yes	Yes	Yes	Yes
Year* Industry Cluster	Yes	Yes	Yes	Yes

In this table, we regress firm cash holdings (cash-to-assets ratio, *CASH*) on the interaction terms between multinational firms located in industry with high/low labor adjustment cost (*MULTI\_FIRM\_HIGH\_LAC*/*MULTI\_FIRM\_LOW\_LAC*) for both OECD and OECD and non-OECD country samples. *MULTI\_FIRM\_HIGH\_LAC*/*MULTI\_FIRM\_LOW\_LAC* are dummy variables equalling to 1 if multinational firms located in industries whose labor adjustment cost is greater/lower than the median value of 2 digit SIC industry labor adjustment cost and zero otherwise. All variable definitions are outlined in Appendix A. All continuous variables are winsorized at 1% levels. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively.

**Table 8**  
**Economic Channels: Industry Concentration**

Variables	OECD Sample		OECD and non-OECD Sample	
	(1)	(2)	(3)	(4)
	<i>CASH</i> (t+1)	<i>CASH</i> (t+1)	<i>CASH</i> (t+1)	<i>CASH</i> (t+1)
<i>MULTI_FIRM_HIGH_HHI *REFORM</i>	<b>0.011***</b> [0.00]		<b>0.011***</b> [0.00]	
<i>MULTI_FIRM_HIGH_HHI</i>	-0.006*** [0.00]		-0.005*** [0.00]	
<i>MULTI_FIRM_LOW_HHI *REFORM</i>		-0.000 [0.00]		-0.001 [0.00]
<i>MULTI_FIRM_LOW_HHI</i>		-0.005** [0.00]		-0.005*** [0.00]
<i>REFORM</i>	0.004 [0.01]	0.007 [0.01]	-0.000 [0.01]	0.003 [0.01]
Constant	0.873*** [0.04]	0.868*** [0.04]	0.875*** [0.04]	0.871*** [0.04]
Observations	169,706	169,706	203,252	203,252
Adjusted R-squared	0.686	0.686	0.675	0.675
Firm FE	Yes	Yes	Yes	Yes
Year*Industry FE	Yes	Yes	Yes	Yes
Firm Cluster	Yes	Yes	Yes	Yes
Year* Industry Cluster	Yes	Yes	Yes	Yes

In this table, we regress firm cash holdings (cash-to-assets ratio, *CASH*) on the interaction terms between multinational firms located in highly/low concentrated markets (*MULTI\_FIRM\_HIGH\_HHI*/*MULTI\_FIRM\_LOW\_HHI*). *MULTI\_FIRM\_HIGH\_HHI*/*MULTI\_FIRM\_LOW\_HHI* are dummy variables equalling to 1 if multinational firms located in industries whose HHI is greater/lower than the median value of 2 digit SIC industry concentration and zero otherwise. All variable definitions are outlined in Appendix A. All continuous variables are winsorized at 1% levels. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively.

## Appendix

<b>Table A1</b>		
<b>Variable Codes, Names and Definitions</b>		
Code	Name	Definition
<b><i>Panel A: Firm-level Characteristics</i></b>		
<i>LEAD_CASH</i>	Cash Holdings	One year lead value of firm cash and marketable securities deflated by total assets.
<i>MULTI_FIRM</i>	Multinational Firm	A dummy variable equalling to 1 if a firm has foreign subsidiaries and 0 otherwise.
<i>SIZE</i>	Firm Size	Logarithm transformation of the total assets.
<i>MB</i>	Market-to-Book Ratio	Ratio of market-to-book value of equity.
<i>CF</i>	Cash Flows	Earnings after interest, dividends, and taxes, but before depreciation, deflated by total assets.
<i>TOBINQ</i>	Tobin Q	Ratio of market-to-book value of firm assets.
<i>LEV</i>	Book Leverage	Ratio of total debt (long-term and short-term debt), deflated by total assets.
<i>R&amp;D</i>	Research and Development (over Sales)	R&D expense, deflated by net sales. Missing observations are replaced by zero.
<i>DIV</i>	Dividend Dummy	Dummy variable indicating if a firm pays dividend in a particular year. Missing observations are replaced by zero.
<i>PPE</i>	Property, Plants and Equipment	Ratio of net PPE-to-total assets.
<i>LIFE_CYCLE</i>	Firm Life Cycle	The retained earnings-to-total equity ratio
<b><i>Panel B: Industry- and Country-level Characteristics</i></b>		
<i>REFORM</i>	Labor Market Reform	A dummy variable equalling to 1 when there is a major reform in labor market and 0 otherwise.
<i>C_REFORM</i>	OECD Labor Market Counter-Reform	A dummy variable equalling to 1 when there is a major counter-reform in labor market and 0 otherwise.
<i>MULTI_FIRM_HIGHEPL1</i>	Multinational firm located in high locational average EPL (using OECD EPL version 1)	A dummy variable equalling to 1 when firms are multinational whose weighted average EPL (using OECD EPL version 1) is greater the median of the weighted average EPL for all multinational firms in the same country in the same year.
<i>MULTI_FIRM_HIGHEPL2</i>	Multinational firm located in high locational average EPL (using OECD EPL version 2)	A dummy variable equalling to 1 when firms are multinational whose weighted average EPL (using OECD EPL version 2) is greater the median of the weighted average EPL for all multinational firms in the same country in the same year.

