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FROM POLICY TO CAPITAL: ASSESSING THE IMPACT OF STRUCTURAL REFORMS ON GROSS CAPITAL INFLOWS

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ABSTRACT

Utilizing a narrative database on structural reforms in 25 OECD countries from 1985 to 2020, we investigate the effects of labor and product market reforms on gross capital inflows. By applying the local projection method and addressing reform endogeneity with the Augmented Inverse Probability Weighted estimator, we find that structural reforms have a positive medium-term effect on both direct and portfolio investment. In particular, reforms boost investment, especially in environments of high quality financial institutions and amid low public debt. Furthermore, building on a new indicator of cabinet policy orientation, we find that newly elected market-oriented cabinets have a positive effect on direct investment inflows. Product market reforms are more conducive to the inflow of direct investment under cabinets that prefer a state-oriented economy. Labor market reforms significantly boost direct investment and portfolio investment under governments favoring a market-oriented economy.

JEL classification: F21, F41, J08, L51, O16

Keywords: direct investment, portfolio investment, gross capital inflows, structural reforms, product market reforms, labor market reforms, policy orientation

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1. Introduction

Capital inflows from abroad play a critical role in a country's economic progress. A key advantage of capital inflows lies in their capacity to stimulate economic growth (see e.g. Igan et al., 2020; Slesman et al., 2015; End 2024). Foreign capital, when entering a country, can be directed towards investments in physical capital, e.g. in infrastructure, in businesses as well as investments in financial products. This influx, in turn, enhances economic activity by generating employment, boosting productivity, and fostering general prosperity (see Benigno et al., 2015 Benigno et al., 2015; Ostry et al., 2011; Blanchard et al., 2016). Capital inflows can take many forms, including direct investment (commonly known as Foreign Direct Investment (FDI)), portfolio investment, and loans from international organizations.

Capital inflows in the form of foreign direct investment can provide not only liquidity but also knowledge, technology and managerial skills. This transfer of expertise has the potential to enhance the competitiveness of domestic firms and stimulate innovation (see Perri and Peruffo 2016; Ning and Wang 2018; Ning et al., 2023). Beyond financial gains, capital inflows have the effect of improving an economy's resilience to external shocks. They do this by facilitating access to global markets, promoting infrastructure development, and encouraging innovation and diversification. However, the relevant regulatory authorities must control these inflows to prevent potential risks such as excessive borrowing or financial instability. [1]

The impact of large capital inflows depends on the nature of the flows involved. [2] Capital inflows involving portfolio investment are associated with a greater likelihood of crises in the banking sector, the exchange rate and the balance of payments. Conversely, capital inflows that are mainly foreign direct investment (FDI) are less likely to lead to a crisis (see Furceri et al., 2011, Ahrend et al., 2012, Ghosh et al., 2016) and Foreign Direct Investments (FDI) emerge as the most desirable. Therefore, it

[1] A significant portion of the literature has delved into examining the relationship between financial liberalization reforms and capital inflows (Denk and Gomes, 2017; Neanidis, 2019). Despite the facilitation of financialization in recent decades through the deregulation of the financial sector and the liberalization of international capital flows, these measures have failed to foster sustainable investment. Instead, they have led to a series of financial crises, often triggered by dramatic swings in capital inflows (Denk and Gabriel, 2017) while in advanced economies, capital reversals have been a recurring phenomenon (Rajan and Zingales, (2003); Stockhammer, 2010; Korinek, 2012; Rey, 2015; Reinhart et al., 2016). Therefore, capital flow liberalization is preferred only when a nation has attained an adequate level of financial and institutional development, and it should be accompanied by policies aimed at promoting financial stability and averting misallocations of resources.

[2] Substantial capital inflows driven by debt significantly increase the likelihood of crises in banking, currency, and balance of payments. In contrast, inflows originating from equity portfolio investments or foreign direct investments (FDI) have minimal impact on crises (Furceri et al., 2011, Ahrend et al., 2012, Ghosh et al., 2016).

is crucial to promote structural policies that favor the inflow of capital and especially foreign direct investment (see Guichard, 2017; Furceri et al., 2012).

Capital flow drivers are typically categorized into push and pull factors (see Calvo et al., 1996; Fernandez-Arias, 1996; Taylor and Sarno, 1997; Agenor, 1998; Chuhan et al., 1998; Forbes and Warnock, 2012). Push factors prompt investors to explore opportunities beyond their domestic economy, as noted by López and Stracca, (2021). On the other hand, pull factors include all the characteristics of an economy that are decisive in attracting foreign capital. These pull variables include both cyclical and structural factors.

Recent studies posit that, due to financial frictions, capital inflows may be misallocated to firms that are not necessarily the most productive, contributing to slower economic growth (Reis, 2013; Gopinath et al., 2017). In this context, structural reforms by changing the structure of the economy and the regulatory framework in which individuals and firms work can create an environment for more productive firms to enter the market and reallocate resources from less productive to more productive firms. Thus, structural reforms help attract capital, encourage sustainable investment, and mitigate the risk of capital reversals and crises (see López and Stracca, 2021).

Therefore, this article will study whether structural reforms can be relevant determinants of capital inflows. For this purpose, we rely on previous literature such as De Santis and Luhrmann (2009), Sarno et al., (2016), Contractor et al. (2020), Duval et al. (2022) and Campos and Kinoshita (2010). A critical issue that arises when studying capital inflows is whether to use gross or net capital inflows. Gross capital inflows provide information on the degree of international exposure of an economy and are more volatile since the Global Financial Crisis (GFC) (see Broner, 2013; Caroline Mehigan, 2018; Lane and Milesi-Ferretti, 2007). On the other hand, net capital inflows provide information about the real economy and reflect developments in the current account but are heavily influenced by capital outflows (see De Santis and Luhrmann, 2009).

Building on the work of Broner et al., (2013) our analysis we will rely on gross capital inflows as they better highlight how international investors react to domestic economic policy decisions. The variables that will be used in the analysis are related to the balance of payments, and particularly the financial account. The balance of payments is a comprehensive record of a country's transactions with the rest of the world. Within the balance of payments, the financial account specifically documents transactions involving financial assets and liabilities between residents and non-residents. Capital outflows are indicated by the net acquisition of financial assets, while capital inflows correspond to the net incurrence of liabilities. Therefore, our analysis focuses on two components of the financial

account balance: the net incurrence of liabilities for direct and portfolio investments. We use the sum of debt instruments[3] and equities for direct investments, and the sum of debt securities and equities for portfolio investments.[4]

In terms of structural reforms, we will look at labor and product market reforms. To identify shocks associated with product and labor reforms, we utilize the narrative database developed by Duval et al., (2018), which spans the period from 1990 to 2013. Furthermore, we employ its updated version, which extends to 2020, based on Wiese et al., (2024).

The empirical analysis is based on the Local Projections (LP) method proposed by Jorda (2005). This method enables us to estimate the cumulative response of the variable of interest to structural reforms. Since reforms are typically not implemented randomly and there are evidence that economic and financial crises frequently motivate the initiation of reforms (see Pitlik and Wirth, 2003; Da Silva et al., 2017; De Haan and Parlevliet, 2018; Duval et al., 2021) we utilize the Augmented Inverse Probability Weighting (AIPW) method proposed by Jorda and Taylor (2016). This approach allows us to mitigate potential selection bias and ensure the robustness of our estimates. The implementation of the AIPW method to estimate the Average Treatment Effect (ATE) of reforms has been used by Bordon et al. (2018), De Haan and Wiese (2022) and Wiese et al. (2024).

This paper adds to the existing literature in various ways. First, we extend the work of earlier studies (such as De Santis and Lührmann (2009), Contractor et al., (2020), Campos and Kinoshita, (2010) Dellis et al., (2017), Cai et al., (2018), Chen et al., (2013), Alfaro, Kalemli-Ozkan, and Volosovych, (2008), which examine the determinants of capital inflows by taking into account the role of product and labour market reforms. Second, we extend earlier related works which examines the effect of product and labor market reforms on the current account (see e.g. Duval et al., 2022) by considering instead the effect of reforms on two key components of the financial account (direct and portfolio investment). Third, in doing so we mitigate potential selection bias by implementing the AIPW method to estimate the Average Treatment Effect (ATE) of reforms. Fourth, building on de Haan and Wiese (2022) we examine the impact of counter-reforms and placebo product and labor market reforms on gross capital inflows. Fifth, we examine whether the effectiveness of reforms in attracting foreign capital depends on the level of financial development and on the public debt ratio.

[3] Those represent funds from the parent company or main investor to the subsidiary or investment company, in the form of debt, or internal capital flows within a multinational corporate structure.

[4] Understanding the composition of capital inflows is crucial as it reveals the nature of foreign capital entering an economy and the potential impact it may have. Equity-based FDI signifies investors' long-term commitment, bringing not only capital but also the potential for technology transfer and skill development, thus promoting deeper economic integration. On the other hand, debt-based inflows can provide a quick inflow of capital but may not lead to lasting benefits for the growth of a business or lead to sustained investor participation.

Sixth, as a robustness check we examine whether, in addition to reforms, a government's views on how much the economy should be controlled by the state affect capital inflows. To this end, based on the Parl-Gov dataset[5] we construct an index reflecting whether the cabinet in office is state- or market-oriented to examine the impact that a new market-oriented cabinet has on capital inflows. Finally, using the aforementioned indicator, we examine to what extent the effectiveness of reforms in attracting foreign capital changes when implemented by governments that have different preferences for the role of the state in the economy.

The core findings of our study highlight the beneficial impact of product and labor market reforms on direct and portfolio investments. However, the benefits of reforms do not materialize in the short term but become evident in the medium-term. Additionally, product and labor market reforms affect positively capital inflows, particularly when implemented in environments characterized by a low government debt ratio and by more developed financial markets and institutions.

To further validate our baseline results, we created a cabinet state-market index that gauges the market regulation preference of the governing cabinet. Newly elected cabinets with a market orientation exert a positive influence on direct investment. Moreover, product market reforms yield better outcomes when enacted by cabinets with a stronger inclination towards a state-controlled economy, whereas labor market reforms positively influence direct investment under market-oriented cabinets.

The rest of the paper is organized as follows: Section 2 reviews the relevant literature on capital inflows and structural reforms. Section 3 presents the data used in the analysis. Section 4 outlines the methodology followed and presents the empirical model. Section 5 presents the baseline results. Section 6 examines whether the effectiveness of reforms in attracting foreign capital depends on the level of financial development and on the public debt ratio. Section 7 examines the impact that a new market-oriented cabinet has on capital inflows, and Section 8 concludes.

2. Literature review

Most of the literature on the determinants of capital flows has typically focused on emerging market economies (EMEs) (see e.g. Aizenman and Pasricha, 2013; Bathia et al., 2020; Ahmed and Zlate, 2014; LoDuca, 2012). However, more recently several papers have focused on capital inflows

[5] The initial data for the state marked variable comes from Benoit and Laver (2006), CHES (2010) and Bakker et al. (2015).

in advanced economies (see e.g., Avdjiev et al., 2020; Aizenman and Binici, 2016; Merrouche and Nier, 2017).

According to the standard neoclassical theory presented in a typical textbook on macroeconomics (e.g. Gartner 2016) capital will move from rich to poor countries, in order to take advantage of the higher returns that exist in poorer countries because of the scarcity of capital there. However, contrary to the predictions of neoclassical economic theory, capital flows are moving from developing nations to developed ones, a phenomenon often referred to as the Lucas paradox (Lucas, 1990). Alfaro, Kalemli-Ozkan, and Volosovych, (2008), henceforth AVK (2008), using gross equity and debt capital inflows from both direct and portfolio investments found that sound institutions are the main driver of the Lucas paradox[6].

Institutional quality has a positive effect on capital inflows, even in advanced economies, as shown by De Santis and Lührmann, (2009). Their study utilized a panel of advanced and developing countries from 1970 to 2003, focusing on net capital inflows from direct and portfolio investments (equities and debt securities), and on the current account balance . They found that net portfolio inflows and current account deficits are negatively correlated with lower institutional quality.

While the aforementioned studies did not directly investigate the impact of reforms on capital inflows, they are related to the current study as they utilize similar data to identify capital inflows. Their findings offer valuable insights into the broader economic environment and institutional factors that may influence capital flows, providing the relevant context for the current analysis.

Contractor et al., (2020) examined the impact of business regulations on Foreign Direct Investment (FDI) utilizing the Ease of Doing Business (EDB) database and the rule of law index from the World Bank for 189 countries. Their results suggest starting a business, enforcing contracts, and resolving insolvency have a positive effect on FDI inflows.

Campos and Kinoshita, (2010) conducted a study on the impact of reforms and institutions on Foreign Direct Investment (FDI) inflows in developing Eastern European and Latin America countries. Their analysis uncovered a robust empirical relationship between structural reforms and FDI although changes in the financial sector and privatization exerted a more significant influence on FDI inflows compared to trade liberalization. Dellis et al., (2017) introduced a new measure of FDI inflows, free from statistical artifacts. They find that efficient product market regulations and flexible labor market institutions positively impact FDI inflows, in line with Bénassy-Quéré et al., (2007).

[6] Since AVK (2008) the Lucas paradox have been reviewed and confirmed many times (see e.g., Azémar and Desbordes 2013; Göktan, 2015; Akhtaruzzaman, 2018).

Duval et al., (2022) examine the influence of structural reforms on the current account balance and its subcomponents, namely savings and investments. They utilize the narrative database of product and labor market reforms examined by Duval et al., (2018), while also controlling for macroeconomic conditions. Their primary finding suggests that product market deregulation tends to weaken the current account, whereas labor market deregulation strengthens it. Additionally, they observe that labor market reforms exert a negative effect on investment, while product market reforms have a positive effect on investment.

Although the above-mentioned papers investigated the impact of structural reforms, recent literature highlights that reform implementation is not random (see e.g., Pitlik and Wirth, 2003; Da Silva et al., 2017; De Haan and Parlevliet, 2018; Duval et al., 2021). Therefore, many recent studies have appropriately utilized the Augmented Inverse Probability Weighting (AIPW) method to address selection bias demonstrating a thoughtful approach to mitigate potential biases in their analyses (see e.g., Bordon et al., 2018; De Haan and Wiese, 2022; Wiese et al., 2023; Wiese et al., 2024). In more detail, Bordon et al. (2018), employed this method to estimate the ATE of structural reforms on employment rate. Similarly, De Haan and Wiese (2022) employed this method to estimate the effect of reforms on economic growth, while more recently, Wiese et al. (2024) utilized this approach to estimate the impact of reforms on inequality.

3. Data

We utilize annual capital flow data from the International Financial Statistics (IFS), issued by the International Monetary Fund (IMF). While alternative data sources exist, the IMF's IFS provides the most comprehensive and comparable dataset on international capital flows. The dependent variables are derived from the financial account, which documents transactions related to financial assets and liabilities between residents and non-residents.

Our analysis focuses on two components of the financial account balance: direct and portfolio investments with capital inflows represented by the net incurrence of liabilities[7]. The dependent variables are expressed as a percentage of GDP to account for differences in the size of the economy. The only drawback of the IMF's IFS data is the presence of substantial missing values in some countries, resulting in an unbalanced dataset.

[7] We do not use net capital inflows since those would be heavily affected by capital outflows.

This study's structural reform data focuses on significant policy changes documented in a narrative database[8] referring to product market and employment protection legislation deregulation reforms. The narrative reform dataset was created by Duval et al., (2018) initially covering the period from 1970 to 2013. The dataset was subsequently updated by Wiese et al., (2024) to include data up to 2020. They examined legislative and regulatory actions reported in OECD Economic Surveys for 26[9] advanced economies, as well as other country-specific sources. This comprehensive approach considers both reforms and "counter-reforms," employing a binary system to assign each country a rating of 0 in non-reform years and 1 in reform years.

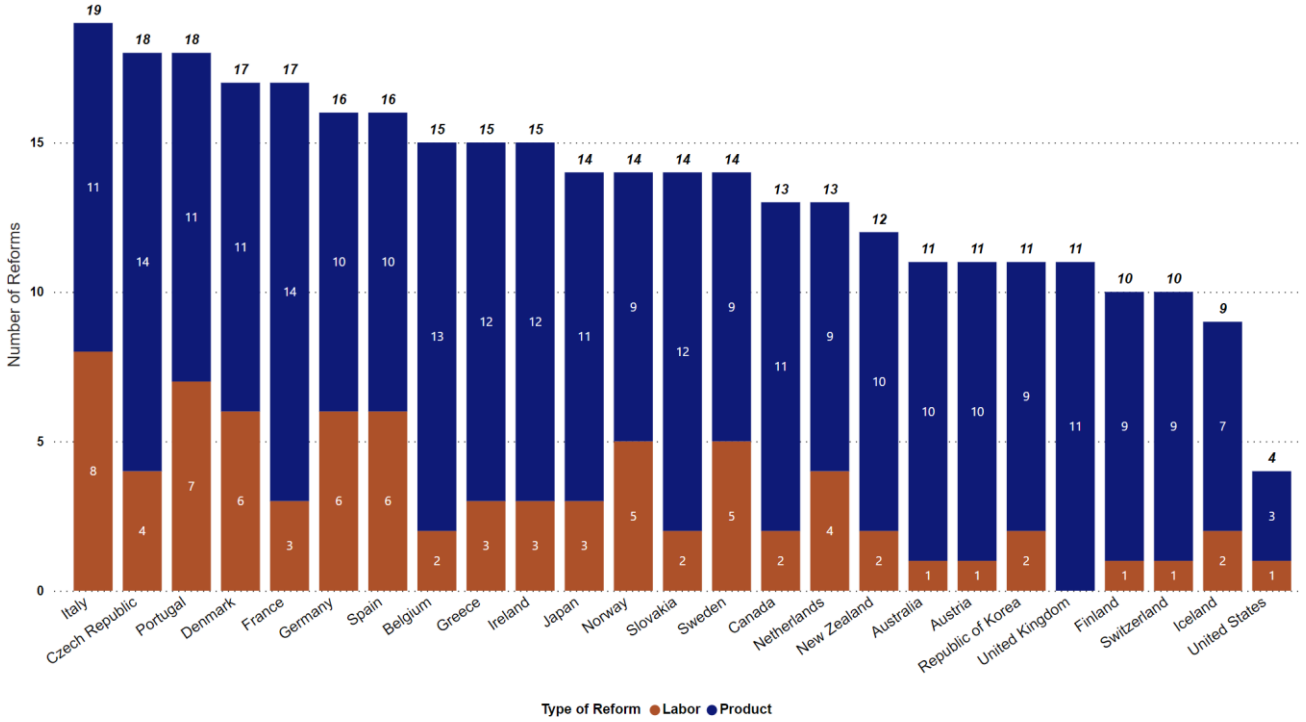
The database we use includes three dummy variables for labor market reforms, product market reforms, and counter-reforms. Each variable indicates the occurrence of a major reform (or counter-reform) in a specific year for each country[10]. The sample includes 257 product market reforms, 80 labor market reforms and 30 counter reforms for both product and labor markets spanning the years

1985 to 2020. The limited number of countries in the structural reform narrative database is the only caveat, as it imposes a restriction on the number of countries we can include in the analysis. However, it is preferred over other measures as it is the only dataset that distinctly identifies the correct timing of reforms relative to alternative measures i.e. the OECD and ILO indicators.

Graph 1 shows the countries which implemented the most structural reforms in product and labor markets during the years covered by our sample.

[8] Other studies used OECD regulation indicators see Bouis et al., 2012; Faccini, 2014; Bordon et al., 2018; Mavrogiannis and Tagkalakis (2022).
[9] We exclude Luxembourg from the analysis due to its significant outliers.
[10] The countries we include in the analysis are Australia, Austria, Belgium, Canada, Czech Republic, Germany, Denmark, Spain, Switzerland, Finland, France, Greece, Ireland, Iceland, Italy, Japan, Korea, Netherlands, Norway, New Zealand, Portugal, Slovakia, Sweeden, United States, United Kingdom

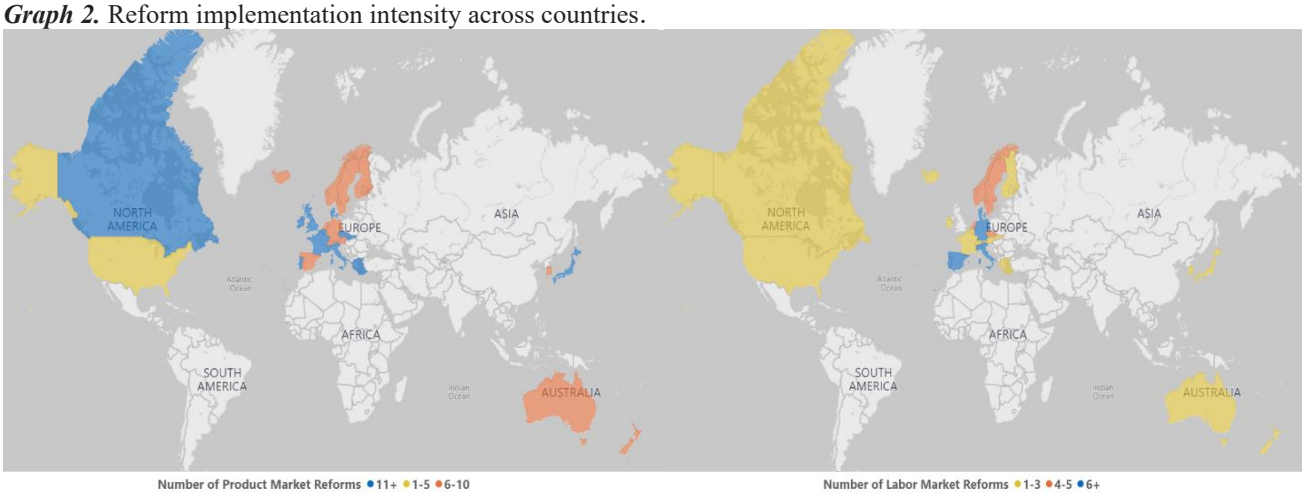
Graph 1. Number of product market and labor market reforms implementation



Source: Duval et al., (2018); Wiese et al., (2024)

In Graph 2, countries are clustered based on the number of reform implementations. The left map illustrates the number of product market reforms in our sample, while the right map displays the number of labor market reforms. The yellow color indicates low intensity of reform implementation, orange represents medium intensity, and blue signifies high intensity. Product market reforms have been implemented in core European countries, the UK, Canada, and Japan, while labor market reforms have been implemented excessively only in a handful of countries in the sample.

Graph 2. Reform implementation intensity across countries.



Notes: The left map displays the implementation of product market reforms, while the right map illustrates labor market reform implementation. Countries depicted in yellow indicate low intensity of reform implementation, orange represents medium intensity, and blue signifies high intensity. Source: Duval et al., (2018); Wiese et al., (2024).

3.1. Determinants of capital inflows

When deciding on the relevant determinants of capital inflows, the relevant literature has focused on the so-called pull factors, which are the domestic economic conditions that help attract capital to a country, highlighting various investment opportunities. These factors include macroeconomic conditions, the quality of institutions, and the financial and market structure.

In more detail, the growth rate of real GDP per capita is a relevant factor as it captures the level of development across countries and controls for differences in initial conditions (see e.g. Campos Kinoshita, 2010). In addition, the unemployment rate can serve as an indicator of the initial conditions in the recipient country's labor market, especially when analyzing the effects of labor market reforms. The government debt ratio is also a key determinant of capital flows. Since it reflects the fiscal and macroeconomic condition of an economy, it can affect both the volatility and the direction of capital flows (see Broner et al., 2013). Therefore, we use public debt as a percentage of GDP from the IMF and OECD as a control variable.

The international competitiveness of the country, proxied by the real effective exchange rate[11] as in De Santis and Luhrmann (2009), is a relevant pull factor, as low competitiveness creates limited investment opportunities and discourages capital inflow. Additional pull factors are the domestic interest rates and capital account openness (see Chinn and Ito, 2006 and Sarno et al., 2016).[12] Credit rating is one of the most important factors of capital inflows (foreign direct investment and portfolio investment) in a country as shown by Cai et al., (2018), Chen et al., (2013), and Chen et al., (2016). We control for this factor using the Foreign Currency Long-Term Sovereign Debt Ratings Index, ranging from 1 to 21, proposed by Kose et al., (2022).

Institutional quality plays a pivotal role in attracting capital inflows by instilling confidence and stability in the investment environment. Countries with strong institutions are seen as more reliable and transparent, thus attracting foreign investors. In addition, strong institutions help mitigate the risks associated with investment, enhancing long-term capital inflows, and contributing to economic growth. We control for this factor using the rule of law index from V-Dem (Varieties of Democracy).

[11] The real effective exchange rate could also serve as an indicator of terms-of-trade, defined as the price of exports relative to imports. This is supported by the positive correlation between a country's real exchange rate appreciation and an increase in its terms-of-trade (see De Santis and Luhrmann 2009; Obstfeld and Rogoff, 1995).

[12] Klein (2005) shows that the effect of capital account liberalization on growth depends on the institutional development of a country.

(see e.g., Campos and Kinoshita, (2010); De Santis and Luhrmann, (2009); Masuch et al., (2018); AVK (2008)).

Financial development significantly influences capital inflows by providing the necessary infrastructure and mechanisms for the efficient allocation of funds. For this reason, we employ the financial development index developed by the IMF. Well-developed financial systems offer a diverse range of investment opportunities and avenues for capital deployment, attracting both domestic and foreign investors. Additionally, a mature financial sector fosters innovation, enhances liquidity, and reduces transaction costs, thus facilitating greater capital inflows into the economy (see e.g. Desbordes and Wei, 2017; Svirydzenka 2016; Sahay et al., 2015; Cihak et al., 2012)

4. Estimation method and model specification

We use the local projection (LP) method introduced by Jorda, (2005) to estimate the short-term effects of reforms on gross capital inflows. Our results are based on LP instead of VAR because, as highlighted by Montiel Olea and Plagborg-Møller, (2021), LP inference offers a more straightforward and reliable method than the conventional autoregressive inference, which is often sensitive by the data's persistence and the forecast horizon's length. In addition, by adopting the lag-augmented LP methodology suggested by Montiel Olea and Plagborg-Møller, (2021)[13], which incorporates lagged values of the variable of interest into the regression, there's no need to adjust for autocorrelation, which also simplifies inference (see e.g. Eskandari and Zamanian, 2023).

The baseline specification we use is:

$$x_{i,t+h} - x_{i,t-1} = \alpha_i^h + \gamma_t^h + \beta_{1j}^h \sum_{j=1}^{5} (x_{i,t-j} - x_{i,t-1-j}) + \beta_2^h R_{i,t} + \beta_{3j}^h \sum_{j=1}^{5} R_{i,t-j} + \beta_4^h \sum_{h=0}^{h} R_{i,t+h} + \beta_5^h Z_{i,t-1} + \varepsilon_{i,t+h} \quad (1)$$

[13] Plagborg-MØller and Wolf, (2021) demonstrate that both local projections (LPs) and Vector Autoregressions (VARs) yield similar estimates of impulse responses. Note that this nonparametric result is achieved solely through unrestricted lag structures.

In this context, h=0,…,5 denotes the estimation horizons[14], while x represents the capital flow variables included in the model individually[15]. These variables encompass two of the three distinct components of Financial Account liabilities[16]: Foreign direct investments (FDIs) and portfolio investments[17]. So, the left-hand side variable $x_{i,t+h}-x_{i,t-1}$ denotes the cumulative response of gross capital inflow-to-GDP ratio to treatment (reform shock) which is represented by $R_{i,t}$ at time t, where i indexes the countries in our sample, α_i^h and γ_t^h are country and time fixed effects. We use the Spatial Correlation Consistent (SCC) standard errors as per Driscoll, and Kraay, (1998).

The control variables in the model consist of 5 lags of the dependent variable, 5 lags of the treatment variable, and leads of the treatment, following the Teuling and Zubanov (2014) correction. This correction is included to mitigate bias arising from overlapping forecast horizons. Note that this term introduces an additional lead of the treatment for each estimated horizon h.

Finally, $Z_{i,t-1}$ contains additional control variables[18] including various capital pull factors such as the long-term interest rate, the GDP per capita growth rate, the real effective exchange rate, the unemployment rate and the government debt ratio. We also include the Chin Ito index to control for the level of capital account openness, the foreign currency long-term sovereign debt ratings index from Kose (2022), the rule of law index from V-Dem and the IMF's Financial development index. When we estimate the impact of product market reform, we also add the contemporaneous effect of labor market reform and vice-versa. The lag selection of the covariates and treatments was made using the Akaike criterion.

4.1. The Augmented inverse probability weighting method

While a significant portion of the literature argues that the implementation of reforms is non-random (see e.g., Pitlik and Wirth, 2003; Da Silva et al., 2017; De Haan and Parlevliet 2018; Duval et al., 2021), this assumption cannot be taken for granted and needs to be tested in our

[14] We opt to focus solely on the short-term effects due to the limited observations for the dependent variable in certain countries and the number of countries available from the narrative database. Increasing the number of horizons estimated in Local Projections (LP) could diminish the reliability of the results, hence our preference for shorter-term estimations.
[15] We exclude Iceland when estimating the impact of reforms on portfolio investments due to its numerous outliers, which could bias our estimates.
[16] The three main components are namely direct investments, portfolio investments and other investments.
[17] Capital flows are defined in such a way that a positive coefficient on the explanatory variables indicates an increase in both direct and portfolio investments gross inflows.
[18] The correlation matrix for the covariates included in the model indicates the presence of limited correlations (see Table A3).

setting. Therefore, we conduct a balance test for the difference in means of the covariates for the treatment and the control group.

The results of the balance test (see Table A1) indicate significant differences in covariates between the treatment and control groups in our sample. To address the endogeneity stemming from selection bias inherent in the implementation of reforms, we use the augmented inverse probability weighting (AIPW) to estimate the average treatment effects of reforms as proposed by Jorda and Taylor (2016). This method employs a two-step process to estimate the treatment effect while adjusting for potential bias in treatment assignment.

The process begins with a probit model used to estimate the propensity score which represents the probability of receiving treatment[19] based on several predictors derived from the literature. After estimating the probit model, we use the predicted propensity score to calculate inverse probability weights for each observation to adjust for the probability of treatment assignment creating a quasi-random distribution of control and treatment sub-samples. Then LP[20] models (equation (1)) are then used to estimate conditional means in the treatment and the control group.

Finally, the differences in weighted conditional means between the treatment and control groups are computed - these differences represent the estimated average treatment effects (ATEs) on the dependent variables (see e.g., Jorda and Taylor 2016 and Glynn and Quinn 2010).

The augmented inverse probability weighting (AIPW) approach is often referred to as "doubly robust" because it offers two layers of protection against bias in causal inference. This dual robustness property protects against model misspecification in either the propensity score model (Probit) or the outcome models (LP), ensuring that the estimator remains consistent for the Average Treatment Effect (ATE). This means that even if one of the models is mis-specified, the ATE estimator remains consistent as long as the other model is properly specified.