<i>MULTI_FIRM_LOWEPL1</i>	Multinational firm located in low locational average EPL (using OECD EPL version 1)	A dummy variable equalling to 1 when firms are multinational whose weighted average EPL (using OECD EPL version 1) is lower the median of the weighted average EPL for all multinational firms in the same country in the same year.
<i>MULTI_FIRM_LOWEPL2</i>	Multinational firm located in low locational average EPL (using OECD EPL version 2)	A dummy variable equalling to 1 when firms are multinational whose weighted average EPL (using OECD EPL version 2) is lower the median of the weighted average EPL for all multinational firms in the same country in the same year.
<i>REFORM_10%MARGIN</i>	Labor market reform enacted after a close presidential election	A dummy variable equalling to 1 when labor market reform enacted after a close presidential election. A close presidential election is a dummy variable equalling to 1 if margin victory (the difference between the fraction of votes won by the victor and that garnered by the runner-up) is less than 10%.
<i>REFORM_50%MAJ</i>	Labor market reform enacted after a presidential election with close margin of majority	A dummy variable equalling to 1 when labor market reform enacted after a presidential election with close margin of majority. A close margin of majority is a dummy variable if the fraction of seats held by the government below its sample median at the election year.
<i>MULTI_FIRM_HIGH_HHI</i>	Multinational firms in highly concentrated industries	A dummy variable equalling to 1 for multinational firms located in industries whose HHI is greater than the median value of 2 digit SIC industry concentration and zero otherwise.
<i>MULTI_FIRM_LOW_HHI</i>	Multinational firms in low concentrated industries	A dummy variable equalling to 1 for multinational firms located in industries whose HHI is lower than the median value of 2 digit SIC industry concentration and zero otherwise.
<i>MULTI_FIRM_HIGH_LAC</i>	Multinational firms in high labor adjustment cost industries	A dummy variable equalling to 1 for multinational firms located in industries whose labor adjustment cost is greater than the median value of 2 digit SIC industry labor adjustment cost and zero otherwise.
<i>MULTI_FIRM_LOW_LAC</i>	Multinational firms in low labor adjustment cost industries	A dummy variable equalling to 1 for multinational firms located in industries whose labor adjustment cost is lower than the median value of 2 digit SIC industry labor adjustment cost and zero otherwise.
<i>GDP_PER_CAPITA</i>	GDP Per Capita	The ratio of a country's GDP per capita to its populations
<i>MARKET_RETURN</i>	Average stock return	Annual average stock return
<i>GDP_GROWTH_RATE</i>	GDP Growth	Yearly change in GDP, divided by lagged GDP.