This method also corrects for selection bias by estimating the treatment effect using the estimated probabilities of treatment assignment (propensity scores). These propensity scores are used to assign appropriate weights to observations effectively giving more weight to the underrepresented groups in the dataset. By doing so, AIPW reduces the impact of selection bias

[19] The treatments are the product market and labor market reforms, i.e., they are binary.
[20] Given that reforms occur in most countries in our sample, we utilize the LP estimation method. However, in scenarios where many countries do not undergo reforms, a (staggered) difference in differences (DID) setup may be more suitable (see e.g., Sant'Anna and Zhao, 2020; Callaway and Sant'Anna, 2021).

and provides consistent treatment effect estimates. This robustness to model misspecification and correction of selection bias makes AIPW a valuable tool in causal inference, enhancing the reliability and accuracy of treatment effect estimates.

To this end, we employ a probit model (presented in Table A5 in Appendix A) to estimate the probability of receiving a treatment. The determinants of the treatments, namely product and labor market reforms, are well documented in the literature. According to Duval et al., (2021) there are six main categories of potential reform drivers, encompassing business and macroeconomic conditions, structural features of the economy, political factors, external influences, and reform packaging (sequencing and momentum). In more detail:

- Recognizing the pivotal role of business conditions[21] in anticipating reform implementation[22] (see e.g., Tommasi and Velasco, 1996; Rodrik, 1996), we incorporate as predictors in the probit: the growth rate of real GDP per capita, output gap, short-term interest rates, inflation rate[23] and government debt. In addition, we also include as predictors the labor force participation rate when examining product market reforms and the employment rate in case of labor market reforms.
- Macroeconomic policies, including fiscal policies (see e.g., Fernandez and Rodrik, 1991; Duval and Furceri, 2018) and monetary policies (see e.g., Draghi, 2016; Duval and Elmeskov, 2008), can significantly influence the likelihood of reforms. To capture these factors, we include the cyclically adjusted primary balance along with the residuals of a Taylor rule[24]. A positive (negative) cyclically adjusted primary balance indicates that fiscal policy is contractionary (expansionary). Similarly, a positive (negative) Taylor rule residual indicates that monetary policy is contractionary (expansionary).We utilize trade openness and the KOF globalization index in order to capture whether an economy is well integrated in international competition (see e.g. Dreher, 2006; Dreher et al., 2008).
- Additionally, to account for various structural features we include as predictors the tax revenue to GDP ratio, the Gini coefficient, and human capital index, based on years of schooling and returns to education, as suggested by Persson and Tabellini, (1994).

[21] The paper of Drazen and Grilli (1993) initiated the exploration of crisis-induced reform implementation, highlighting economic crises as pivotal catalysts for reform initiatives.
[22] Wiese (2014) analyzed the factors influencing healthcare financing privatizations, providing evidence supporting the crises induced reform hypothesis.
[23] Drazen and Easterly (2001) systematically investigate the hypothesis of crisis induced reforms and validate it for specific types of crises, such as very high inflation, but not for others, such as negative growth.
[24] The Taylor rule residuals are obtained after regressing the short-term interest rates on its own lag, the lagged output gap, inflation rate, and a time trend using fixed effects as in Duval et al. (2018).

- Political factors play a crucial role in reform implementation. Thus, we incorporate the government ideology variable, ranging from 1 to 3, with 3 representing a left-wing government, 2 a centrist-oriented government, and 1 a right-wing government. Additionally, we include the All-House dummy variable to denote whether the party in executive control holds an absolute majority in all relevant legislative houses with lawmaking powers. Furthermore, we introduce a variable to track the duration of a government's tenure, noting that governments are less inclined to implement reforms as their time in office increases,[25] along with an election dummy variable.
- To account for external pressures related to EU fiscal oversight, we use a dummy variable taking the value 1 if a country is a European Union member.
- Finally, to capture reform implementation in a broader packaging we incorporate two lags of product market reforms and the OECD product market regulation index when estimating the product market reforms probit, and two lags of labor market reforms alongside with the OECD employment protection legislation index when estimating the labor market reforms probit.

Figure A1 (see Appendix A) display the smooth kernel density estimates illustrating the distribution of propensity scores for both treatment and control units[26]. The density plots confirm that there is sufficient overlap in the propensity scores between treatment and control units.[27] Therefore observations in which reforms took place are assigned a weight of 1/p, where p represents the probability score, while observations without reform are assigned a weight of 1/(1-p).[28] Next, we proceed to estimate the LP model (equation (1)) using the observations that have been corrected for selection bias. To mitigate the imported uncertainty stemming from the initial stage propensity score estimation, we employ block-bootstrapped standard errors using 500 repetitions to our AIPW estimations (see de Haan and Wiese, 2022; Wiese et al., 2024).

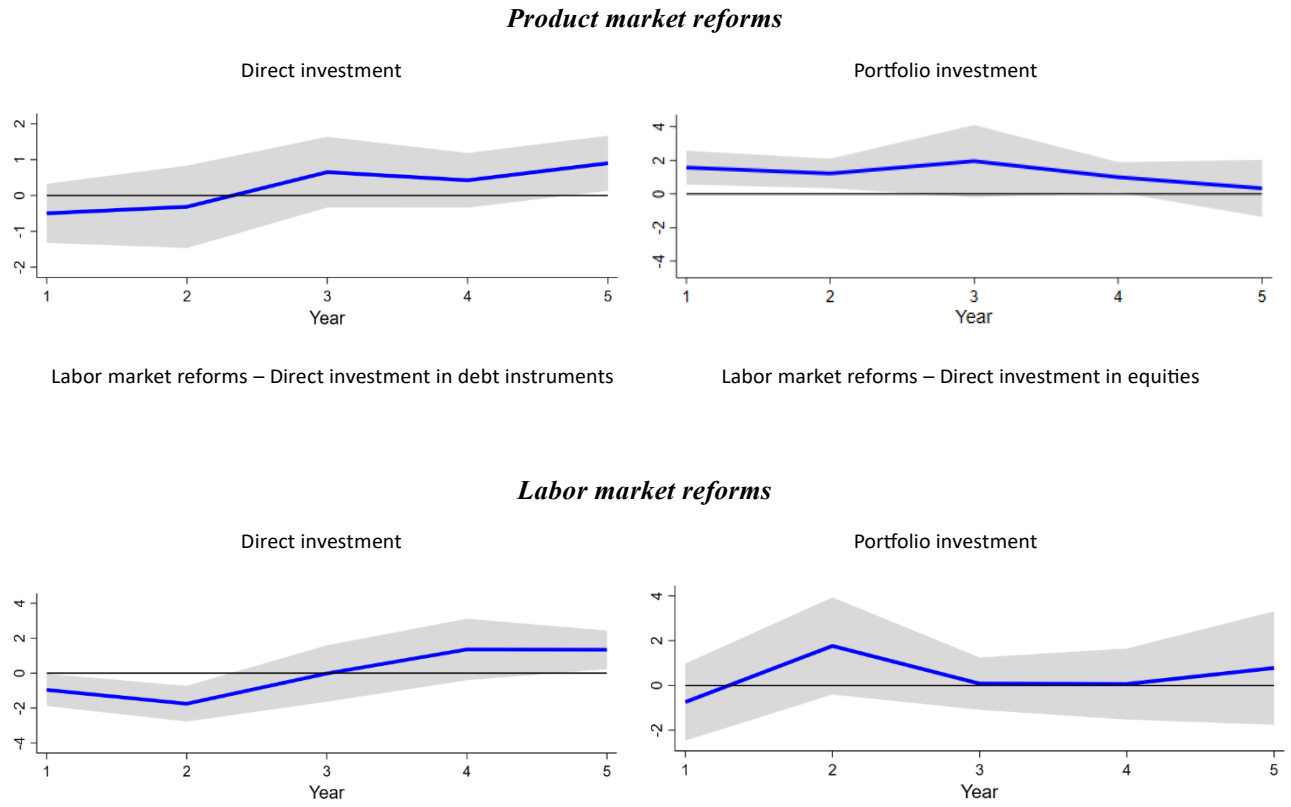
[25] Alesina et al. (2023) investigated the impact of reforms on vote shares during a government's tenure. Their findings highlight the significance of initiating reforms early in the term in order to mitigate potential electoral repercussions.
[26] The ROC curve area is 0.813 for product market reforms and 0.781 for labor market reforms, indicating a high degree of discrimination between treated and control units. This suggests that the propensity scores effectively distinguish between units that received reforms and those that did not, validating the model's predictive accuracy.
[27] The density plot for propensity scores indicates sufficient counterfactuals for treatment units.
[28] After the re-weighting of the observations, we conduct a post balance test (see Table A). Although a small imbalance may be present the literature suggests a pragmatic approach to dealing with imbalances. Austin (2011) suggests that while balance is desired, some degree of imbalance might be inevitable and can often be addressed through model specification.

5. Baseline Results

In this section, we present the baseline simple unweighted Local Projections (LPs) alongside the Average Treatment Effect (ATE) of reforms, derived using the Augmented Inverse Probability Weighting (AIPW) method. The complete estimates of the simple LPs, as well as the coefficients from the AIPW method, are provided in Appendix A.

The unweighted Local Projection (LP) estimates indicate that the short-term effects of product and labor market reforms are negative for both direct and portfolio investment, with the exception of a positive effect of product market reform on portfolio investment (Figure 1). However, by the end of the 5-year forecast horizon the response of direct investment to both product and labor market reform becomes positive and statistically significant. On the other hand, the medium-term response of portfolio investment to both product and labor market reforms tends to zero and is statistically insignificant.

Figure 1. The impact of product and labor market reforms on direct investment and portfolio investment using the simple unweighted LP method.

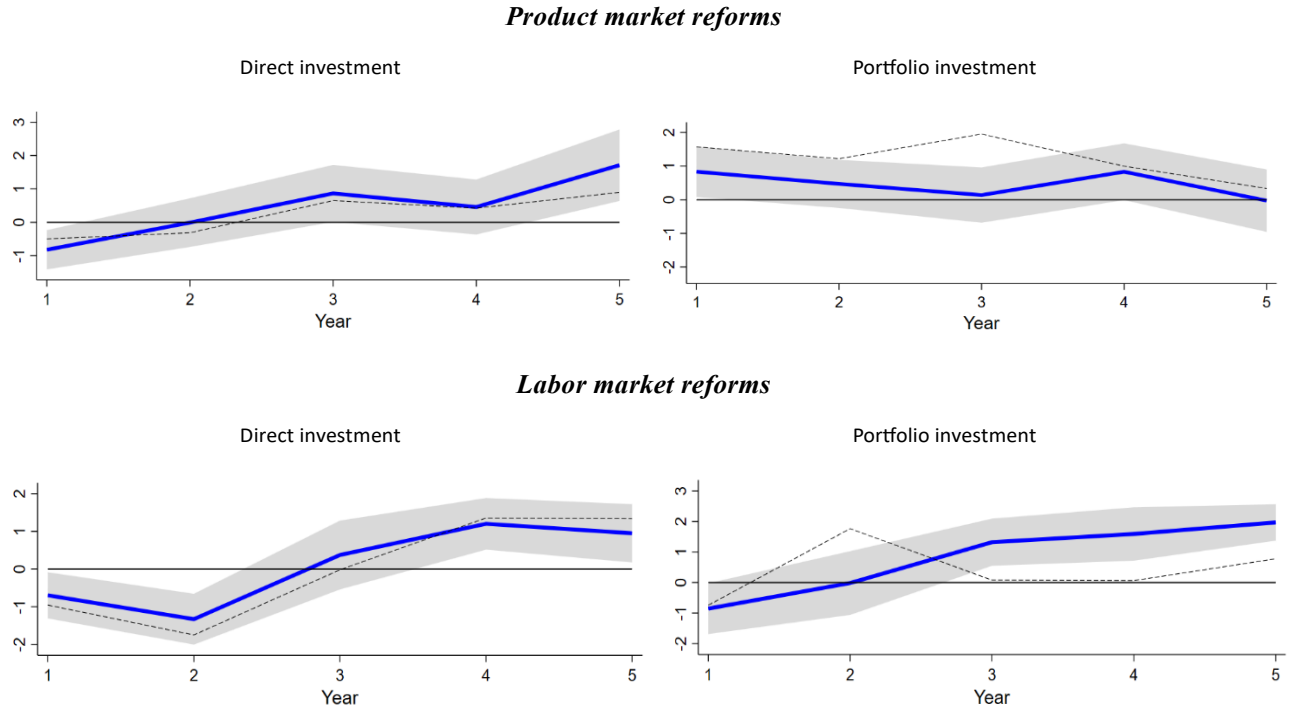


Notes: The solid blue line represents the cumulative impulse response of direct investment and portfolio investment to product (upper panel) and labor market (lower panel) reforms based on equation 1 using the unweighted simple LP method. The light grey shaded area indicates the 90% confidence interval based on the Spatial Correlation Consistent (SCC) standard errors (Driscroll and Kraay standard errors). The coefficient estimates are reported in Appendix A (see Tables A6-A9)

Turning to the AIPW baseline results (see Figure 2), we find that product and labor market reforms initially exert a negative effect on direct investment, which subsequently turns positive after the third year. The product and labor market reforms lead to a cumulative increase in direct investment of about 2% and 1% of GDP, respectively, over the end of the 5-year horizon. Note that the estimated effects of product and labor market reforms on direct investment have a similar response profile with the ATE of reforms based on the AIPW method.

The response profile of direct investment suggests that the benefits of product market reforms do not materialize in the short term but become evident in the medium-term. This lagged effect could be attributed to the time required for a) firms to adapt to the new regulatory environment and b) reforms to positively affect market perceptions, leading to increased investor confidence and investment inflows (see e.g., Alesina et al., 2005 Bekaert et al., 2005).[29] As for the second, obviously potential investors will want to see that the reforms will actually be implemented and not reversed over time.

Figure 2. The ATE of product and labor market reforms on direct investment and portfolio investment using the AIPW method.



Notes: The solid blue line represents the (ATE- AIPW) impulse response of direct investment or portfolio investment following a product (upper panel) and labor market (lower panel) reform based on equation 1. The light grey shaded area indicates the 90%

[29] Although we find initial negative effects, Gal and Hijzen (2016) using firm level data show that product market reforms boost capital by 4%, output by 3%, and employment by 1.5% within two years, enhancing the investment landscape for debt securities and equities by encouraging firm entry, especially through reduced entry barriers.

confidence interval using bootstrapped standard errors. The thin dashed black line is the cumulative impulse response from the simple unweighted LPs. The detailed estimates are displayed in Table A14, Appendix A.

Similarly, the response profile of direct investment to labor market reforms suggests that although reforms aim to enhance flexibility and productivity, they may initially create uncertainty and adjustment costs that deter direct investment. Businesses may adopt a cautious stance due to possible short-term disruptions or the costs associated with adapting to new labor market regulations (see Boeri, 2012; Duval et al., 2020).

However, as the reforms mature and their benefits become clearer—such as increased labor market efficiency, reduced labor costs, and improved competitiveness—investors' confidence improves, leading to a resurgence in direct investment. The positive impact observed beyond the third horizon reflects the realization of these benefits, aligning with the theory that structural reforms, though initially disruptive, enhance the investment climate and economic performance over time (see Bassanini and Duval, 2006; Alesina et al., 2006; Rajan and Zingales, 2003).