<b>Appendix A2 List of Major Labor Reforms - 1996-2014</b>				
<b>Countries</b>	<b>Year</b>	<b>Legislations</b>	<b>Reform</b>	<b>Sample Used</b>
<b>OECD Countries</b>				
Australia	2007	Workplace Relations Amendment (Work Choices) Act	Reform	1997-2009
Australia	2010	Fair Work Act	Counter-Reform	2007-2014
Austria	2003	Federal Act amending the Labor Constitution Act	Reform	1997-2014
Belgium	1998	Employment Law ("Renault Law")	Counter-Reform	1997-2014
Finland	1997	Hours of Work Act	Reform	1997-2014
France	2003	Social Modernisation Law	Counter-Reform	1997-2008
France	2009	Layoff Law	Reform	2004-2014
Greece	2011	Law 4024, Law 4046 and Ministerial Council Act No 6	Reform	1997-2014
Ireland	2006	Revision of the 1973 Minimum Notice and Terms of Employment Act	Reform	1997-2011
Ireland	2012	The Protection of Employees Act	Counter-Reform	2007-2014
Italy	2013	Jobs Act	Reform	1997-2014
Japan	2007	Labor Contract Act	Reform	1997-2014
Netherlands	1999	The Flexibility and Security Act	Reform	1997-2014
New Zealand	2001	The New Employment Relations Act	Counter-Reform	1997-2011
Norway	2005	Working Environment Act of 2005	Counter-Reform	1997-2014
Portugal	2004	The New Labor Code (Código do Trabalho)	Reform	1997-2014
Portugal	2010	The 2009 new Labor Code	Reform	1997-2014
Turkey	2003	Labor Act, No. 4857 of 22 May 2003	Counter-Reform	1997-2014
Spain	2011	The 2010 Labor Market Reform	Reform	1997-2014
Sweden	1997 and 1999	The revised Employment Protection Legislation	Reform	1997-2014
United Kingdom	2000	Employment Relations Act	Counter-Reform	1997-2014
<b>Other Countries</b>				
China	2008	Labor Contract Law	Counter-Reform	1997-2014
Egypt	2003	Labor Code (No. 12 of 2003)	Reform	1997-2014
Hungary	2012	Labor Code Act 2012	Reform	1997-2014
Indonesia	2003	Manpower Act of 2003	Counter-Reform	1997-2014
Mexico	2012	Labor Reform of 2012	Reform	1997-2014
Singapore	2008	Employment (Amendment) Act 2008	Counter-Reform	1997-2014
South Africa	2002	Labor Relations Amendment Act 2002	Counter-Reform	1997-2014
Sri Lanka	2008	Termination of Employment of Workmen (Special Provisions) Act No. 45 of 1971 (TEWA), amendment of 2008 (Act No 20 of 2008)	Counter-Reform	1997-2014
Thailand	1998	Labor Protection Act	Counter-Reform	1997-2014

This table provides the list of 17 out of 21 OECD and other countries that passed major Labor Market Reforms during 1996-2014. It also outlines the reform years as well as the associated employment protection legislations. The table also indicates whether the reform is a reform or a counter-reform and the time periods used for each reform and counter-reform sample countries. These data are retrieved from International Monetary Fund (IMF) (2019) Table A1 and Simintzi et al. (2014).

Appendix A3						
Robustness Tests						
Variables	OECD Sample					
	(1)	(2)	(3)	(4)	(5)	(6)
	<i>CASH</i> ( <i>t+1</i> )	<i>CASH</i> ( <i>t+1</i> )	<i>CASH</i> ( <i>t+1</i> )	<i>CASH</i> ( <i>t+1</i> )	<i>CASH</i> ( <i>t+1</i> )	<i>CASH</i> ( <i>t+1</i> )
<b><i>MULTI_FIRM * REFORM</i></b>		<b>0.009***</b> <b>[0.00]</b>		<b>0.010***</b> <b>[0.00]</b>		<b>0.005*</b> <b>[0.00]</b>
<i>MULTI_FIRM</i>	-0.019*** [0.00]	-0.021*** [0.00]	-0.020*** [0.00]	-0.022*** [0.00]	-0.021*** [0.00]	-0.022*** [0.00]
<i>REFORM</i>	0.007 [0.01]	0.003 [0.01]			-0.014 [0.01]	-0.017 [0.01]
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	169,706	169,706	169,706	169,706	142,776	142,776
Adjusted R-squared	0.687	0.687	0.689	0.689	0.685	0.685
Firm FE, Year FE	Yes	Yes				
Firm Cluster, Year Cluster	Yes	Yes				
Firm FE, Year*Country FE			Yes	Yes		
Firm Cluster, Year*Country Cluster			Yes	Yes		
Firm FE, Year*Industry * Country FE					Yes	Yes
Firm Cluster, Year*Industry * Country Cluster					Yes	Yes

In Panel A of this table, we regress firm cash holdings (cash-to-assets ratio, *CASH*) on multinational firms (*MULTI\_FIRM*, i.e. a dummy variable equalling to 1 if a firm has foreign subsidiaries and 0 otherwise) and labor market reform (*OECD\_REFORM*, i.e. a dummy variable equalling to 1 when there is a major change in labor market law and 0 otherwise) using OECD labor market reform sample with alternative model specifications. Specifically, in Columns (1) and (2), we employ firm and year fixed effects with firm and year clustering, firm and year\*country fixed effects with firm and year\*country clustering in Columns (3) and (4). In Column (5) and (6), firm and year\*industry\*country fixed effect with firm and year\*industry\*country clustering are employed. In Panel B, we rerun the baseline regression models using different samples, including counter-reform OECD sample in Columns (1) and (2), and counter-reform sample in Columns (3) and (4). All variable definitions are outlined in Appendix A. All continuous variables are winsorized at 1% levels. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively.