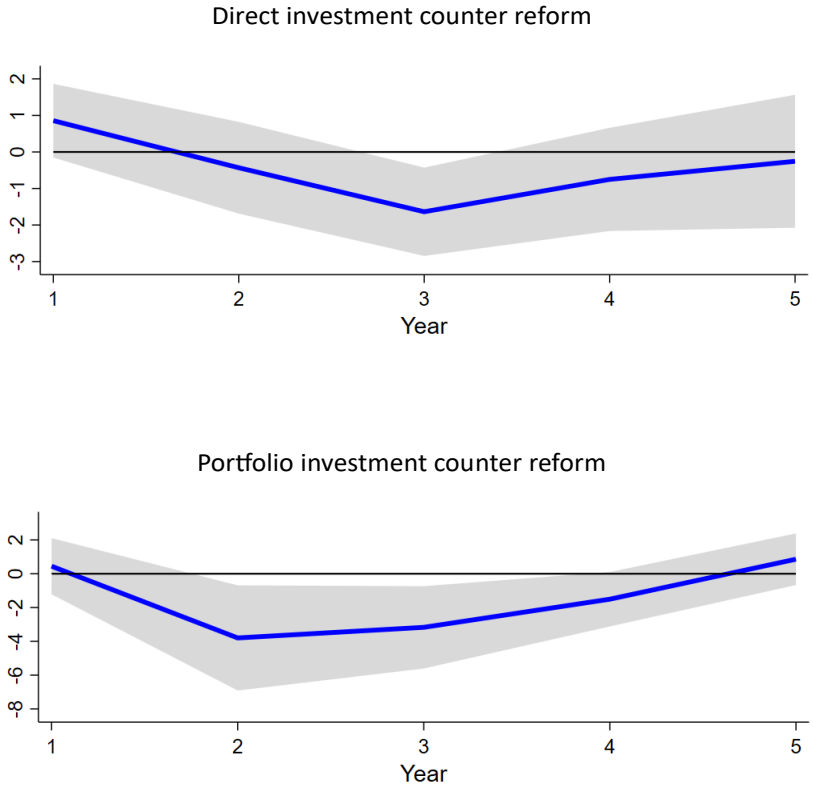
Turning to portfolio investment, we find a positive impact response to product market reforms which gradually becomes zero and insignificant. Note that the impulse response approaches faster to zero relative to the estimates obtained from the simple unweighted LPs. The diminishing effect over time may also relate to market participants' adaptive expectations. As investors adjust to the new regulatory and competitive environment, the initial advantages conferred by the reforms are capitalized into asset prices, reducing the scope for additional gains from these reforms alone (Brewer, 1993; Mosley and Singer, 2008).

Portfolio investment responds negatively on impact to labor market reforms. However, the response of portfolio investment gradually turns positive and remains so until the end of the forecast horizon. Labor market reforms lead to a cumulative increase in portfolio investment of about 1.5 of GDP over the end of the 5-year horizon. This effect is more pronounced relative to the estimates obtained in the simple unweighted LPs. The negative impact response of portfolio investment is related to the fact that initially labor market reforms introduce uncertainty and are associated with potential adjustment costs, leading to a cautious approach by investors due to concerns about corporate profitability and financial stability (see Andrés et al., 2017). However, gradually reforms are beginning to increase the flexibility of the labor market, reduce unemployment and boost productivity, resulting in improved economic performance, strengthening investor confidence, thus, contributing to the inflow of capital.

5.1. Robustness checks: Counter-reforms and placebo reforms

To verify our baseline findings regarding the positive impact of deregulation on capital inflows, we examine the effects of counter reforms on both direct and portfolio investments. Since we do not have many observations of counter-reforms from the narrative database, we consider product and labor market counter-reforms together. As reported in Figure 3, stringent regulations in labor and product markets impact negatively on both direct and portfolio investment, in contrast with the positive effects obtained in the deregulation case. Stricter regulations increase operational costs and reduce market efficiency, deterring investment. Deregulation, on the contrary, tends to reduce barriers and strengthen market confidence, helping to attract investment (see Djankov et al., 2002).

Figure 3. The impact of combined product and labor market counter reforms on direct investment and portfolio investment using unweighted simple LP estimates.



Notes: The solid blue line represents the cumulative impulse response of direct investment (upper panel) and portfolio investment (lower panel) to joint counter reforms based on equation 1 using the unweighted simple LP method. The light grey shaded area indicates the 90% confidence interval based on the Spatial Correlation Consistent (SCC) standard errors. The coefficient estimates are reported in Appendix A (see Tables A10 - A11)

To further evaluate the robustness of our baseline findings, we conduct simulations using placebo reforms. We generate a distribution of unconditional Average Treatment Effects (ATEs) coefficients using randomly generated reforms. The expectation for placebo simulated reform coefficients is for them to form a normal distribution around zero. We anticipate the actual coefficients of the real reforms to be within that distribution, although not near zero where the largest density of the placebo reform coefficients occurs. To ensure statistical soundness, we conducted 10,000 replications of the simulations. The placebo reforms were generated from a binomial distribution with a probability of success corresponding to the percentage of product, labor, and counter-reforms observed in our sample. By comparing the distribution of coefficients from placebo reforms with those from actual reforms, we can evaluate the robustness of our results and discern the extent to which they are influenced by the specific characteristics of our sample (see de Haan and Wiese, 2022). Based on the evidence presented in Appendix A (see Figures A1-A6) we can conclude that our results remain valid.

6. The role of macroeconomic conditions and financial institutions

Structural reforms in the product and labor markets are pivotal for enhancing a country's economic resilience and attractiveness to investors by fostering regulatory efficiency and market adaptability (see e.g., Rodrik, 1996; Aghion et al., 2005). However, such reforms might influence capital inflows differently under various macroeconomic and institutional conditions. Understanding these dynamics is crucial for timely deregulation efforts and informed economic policy (see e.g., Acemoglu and Robinson, 2012; Masuch et al., 2018; Duval and Furceri, 2018).

Therefore, in this section we examine whether the impact of product and labor market reforms depends on the level of the public debt to GDP ratio and financial development. Building on de Haan and Wiese (2022) and Ramey and Zubairy (2018) we estimate:[30]

$$x_{i,t+h}-x_{i,t-1} = D_{r,i,t}[\alpha_i^h + \gamma_t^h + \beta_{1j}^h \sum_{j=1}^{5}(x_{i,t-j} - x_{i,t-1-j}) + \beta_2^h R_{i,t} + \beta_{3j}^h \sum_{j=1}^{5} R_{i,t-j} + \beta_4^h \sum_{h=0}^{h} R_{i,t+h} + \beta_5^h Z_{i,t-1}] + \varepsilon_{i,t+h} \quad (2)$$

[30] Following this approach, we allow the covariates to vary depending on the state under consideration.

Hence, we modify[31] equation 1 by introducing a series of dummy variables $D_{r,i,t}$ with i being the country, t is the year and r the corresponding dummy variable introduced each time. The first dummy variable takes the value 1 when the public debt ratio is above the sample median and zero otherwise.[32] The second dummy variable takes the value 1 when the IMF financial development index is above the sample median and zero otherwise.[33]

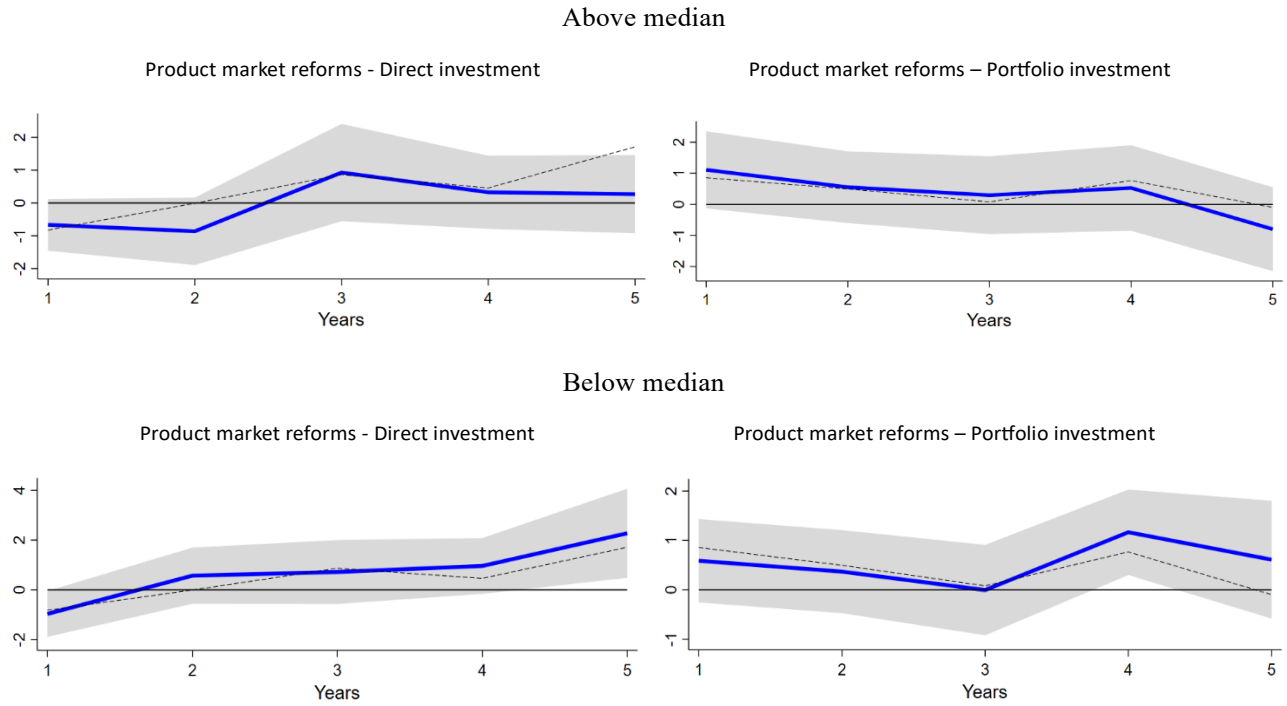
Reforms implemented in countries with better institutions, infrastructure, and macroeconomic conditions may be more effective in attracting capital in the form of direct investment and portfolio investments due to several interconnected factors. High-quality infrastructure as well as better institutions and access to finance as well as more globalized economies facilitate business operations, reduce transaction costs, and increase the potential returns on investment, making direct investments more appealing (see e.g. AVK, 2008 ; Campos Kinoshita, 2010; Andrés et al., 2017). Moreover, the existence of a high-level institutional framework can be an indication that the reforms announced and voted in the parliament are actually implemented by the public administration. Furthermore, the existence of a sound macroeconomic framework that includes for example sound public finances and a low public debt ratio can constitute an environment that facilitates the attraction of capital inflows regardless of whether reforms are implemented. At the same time, however, an unfavorable fiscal environment with a high public debt ratio and concerns about debt sustainability might discourage investors. At the same time, in case of high fiscal risks, policy makers may have no alternative and therefore the necessary reforms should be implemented. This could encourage international investors to move their capital to the country in question, but only if the reforms begin to pay off.[34]

As reported in Figures 4 and 5 reforms in product and labor markets have a clear positive medium term effect on direct and portfolio investment in cases of low public debt ratio, indicating that they function better when macroeconomic and fiscal conditions are sound (see e.g., Bordon et al., 2018; Duval and Furceri, 2018). Note that the effects of reforms in a low debt environment

[31] The $Z_{i,t-1}$ vector contains the same control variables as in equation 1.
[32] The IMF financial development reflects the development of financial markets and institutions and is not affected by the reform index. The same applies to the public debt ratio, because the public debt ratio responds slowly in the short term, if at all, to the change in labor and product market regulation. Therefore, the critique of Gonçalves et al., 2023 is not applicable in our case.
[33] The sample median for the public debt ratio is 47% and the sample median for the financial development index is 0.65.
[34] We also examined the impact of reforms on direct and portfolio investment in cases of high and low sovereign rating (based on Kose et al., 2022), and in cases of high and low rule of law and globalization indices (based on the KOF index). The results show that reforms have a positive impact when the sovereign rating is high and in cases where the rule of law and KOF globalization indices are above their median values.

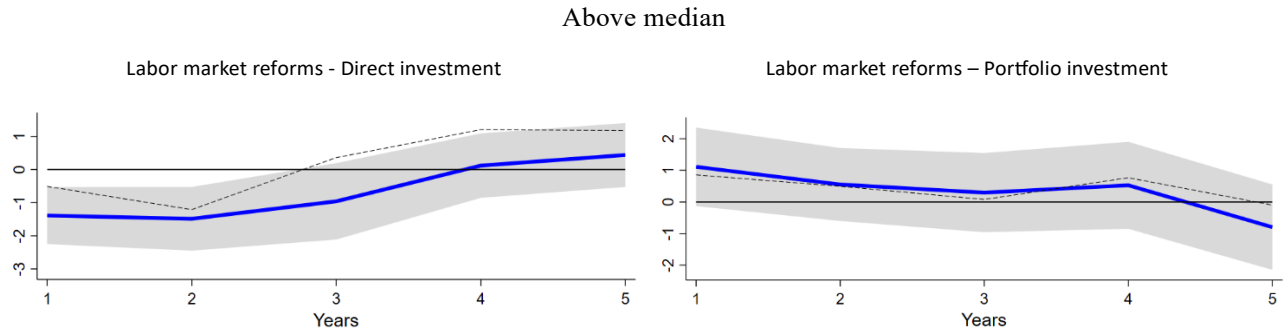
are more pronounced relative to the baseline specification[35] Therefore, a low public debt ratio reflects stronger economic fundamentals, including stable fiscal positions, robust growth prospects, and effective governance, which can amplify the benefits of structural reforms.

Figure 4. The effect of product market reforms on direct investment and portfolio investment in cases of above and below sample median public debt ratio.



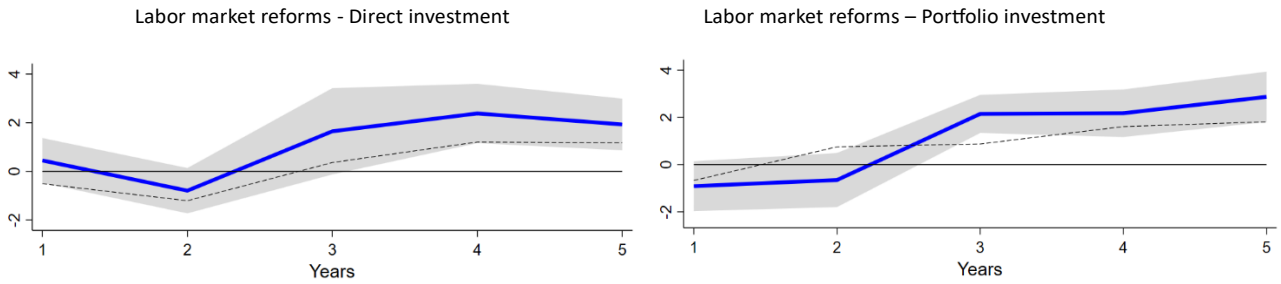
Notes: The solid blue line represents the (ATE- AIPW) impulse response of direct investment or portfolio investment following a product market reform in cases of above (upper panel) sample median and below (lower panel) sample median public debt, based on equation 2. The light grey shaded area indicates the 90% confidence interval using bootstrapped standard errors. The thin dashed black line is the baseline (ATE- AIPW) impulse response as per equation 1. The detailed estimates are displayed in Table A15, Appendix A.

Figure 5. The effect of labor market reforms on direct investment and portfolio investment in cases of above and below sample median public debt ratio.



[35] Cacciatore et al. (2016) and Fernández-Villaverde et al. (2015) suggest that structural reforms, particularly those aimed at labor and product markets, along with efforts to reduce fiscal volatility, promote long-term economic stability, despite potential short-term challenges. Although data-driven studies highlight the significance of the implementation conditions for structural reforms in the short term (see e.g., de Haan and Wiese, 2022; Duval and Furceri, 2018), Pfeiffer et al. (forthcoming), employing a DSGE model, find that in most cases, the effects of reforms remain consistent even when considering the zero lower bound (ZLB), in line with Fernández-Villaverde et al. (2021).

Below median



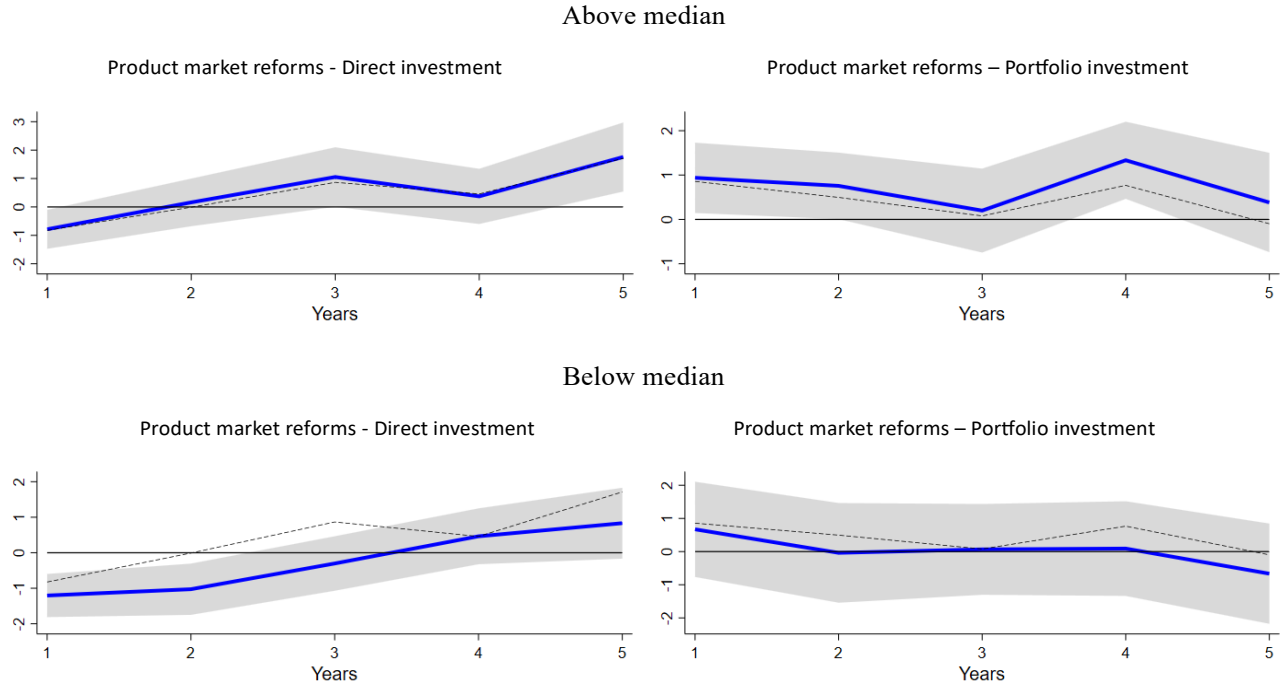
Notes: The solid blue line represents the (ATE- AIPW) impulse response of direct investment or portfolio investment following a labor market reform in cases of above (upper panel) sample median and below (lower panel) sample median public debt, based on equation 2. The light grey shaded area indicates the 90% confidence interval using bootstrapped standard errors. The thin dashed black line is the baseline (ATE- AIPW) impulse response as per equation 1. The detailed estimates are displayed in Table A15, Appendix A.

Figures 6 and 7 report the effects of reforms in a high and low financial development environment. We measure financial development, based on the IMF Financial Development Index (FDI). This index serves as a comprehensive measure of the development of financial markets and institutions in a country. It includes indicators that assess the depth, access, and efficiency of financial institutions and markets. Financially developed countries with liberalized financial sectors attract more foreign direct investment by providing a more stable and reliable environment for investment. This is evidenced by the strong empirical relationship found between reforms and FDI, particularly from financial liberalization and privatization efforts (see Campos and Kinoshita, 2010).

The evidence reported in Figure 6 indicate that product market reforms that are implemented in high financially developed economies have positive medium term effects on both direct and portfolio investment, with the effect being more pronounced vis-à-vis the baseline ATE specification. Turning to labor market reforms we observe that the boost direct investment in the medium term in both high and low financially developed economies (see Figure 7). Labor market reforms increase portfolio investment over the medium term in both high and low financial developed economies, but the effects are clearer and more sizeable and statistically significant in high financially developed economies.

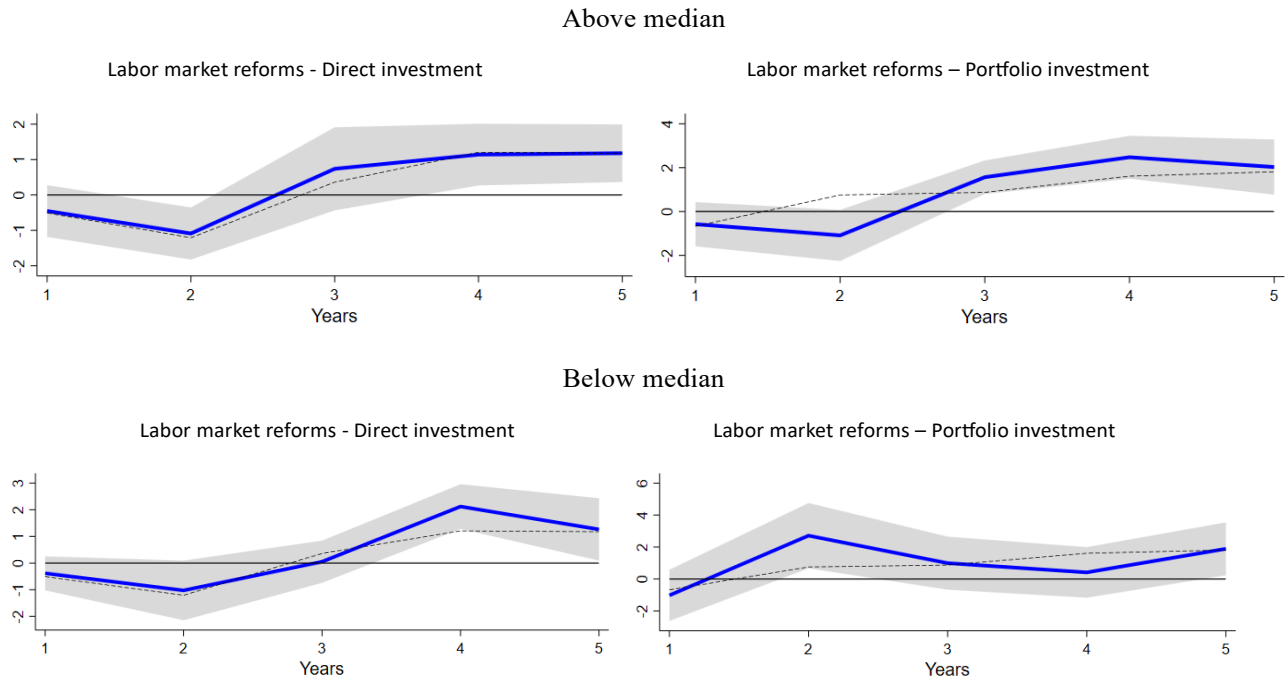
Overall, a clear pattern emerges, i.e., countries with more developed financial systems are better able to capitalize on reforms due to their ability to efficiently allocate resources, manage risks, and support innovation and competition (see e.g., Ostry et al., 2009).

Figure 6. The impact of product market reforms on direct investment and portfolio investment in cases of above and below sample median financial development index.



Notes: The solid blue line represents the (ATE- AIPW) impulse response of direct investment or portfolio investment following a product market reform in cases of above (upper panel) sample median and below (lower panel) sample median financial development index, based on equation 2. The light grey shaded area indicates the 90% confidence interval using bootstrapped standard errors. The thin dashed black line is the baseline (ATE- AIPW) impulse response as per equation 1. The detailed estimates are displayed in Table A16 in Appendix A.

Figure 7. The impact of labor market reforms on direct investment and portfolio investment in cases of above and below sample median financial development.



Notes: The solid blue line represents the (ATE- AIPW) impulse response of direct investment or portfolio investment following a product market reform in cases of above (upper panel) sample median and below (lower panel) sample median financial development index, based on equation 2. The light grey shaded area indicates the 90% confidence interval using bootstrapped

standard errors. The thin dashed black line is the baseline (ATE- AIPW) impulse response as per equation 1. The detailed estimates are displayed in Table A16 in Appendix A.

7. Robustness check: does a government's policy orientation matter for capital inflows?

As a further robustness check we construct an index reflecting whether the cabinet in office is state- or market-oriented to examine the impact that a new market-oriented cabinet has on capital inflows. To construct the index, we use the state market variable from Parl-Gov dataset[36] which takes values from 0-10 and measures the degree of regulation in the economy each party in office prefers. For example, a party that takes values closer to 0 is inclined to a more state-controlled, heavily regulated economy whereas parties that take values closer to 10 have a preference for a market-oriented, deregulated economic environment.

Political ideology has an influence on this variable, as left-wing and right-wing governments tend to pursue different economic policies. Although political ideology undeniably influences policy orientation (see Potrafke 2017), it is essential to distinguish between the two. For instance, some socialist parties, despite their left-leaning ideology stance, might adopt market-oriented policies and could be perceived as more market oriented by the state-market variable than other left parties. Similarly, radical right parties diverge from the typical market orientation associated with liberal parties and could be assigned lower values as regards the state-market variable.

The state market variable from Parl-Gov provides the basis for the construction of this index, which measures the degree of market regulation preferred from the cabinet in office for each year for 23 countries included in our dataset[37]. The construction of such an index has many challenges mostly by the formation of coalitions, the restructuring of the cabinet without elections and the adaptation of the index to an annual frequency.

If the government consists of a single party, then the state market index corresponding to that party will also correspond to the government. On the other hand, if the government consists of a coalition of parties, we first calculate the share of parliamentary seats held by each party in

[36] The initial data for the state marked variable comes from Benoit and Laver (2006), CHES (2010) and Bakker et al. (2015).

[37] The countries available for the state market are Australia, Austria, Belgium Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Slovakia, Spain, Sweeden, Switzerland, United Kingdom.

the coalition. We then calculate the weighted average of the state market index using as weights the shares of parliamentary seats in the governing coalition calculated in the first step.[38]

To mark the start of a new cabinet's term, we use the start date of its term, rather than the date of the election. This is because if there was a cabinet reshuffle without an election, the date of the election would not capture it, but the start of the new cabinet's term would capture it.

In addition, when elections are held within a year or there is a restructuring of the composition of the government (without elections), that year receives a weighted average of the index from the previous and the new government, depending on the number of months that each government was in office.[39]

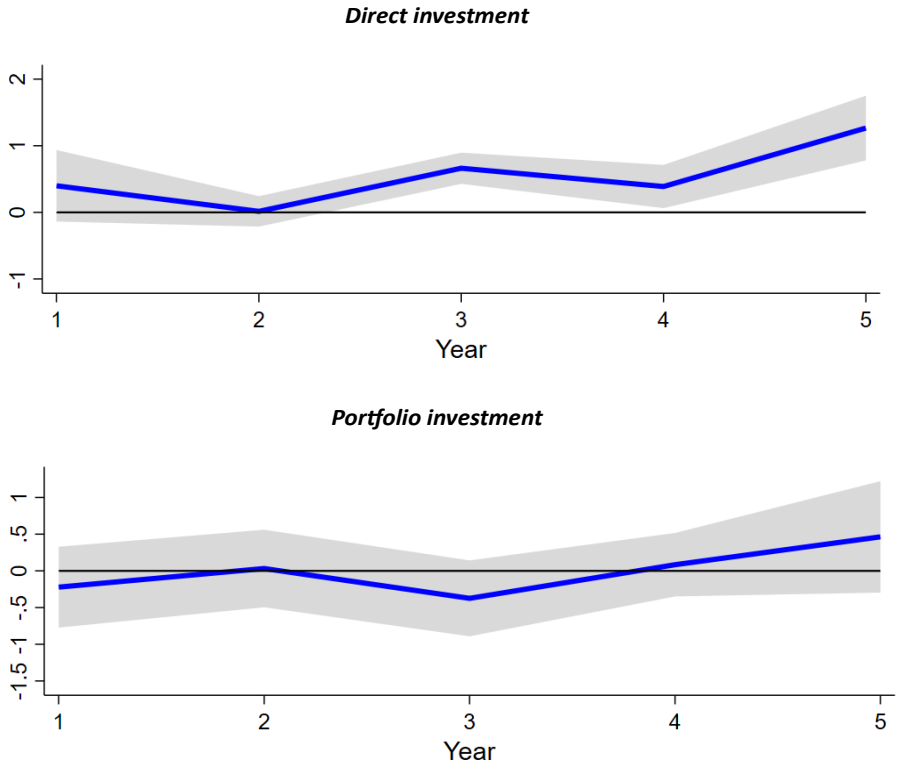
To assess the effect of the constructed state-market index on capital inflows, we employ the Jorda, (2005) simple LP method. Therefore, we estimate equation 1 with identical control variables, but instead of the reform variable R, we introduce the change in the state-market index. By focusing on changes in the index, rather than the index itself, we capture shifts in policy direction, which are crucial for understanding whether these can impact on capital flow.[40]

As displayed in Figure 8, when the government in office has a market-oriented agenda it can positively influence direct investment, which increase by about 1.5% of GDP 5 years after the change in policy orientation. This phenomenon could be attributed to the perception among investors that market-oriented governments are more likely to implement policies conducive to economic growth and financial market liberalization, which in turn enhances the profitability and attractiveness of direct investment. Furthermore, direct investment are typically more sensitive to economic policies due to their direct linkage with corporate earnings and growth prospects, compared to other investment that might be perceived as safer but offer lower returns (see e.g., Brewer, 1993; Scully, 2002; Mosley and Singer, 2008). This aligns with and reinforces our earlier observations regarding the positive impact of deregulation efforts on product and labor markets on investment flows, suggesting that structural reforms and government orientation towards the market economy play a crucial role in shaping direct investment patterns.

[38] Similarly, in the Bjørnskov (2008) index in order to account for varying degrees of influence on government policy, the ideology scores of each governing party are adjusted based on their proportional representation in parliament.
[39] Alternatively, in Potrafke (2010) years in which the government changed are labeled according to the government that was in office for the longer period. Adopting the approach of Potrafke (2010) had no effect on the results.
[40] Government policy orientation can significantly influence capital inflows, shaping the attractiveness of an economy to foreign investors. Studies such as Slesman et al. (2015) and Guichard (2017) underscore the role of political stability and policy predictability in attracting or deterring foreign capital. These papers suggest that countries favoring open markets, deregulation, private enterprise, and the quality of institutions tend to foster a more favorable environment for capital inflows.

Turing to portfolio investment, we find that a market-oriented cabinet has no particular effect over the forecast horizon – the effect on the 5-year horizon is positive but not statistically significant. Arguably, portfolio investment have a shorter term dimension than direct investment and are, therefore, less influenced by government views but more by the market returns they can earn.

Figure 8. The impact of policy orientation of the cabinet on direct and portfolio investment inflows.



Notes: The solid blue line depicts the impact of cabinet state-market index change on direct investment (upper panel) and portfolio investment (lower panel) based on equation 1 using the unweighted simple LP method. The shaded area indicates the 90% confidence interval using Spatial Correlation Consistent (SCC) standard errors. For detailed coefficients, see Tables A12-13, Appendix A.

7.1 Do government views affect the impact of reforms?

We next assess whether the policy orientation of a government (based on the constructed cabinet state-market index) affects the impact of reforms on capital inflows. Although it is known that the ideology of a government is directly linked to the implementation of reforms aimed at reducing the role of the state in the economy (see Potrafke, 2010), it is still not clear how this government ideology affects the results of structural reforms.

Therefore, we estimate:

$$x_{i,t+h}-x_{i,t-1} = F(z_{i,t})[\alpha_i^h + \gamma_t^h + \beta_{1j}^h \sum_{j=1}^{5}(x_{i,t-j} - x_{i,t-1-j}) + \beta_2^h R_{i,t} + \beta_{3j}^h \sum_{j=1}^{5} R_{i,t-j} + \beta_4^h \sum_{h=0}^{h} R_{i,t+h} + \beta_5^h C_{i,t-1}] + \varepsilon_{i,t+h} \quad (3)$$

With

$$F(z_{i,t}) = \frac{\exp(-\gamma z_{i,t})}{1+\exp(-\gamma z_{i,t})}, \gamma > 0 \quad (4)$$

Following Alesina et al., (2023) we use an exponential smooth transition function $F(.)$, (with $\gamma = 1.5$). A higher value of γ makes the transition from the minimum to maximum value of the function more abrupt, whereas a lower value results in a smaller more gradual transition. We opt for a low value of the parameter to ensure an even more gradual and smoother transition[41]. The variable $z_{i,t}$ is the standardized cabinet state-market index. So, when $F(z_{i,t}) = 1$ the respective cabinet is extremely market oriented, whereas when $F(z_{i,t}) = 0$ the respective cabinet is extremely state-market oriented. $C_{i,t-1}$ contains the same set of control variables as the baseline model.

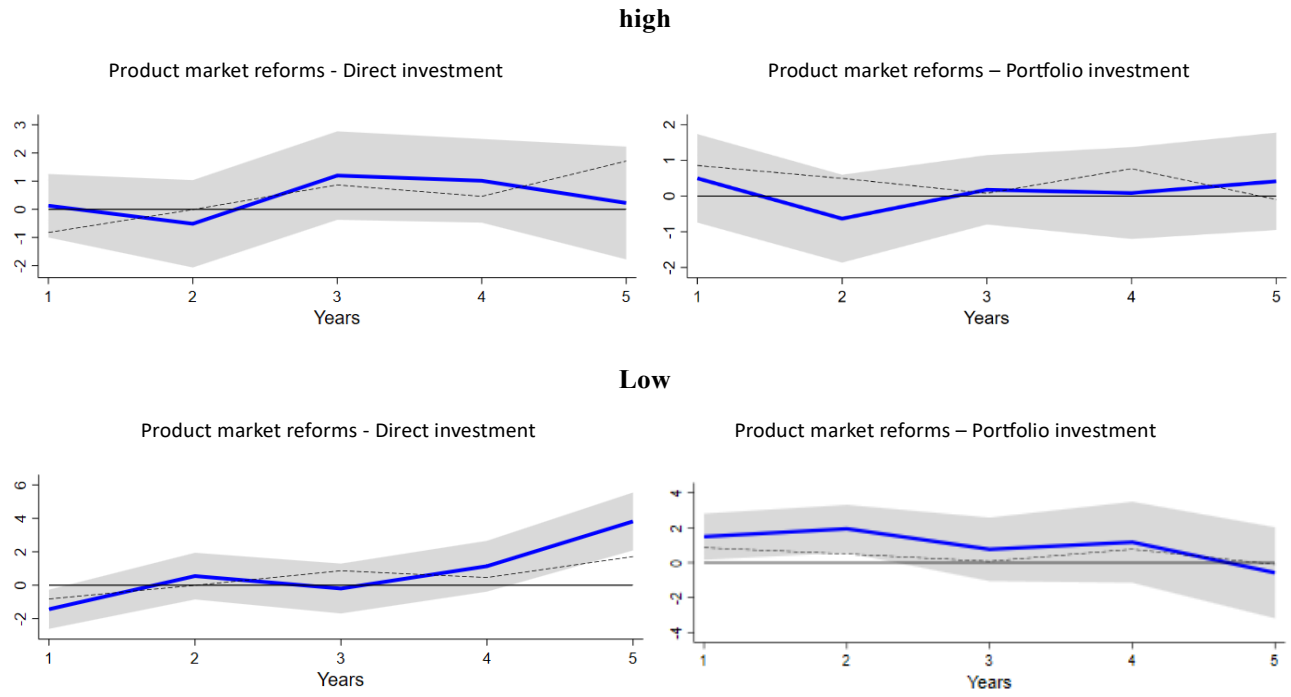
Note that the use of a smooth transition function offers several advantages when we examine the state-market index over a simple dummy variable (i.e., a dummy variable taking the value one if the state market index is above sample median and zero otherwise). Firstly, a smooth transition function allows for a more flexible modeling between variables by capturing gradual transitions and nonlinearities in the data. Unlike a binary dummy variable that assumes abrupt shifts between states, a smooth transition function provides a smaller continuous representation of changes. Additionally, they offer improved statistical efficiency and robustness by utilizing all available information from the state-market index, rather than relying solely on discrete state classifications from big changes.

Surprisingly, the medium-term impact of product market reforms on direct investment is more pronounced and statistically significant when the state-market index takes smaller values (see Figure 9). Similarly, product market reforms that are implemented by governments with a

[41] We conducted several sensitivity tests on the γ parameter, considering values from 1 to 1.8, and the results remain robust.

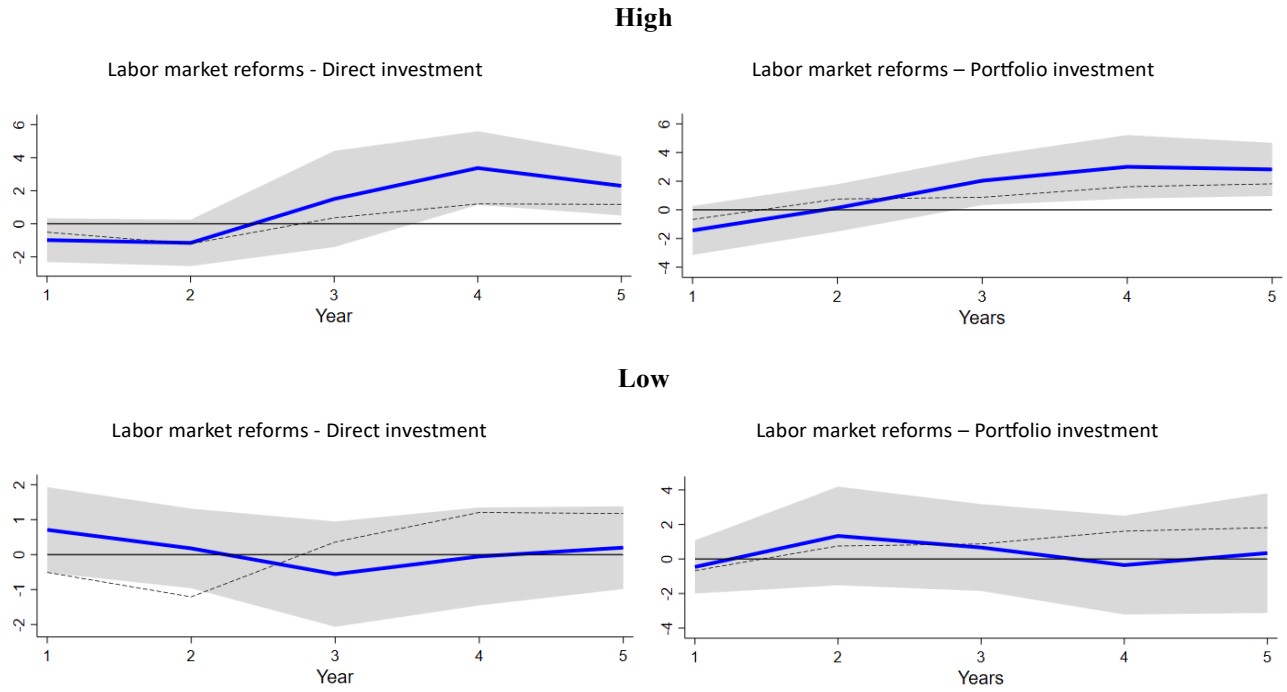
preference on a state rather than a market-economy can generate a positive and statistically significant impact effect on portfolio flows (which however returns to zero after the mid of period two). Therefore, if reforms aimed at product market deregulation are implemented by governments that have a more traditional state-oriented approach, then the positive impact on direct and portfolio investment will be significantly greater. The gains for direct investment will appear in the medium term, while the gain for portfolio investment will be in the short term. These results may stem from the fact that economies under heavier state control have greater untapped potential for efficiency gains through deregulation, thus offering more substantial scope for improving market dynamics and investment attractiveness. This aligns with the broader literature on economic reforms, which suggests that positive market reaction is particularly pronounced in settings where previous regulatory constraints have suppressed market functioning and investment flows (see e.g., Mosley and Singer, 2008; Brewer, 1993).

Figure 9. The impact of product market reforms on direct investment and portfolio investment in cases of high and low cabinet state-market index.



Notes: The solid blue line represents the (ATE- AIPW) impulse response of direct investment or portfolio investment following a product market reform in cases of higher (upper panel) and lower (lower panel) cabinet state-market index, as provided by equation 3. The thin dashed black line is the baseline (ATE- AIPW) impulse response as per equation 1. The shaded area indicates the 90% confidence interval using bootstrapped standard errors. For detailed coefficients, see Table A17 in Appendix A.

Figure 10. The impact of labor market reforms on direct investment and portfolio investment in cases of high and low cabinet state-market index.



Notes: The solid blue line represents the (ATE- AIPW) impulse response of direct investment or portfolio investment following a product market reform in cases of higher (upper panel) and lower (lower panel) cabinet state-market index, as provided by equation 3. The thin dashed black line is the baseline (ATE- AIPW) impulse response as per equation 1. The shaded area indicates the 90% confidence interval using bootstrapped standard errors. For detailed coefficients, see Table A17 in Appendix A.

Conversely, labor market deregulation reforms tend to attract direct investment predominantly when they are implemented by governments with a more market-oriented approach (see Figure 10). This alignment between the government's economic orientation and the nature of reforms suggests that market-oriented cabinets may be better placed to enact labor market reforms in a way that resonates with investor expectations and confidence. Such governments are often seen as more committed to creating flexible, efficient labor markets that favor business growth and innovation.

Reforms to deregulate the labor market tend to face challenges under state-oriented cabinets because of the inherent resistance to change and a historical commitment to protective labor regulations. These governments often have strong relationships with labor unions and a social preference for maintaining a high degree of regulation to ensure workers' rights and social welfare. Furthermore, a state-oriented government lack the ability to effectively communicate the potential benefits of deregulation to the economy and society, thereby reducing public and investor

confidence in the reforms, likely because they believe that they will not ultimately be implemented or that they will be reversed resulting in the failure of reforms.[42]

8. Conclusion

This article, based on the literature examining the determinants of capital inflows (such as De Santis and Lührmann (2009), Contractor et al., (2020), Campos and Kinoshita, (2010) Dellis et al., (2017), Cai et al., (2018), Chen et al., (2013), AVK, (2008)), highlights the importance of structural reforms in product and labor markets as factors that can encourage the inflow of direct and portfolio investment. We identify shocks associated with product and labor reforms based on the narrative database of Duval et al. (2018) and Wiese et al. (2024). The empirical analysis is based on Local Projections (LP) coupled with the Augmented Inverse Probability Weighting (AIPW) method (see Jorda and Taylor, 2016) to mitigate potential selection bias of reforms and ensure the robustness of our estimates.

Our findings underscore the favorable impact of product and labor market reforms on both direct and portfolio investment. While these reforms initially impact negatively on capital inflows, their effect turns positive and statistically significant over the medium-term. Additionally, reforms implemented in environments characterized by better financial institutions and lower public debt levels tend to attract higher capital inflows. Therefore, a sound macroeconomic environment combined with developed financial markets and institutions will help the reforms to bear fruit, that is, to strengthen competition in product markets and reduce regulation in labor markets. This has the effect of creating profitable investment opportunities at home thus contributing to the inflow of foreign capital in the form of foreign direct investment and portfolio investment.

As a robustness check we examine whether, in addition to reforms, a government's views on how much the economy should be controlled by the state affect capital inflows. To this end, we construct an index reflecting whether the cabinet in office is state- or market-oriented to examine the impact that a new market-oriented cabinet has on capital inflows. We find that cabinets that are newly elected and lean towards market liberalization tend to have a positive

[42] Political ideology (i.e., left, center, and right governments) does not seem to have any effect on the outcome of product market reforms. This suggests that investors are mainly influenced by a government's implemented policy rather than its ideology. Labor market reforms have positive effects on direct investment when implemented under right-wing governments and positive effects on portfolio investments under both left-wing and right-wing governments (see Appendix B).

effect on direct investment. This strengthens our previous findings regarding the favorable influence of market liberalization initiatives on direct investment flows and indicates that structural reforms and governmental commitment to market-oriented policies significantly influence investment dynamics. Furthermore, our analysis indicates that product market reforms are most effective under cabinets that prefer state intervention in the economy. Economies under heavier state control may possess greater untapped potential for efficiency gains through deregulation offering more room for investments. On the contrary, labor market reforms have a more significant positive effect on direct investment when implemented by market-oriented cabinets.

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Appendix A

Table A1. Balance test of covariates in treatment and control group.

	Difference in means			
	Product market reforms		**Labor market reforms**	
Real effective exchange rate (t-1)	-2.01**	(-2.17)	0.49	(0.08)
Financial development Index (t-1)	-0.06***	(-4.60)	-0.02	(-1.25)
Government debt (t-1)	2.37	(-0.12)	9.387**	(2.12)
Sovereign rating Index (t-1)	0.04	(0.18)	-0.49	(-1.34)
Chinn Ito Index	-0.002	(0.01)	0.003	(0.11)
Rule of law	-0.033	(0.63)	-0.0011	(-0.14)
GDP per capita growth (t-1)	0.01	(1.29)	-0.01	(-1.45)
Unemployment rate (t-1)	0.75**	(2.35)	1.62***	(3.23)
Long term interest rate (t-1)	1.76***	(6.45)	1.33***	(3.01)
Observations	796		796	

Note: Two tailed t test standard errors in parenthesis. ***/**/* Indicate p-value 0.01/0.05/0.10

Table A2. Post weighting balance test.

	Difference in means			
	Product market reforms		**Labor market reforms**	
Real effective exchange rate (t-1)	-1.94*	(-1.74)	-0.60	(-0.26)
Financial development Index (t-1)	- 0.007	(-0.43)	0.02	(0.74)
Government debt (t-1)	-4.92	(-1.26)	-3.91	(-0.59)
Sovereign rating Index (t-1)	0.06	(0.27)	0.44	(1.38)
Chinn Ito Index	-0.007	(0.04)	-0.017	(-0.44)
Rule of law	-.004	(-1.05)	0.005	(0.09)
GDP per capita growth (t-1)	0.05	(0.48)	0.004	(0.29)
Unemployment rate (t-1)	0.13	(0.22)	-0.17	(-0.29)
Long term interest rate (t-1)	0.59*	(1 .85)	0.48	(0.96)
Observations	796		796	

Note: Two tailed t test standard errors in parenthesis. ***/**/* Indicate p-value 0.01/0.05/0.10

Table A3. Correlation matrix of control variables

	1	2	3	4	5	6	7	8	9
1. Real effective exchange rate	1.000								
2 Chinn Ito index	-0.21	1.000							
3 Rule of law	-0.010	0.210	1.000						
4 Financial development Index	-0.044	0.331	0.338	1.000					

5 Sovereign rating	0.123	0.312	0.523	0.206	1.000				
6 Government debt as	-0.101	0.075	-0.306	0.000	-0.546	1.000			
7 GDP growth	0.143	-0.088	-0.025	-0.090	0.088	-0.174	1.000		
8 Unemployment rate	-0.215	0.008	-0.181	-0.168	-0.484	0.359	-0.142	1.000	
9 Long term interest rate	0.171	-0.476	-0.033	-0.483	-0.149	-0.075	0.160	0.183	1.000

Table A4. Descriptive statistics

Variables	Obs	Mean	Std. Dev.	Min	Max	Source
Liabilities of direct investments as % of GDP	796	3.269	7.659	-36.140	86.479	IMF IFS
Liabilities of portfolio investments as % of GDP	744	2.739	5.230	-22.863	57.292	IMF IFS
Real effective exchange rate	790	100.826	16.166	45.1	164.4	WORLD BANK
Financial development Index	796	.649	.186	.164	1	IMF
Government debt as % of GDP	767	56.06	37.888	6.068	226.115	IMF, OECD
Sovereign rating index	744	18.777	3.104	2.842	21	Kose et al., (2022)
Chinn Ito Index	779	.869	.241	.163	1	Chinn and Ito (2008)
Rule of law	796	.957	.061	.392	.999	V-Dem
GDP growth rate	769	2.15	2.971	-11.167	24.475	WORLD BANK
Unemployment rate	789	7.439	4.16	.6	27.825	IMF IFS
Long term interest rate	752	5.119	3.702	-.524	22.497	OECD
Human capital	771	3.201	.392	1.799	3.849	PWT 10.01
All-House	796	.221	.415	0	1	DPI (2020)
Years in office	795	3.834	2.69	1	16	DPI (2020)
Government ideology	746	1.808	1.024	0	3	DPI (2020)
KOF Globalization Index	796	79.564	8.373	46.01	91.31	ETH Zürich
Inflation rate	796	2.937	3.483	-4.478	31.995	WORLD BANK
Trade openness	796	74.552	37.744	16.604	252.495	OECD
Gini disposable	784	29.287	3.911	19.1	38.8	SWIID
Tax revenue as % of GDP	794	34.573	7.191	15.231	50.286	WORLD BANK
Short term interest rate	762	4.259	4.396	-.819	31.025	OECD
Gross capital formation as % of GDP	796	23.804	4.568	11.892	54.775	PWT 10.01
Output gap	775	-.353	2.747	-10.349	7.681	OECD
Labor force participation rate	783	73.548	6.352	57.583	87.371	PWT 10.01
Elections	794	.364	.481	0	1	ParlGov
OECD PMR strictness Index	760	2.672	1.409	.54	5.686	OECD
OECD EPL regular workers Index	768	2.194	.984	.093	5	OECD
EU member	796	.585	.493	0	1	Own calculations

Table A5. Marginal effects of predictors on product and labor market reform treatment

VARIABLES	(1) Product Market	(2) Labor Market
GDP growth (t-1)	0.082	-0.103
	(0.611)	(0.787)
GDP growth (t-2)	-0.503	0.519
	(0.566)	(0.922)

GDP growth (t-3)	-0.689	-0.758
	(0.616)	(0.581)
Outputgap (t-1)	-0.011	0.030
	(0.057)	(0.065)
Short term interest rate (t-1)	-0.111	-0.276
	(0.291)	(0.335)
Inflation rate (t-1)	-0.061	0.076
	(0.040)	(0.062)
Cyclically adjusted primary balance (t-1)	-0.045**	0.028**
	(0.019)	(0.012)
Taylor rule residuals (t-1)	0.048	0.287
	(0.271)	(0.337)
Trade openness (t-1)	-0.024	-0.027
	(0.002)	(0.002)
Tax revenue (t-1)	-0.015	-0.027
	(0.019)	(0.022)
Gini disposable (t-1)	-0.023	-0.057
	(0.042)	(0.049)
Human capital (t-1)	0.031	-0.242
	(0.364)	(0.273)
KOF globalization Index (t-1)	0.055***	-0.008
	(0.018)	(0.017)
All house (t-1)	0.162	0.064
	(0.192)	(0.175)
Years in offcice (t-1)	0.010	-0.033
	(0.022)	(0.0281)
Elections (t-1)	0.037	-0.291*
	(0.150)	(0.169)
Government ideology	-0.008	-0.011
	0.013	0.100
Government debt (t-1)	-0.002	0.001
	(0.001)	(0.002)
Labor force participation rate (t-1)	-0.036**	
	(0.015)	
OECD PMR strictness Index (t-1)	-0.933**	
	(0.401)	
OECD PMR strictness Index (t-2)	0.980***	
	(0.380)	
Product market reform (t-1)	-0.140	
	(0.146)	
Product market reform (t-2)	0.021	
	(0.121)	
Employment rate (t-1)		-0.228***
		(0.083)
Employment rate (t-2)		0.211***
		(0.077)
OECD EPL regular workers Index (t-1)		0.419
		(0.872)
OECD EPL regular workers Index (t-2)		-0.125
		(0.817)
Labor market reform (t-1)		-0.145
		(0.229)
Labor market reform (t-2)		0.076
		(0.183)
EU member (t-1)	0.041	0.177
	(0.213)	(0.361)
TIME	-0.105***	-0.075***
	(0.032)	(0.028)
Area under ROC curve	0.8130	0.781
Observations	669	677

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Graph A1. Overlap of propensity scores for treatment and control group

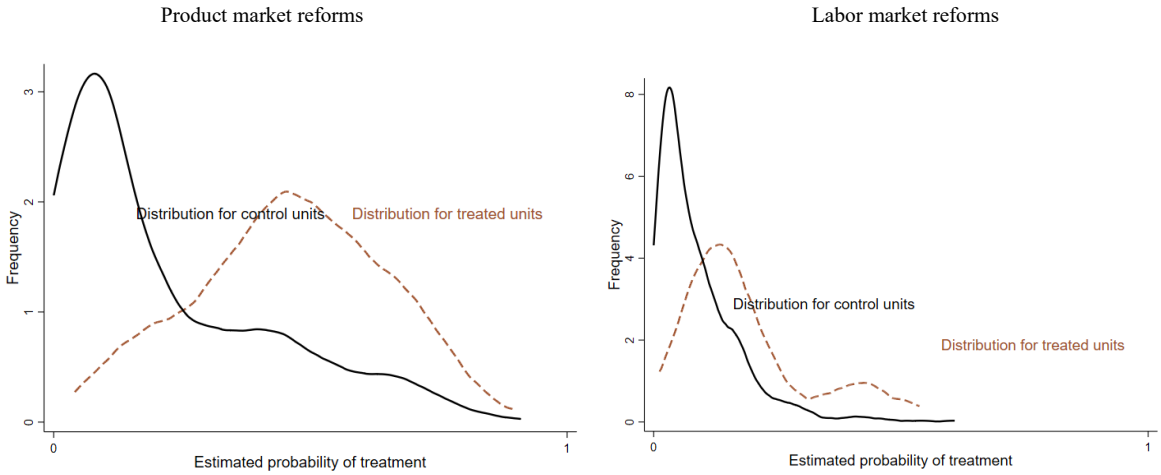
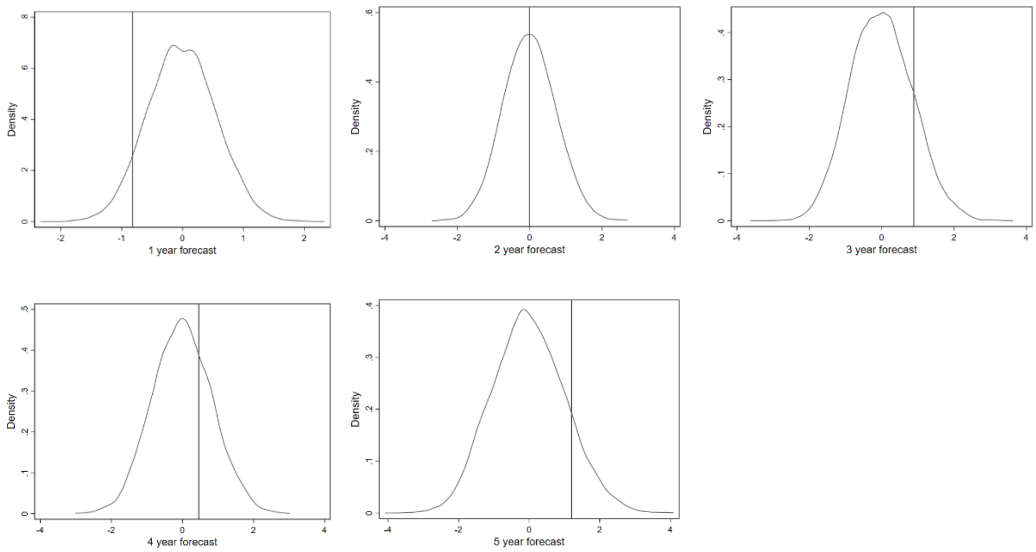
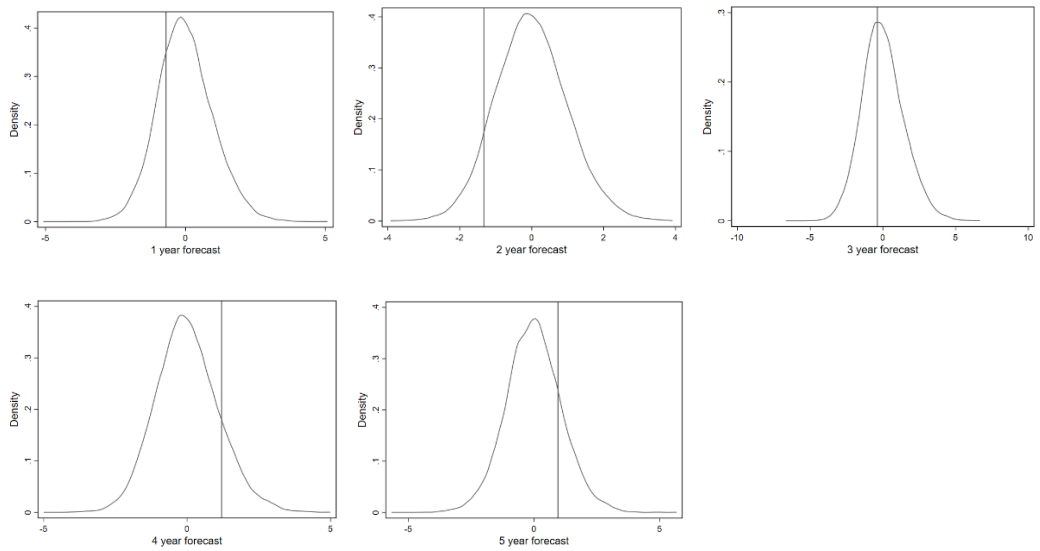


Figure A1. Distribution of the coefficients of unconditional ATEs of placebo product market reforms on direct investment.



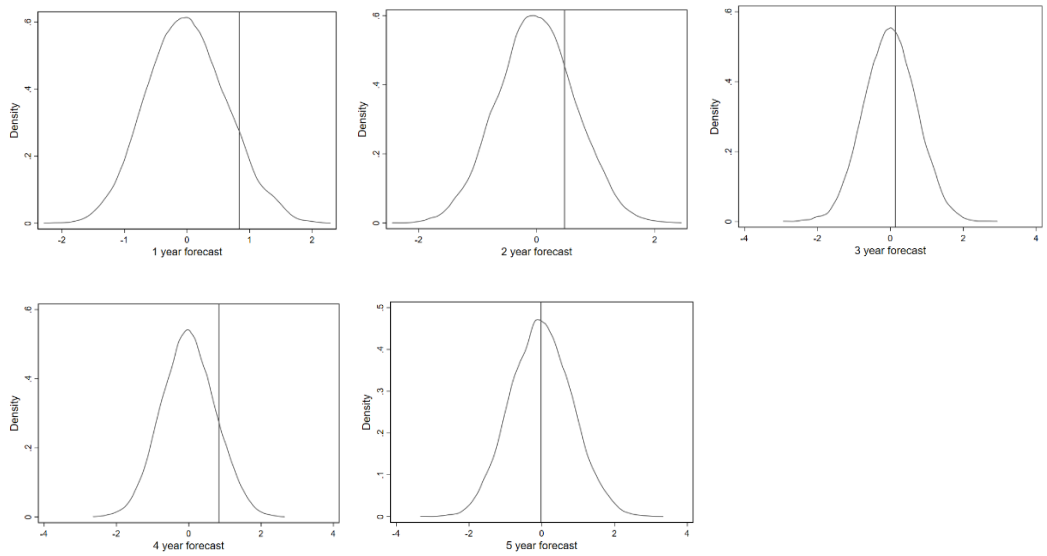
Notes: This figure illustrates the distribution of coefficients representing the unconditional Average Treatment Effects (ATEs) of randomly generated product market reforms on direct investments. The simulations rely on the Augmented Inverse Probability Weighting (AIPW) approach used in Table A14 and Figure 2 in the main text. The thin vertical line denotes the ATE derived from the main analysis using actual product market reforms. All simulations are based on 10,000 replications. The placebo product market reforms are generated from a binomial distribution with a 30% probability of success, mirroring the proportion of actual product market reforms observed in our sample.

Figure A2. Distribution of the coefficients of unconditional ATEs of placebo labor market reforms on direct investment.



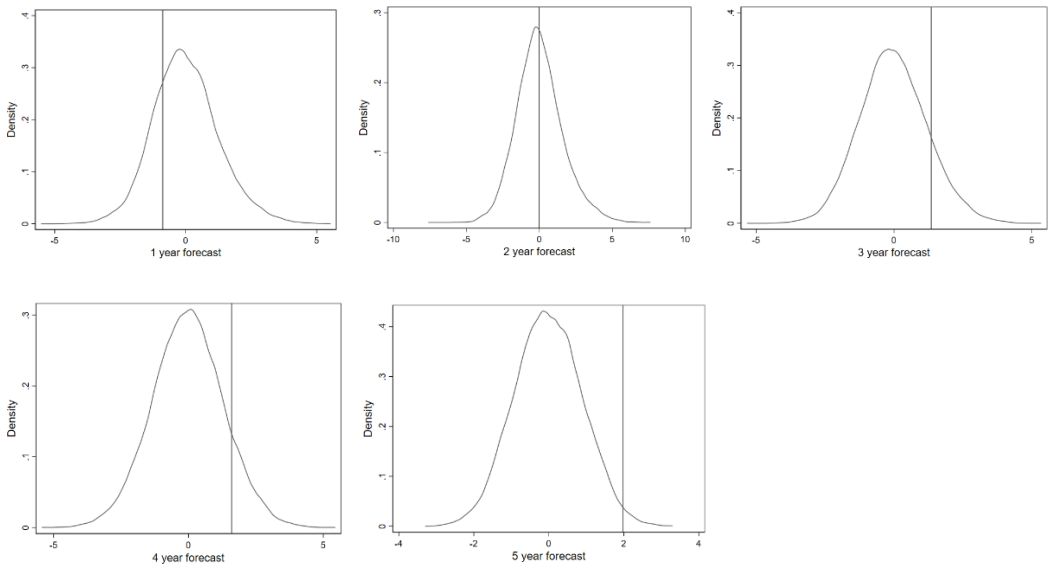
Notes: This figure illustrates the distribution of coefficients representing the unconditional Average Treatment Effects (ATEs) of randomly generated labor market reforms on direct investments. The simulations rely on the Augmented Inverse Probability Weighting (AIPW) approach used in Table A14 and Figure 2 in the main text. The thin vertical line denotes the ATE derived from the main analysis using actual labor market reforms. All simulations are based on 10,000 replications. The placebo labor market reforms are generated from a binomial distribution with a 10% probability of success, mirroring the proportion of actual product market reforms observed in our sample.

Figure A3. Distribution of the coefficients of unconditional ATEs of placebo product market reforms on portfolio investment.



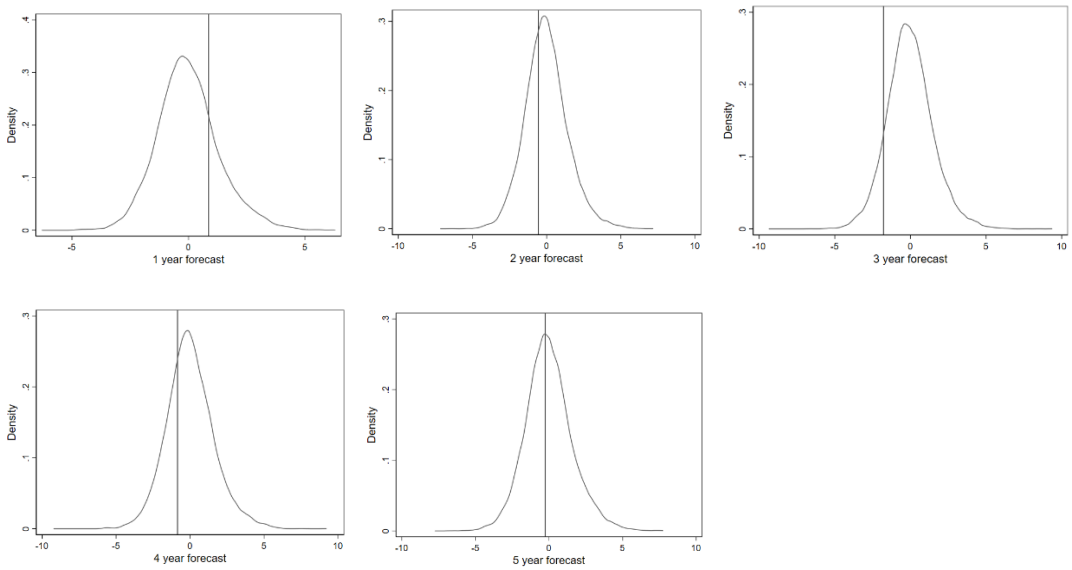
Notes: This figure illustrates the distribution of coefficients representing the unconditional Average Treatment Effects (ATEs) of randomly generated product market reforms on portfolio investments. The simulations rely on the Augmented Inverse Probability Weighting (AIPW) approach used in Table A14 and Figure 2 in the main text. The thin vertical line denotes the ATE derived from the main analysis using actual product market reforms. All simulations are based on 10,000 replications. The placebo product market reforms are generated from a binomial distribution with a 30% probability of success, mirroring the proportion of actual product market reforms observed in our sample.

Figure A4. Distribution of the coefficients of unconditional ATEs of placebo labor market reforms on portfolio investment.



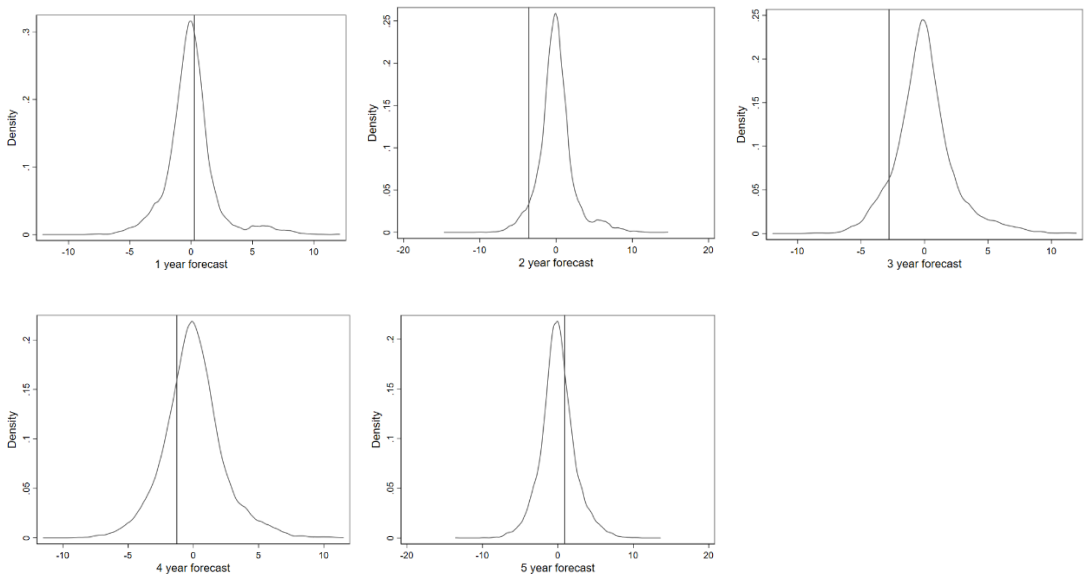
Notes: This figure illustrates the distribution of coefficients representing the unconditional Average Treatment Effects (ATEs) of randomly generated labor market reforms on portfolio investments. The simulations rely on the Augmented Inverse Probability Weighting (AIPW) approach used in Table A14 and Figure 2 in the main text. The thin vertical line denotes the ATE derived from the main analysis using actual labor market reforms. All simulations are based on 10,000 replications. The placebo labor market reforms are generated from a binomial distribution with a 10% probability of success, mirroring the proportion of actual product market reforms observed in our sample.

Figure A5. Distribution of the coefficients of unconditional ATEs of placebo joint counter on direct investment.



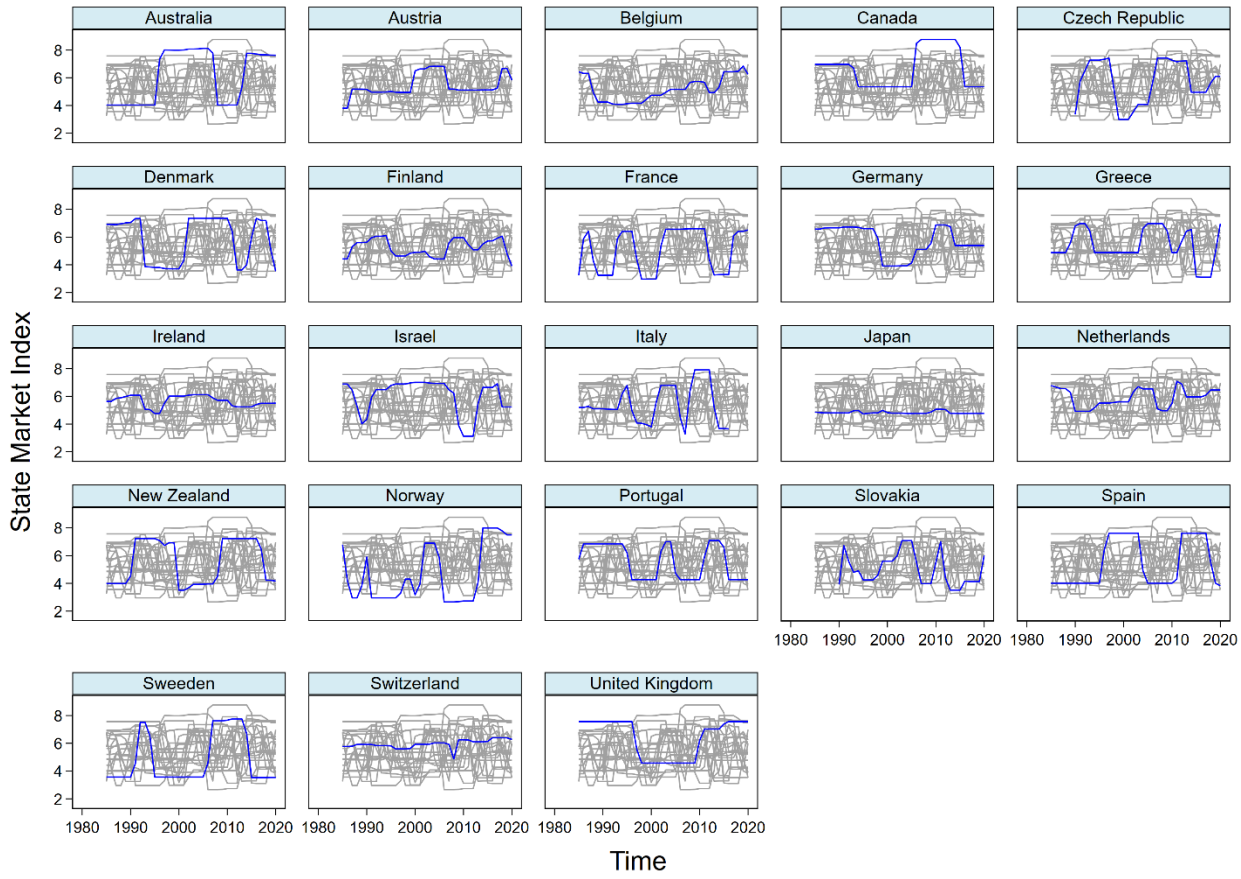
Notes: This figure illustrates the distribution of coefficients representing the unconditional Average Treatment Effects (ATEs) of randomly generated joint counter reforms on direct investments. The simulations rely on the Augmented Inverse Probability Weighting (AIPW) approach used in Table A11 and Figure 3 in the main text. The thin vertical line denotes the ATE derived from the main analysis using actual joint counter reforms. All simulations are based on 10,000 replications. The placebo joint counter reforms are generated from a binomial distribution with a 5% probability of success, mirroring the proportion of actual joint counter reforms observed in our sample.

Figure A6. Distribution of the coefficients of unconditional ATEs of placebo joint counter on portfolio investment.



Notes: This figure illustrates the distribution of coefficients representing the unconditional Average Treatment Effects (ATEs) of randomly generated joint counter reforms on portfolio investments. The simulations rely on the Augmented Inverse Probability Weighting (AIPW) approach used in Table A10 and Figure 3 in the main text. The thin vertical line denotes the ATE derived from the main analysis using actual joint counter reforms. All simulations are based on 10,000 replications. The placebo joint counter reforms are generated from a binomial distribution with a 5% probability of success, mirroring the proportion of actual joint counter reforms observed in our sample.

Graph A2. The constructed cabinet state market for the countries available in our sample.



Notes: The blue line represents the value of the cabinet state-market index for the country presented, the light grey lines in the background denote the values for the remaining countries.

Table A6. The impact of product market reforms on direct investment using the simple unweighted LP.

	Year 1	Year 2	Year 3	Year 4	Year 5
Direct investment (t-1)	-0.711***	-0.899***	-1.190***	-1.128***	-0.820***
	(0.108)	(0.090)	(0.169)	(0.121)	(0.101)
Direct investment (t-2)	-0.019	-0.265	-0.042	0.232**	-0.159
	(0.030)	(0.196)	(0.087)	(0.078)	(0.132)
Direct investment (t-3)	-0.227	-0.028	0.265***	-0.094	0.240*
	(0.182)	(0.086)	(0.065)	(0.131)	(0.098)
Direct investment (t-4)	0.011	0.252**	-0.044	0.250	0.056
	(0.099)	(0.082)	(0.095)	(0.130)	(0.056)
Direct investment (t-5)	0.215	0.013	-0.041	-0.141	-0.117
	(0.118)	(0.108)	(0.137)	(0.097)	(0.118)
Chinn Ito Index (t-1)	-0.717	-1.302	-1.806	-0.844	0.558
	(2.162)	(2.372)	(2.767)	(3.090)	(3.579)
Unemployment (t-1)	0.094	0.302*	0.349**	0.421*	0.376
	(0.151)	(0.110)	(0.103)	(0.198)	(0.223)
Government debt (t-1)	0.071**	0.076**	0.054*	0.013	-0.025
	(0.025)	(0.027)	(0.024)	(0.023)	(0.031)
Sovereign rating (t-1)	0.281	0.632**	0.822***	1.066**	1.130*
	(0.186)	(0.217)	(0.213)	(0.336)	(0.413)
Rule of law (t-1)	-8.093	-3.097	-17.622	-14.131	11.595
	(10.950)	(9.103)	(14.120)	(12.995)	(16.904)
Financial development (t-1)	3.742	6.554	3.511	4.182	2.847
	(3.134)	(4.379)	(5.368)	(5.098)	(5.357)
GDP growth (t-1)	-0.220	-0.023	-0.431*	-0.404**	-0.244
	(0.186)	(0.133)	(0.178)	(0.111)	(0.140)
Real effective exchange rate (t-1)	0.060**	0.058**	0.046*	0.029	0.022
	(0.021)	(0.016)	(0.020)	(0.021)	(0.019)
Long term interest rate (t-1)	0.300	0.502*	0.596**	0.606**	0.741*
	(0.177)	(0.206)	(0.168)	(0.200)	(0.292)
Product market reform	-0.497	-0.315	0.6505	0.423	0.898*
	(0.499)	(0.697)	(0.598)	(0.462)	(0.465)
Time Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Country Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5
Pesaran CD test statistic	6.19	6.26	4.62	3.45	-3.75
N	597	573	550	526	502

Notes: Estimations are based on equation (1). The Pesaran (2015) test for cross-sectional dependence is conducted on the disturbances from a model with standard errors clustered at the country level. The tests indicate spatial dependence in the errors. Spatial correlation consistent standard errors are therefore shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Table A7. The impact of labor market reforms on direct investment using the simple unweighted LP

	Year 1	Year 2	Year 3	Year 4	Year 5
Direct investment (t-1)	-0.888***	-1.188***	-1.114***	-0.818***	-1.017***
	(0.060)	(0.172)	(0.123)	(0.125)	(0.066)
Direct investment (t-2)	-0.267	-0.038	0.236	-0.160	0.180**
	(0.178)	(0.069)	(0.133)	(0.094)	(0.048)
Direct investment (t-3)	-0.032	0.266*	-0.115	0.242**	0.082*
	(0.050)	(0.118)	(0.085)	(0.086)	(0.035)
Direct investment (t-4)	0.249*	-0.055	0.242**	0.051	-0.057
	(0.094)	(0.090)	(0.085)	(0.086)	(0.118)
Direct investment (t-5)	0.001	-0.041	-0.118	-0.122	-0.056
	(0.163)	(0.072)	(0.120)	(0.130)	(0.187)
Chinn Ito Index (t-1)	-0.811	-0.627	0.413	1.933	3.727
	(3.493)	(4.640)	(4.972)	(4.274)	(4.752)
Unemployment (t-1)	0.329	0.333	0.366	0.299	0.088
	(0.212)	(0.198)	(0.330)	(0.362)	(0.218)
Government debt (t-1)	0.086*	0.066	0.024	-0.016	-0.029
	(0.039)	(0.040)	(0.040)	(0.044)	(0.040)
Sovereign rating (t-1)	0.712*	0.867	1.170	1.176	0.605
	(0.336)	(0.444)	(0.697)	(0.813)	(0.407)
Rule of law (t-1)	1.216	-9.756	-4.531	20.621	29.184
	(13.218)	(20.654)	(25.481)	(24.107)	(22.512)
Financial development (t-1)	7.745	4.026	4.973	3.500	5.246
	(7.515)	(7.123)	(6.954)	(7.536)