<b>Table A4</b>		
<b>Economic Policy Uncertainty</b>		
	<b>OECD Sample</b>	<b>OECD and non-OECD Sample</b>
VARIABLES	<i>(1)</i> <i>CASH</i> <i>(t+1)</i>	<i>(2)</i> <i>CASH</i> <i>(t+1)</i>
<i>MULTI_FIRM* REFORM</i>	0.005** [0.00]	0.006** [0.00]
<i>REFORM</i>	-0.000 [0.00]	-0.002 [0.00]
<i>MULTI_FIRM</i>	-0.048*** [0.01]	-0.037*** [0.01]
<i>MULTI_FIRM*PU</i>	0.006*** [0.00]	0.004** [0.00]
<i>PU</i>	-0.004 [0.00]	-0.000 [0.00]
Observations	165,720	188,637
Adjusted R-squared	0.680	0.673
Firm FE	Yes	Yes
Firm Cluster	Yes	Yes
Year*Industry FE	Yes	Yes
Year*Industry Cluster	Yes	Yes

In this table, we regress firm cash holdings (cash-to-assets ratio, *CASH*) on the interaction terms between multinational firms (*MULTI\_FIRM*) and economic policy uncertainty index (*PU*). All variable definitions are outlined in Appendix A. All continuous variables are winsorized at 1% levels. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively.

**Table A5**  
**Multinational Firms and Cash Holdings**

VARIABLES	OECD Sample		OECD and non-OECD Sample	
	(2) <i>CASH</i> ( <i>t+1</i> )	(1) <i>CASH</i> ( <i>t+1</i> )	(4) <i>CASH</i> ( <i>t+1</i> )	(3) <i>CASH</i> ( <i>t+1</i> )
<i>MULTI_FIRM</i>	<b>-0.017***</b> [0.00]	<b>-0.020***</b> [0.00]	<b>-0.015***</b> [0.00]	<b>-0.018***</b> [0.00]
<i>SIZE</i>	-0.030*** [0.00]	-0.031*** [0.00]	-0.030*** [0.00]	-0.030*** [0.00]
<i>CF</i>	0.001 [0.00]	0.000 [0.00]	0.001 [0.00]	0.000 [0.00]
<i>TOBINQ</i>	-0.006 [0.01]	-0.011 [0.01]	-0.015*** [0.01]	-0.010 [0.01]
<i>LEV</i>	-0.012*** [0.00]	-0.015*** [0.00]	-0.017*** [0.00]	-0.021*** [0.00]
<i>RD</i>	0.009*** [0.00]	0.010*** [0.00]	0.012*** [0.00]	0.013*** [0.00]
<i>DIV_PAYER</i>	0.005*** [0.00]	0.004** [0.00]	0.004*** [0.00]	0.003** [0.00]
<i>PPE</i>	-0.195*** [0.01]	-0.195*** [0.01]	-0.195*** [0.01]	-0.194*** [0.01]
<i>LIFE_CIRCLE</i>	-0.017* [0.01]	-0.017* [0.01]	-0.010 [0.01]	-0.009 [0.01]
<i>MEAN_RETURN</i>	0.000** [0.00]		0.000*** [0.00]	
<i>GDP_PER_CAPITA</i>	-0.000*** [0.00]		-0.000 [0.00]	
<i>GDP_GROWTH_RATE</i>	-0.002*** [0.00]		-0.000 [0.00]	
Constant	0.872*** [0.03]	0.876*** [0.03]	0.812*** [0.04]	0.816*** [0.04]
Observations	167,525	169,706	201,250	203,250
R-squared	0.684	0.689	0.674	0.678
Firm FE	Yes	Yes	Yes	Yes
Year*Industry FE	Yes		Yes	
Firm Cluster	Yes	Yes	Yes	Yes
Year*Industry Cluster	Yes		Yes	
Year*Country Cluster		Yes		Yes
Year*Country FE		Yes		Yes

In this table, we regress firm cash holdings (cash-to-assets ratio, *CASH*) on multinational firms (*MULTI\_FIRM*, i.e. a dummy variable equalling to 1 if a firm has foreign subsidiaries and 0 otherwise). Columns (1) and (2) report the results for OECD sample while Columns (3) and (4) are for OECD and non-OECD sample. All variable definitions are outlined in Appendix A. All continuous variables are winsorized at 1% levels. In all regressions, we include firm and year\*industry (4-digit SIC) fixed effects. Robust firm and year\*industry clustered standard errors are reported in the brackets. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively.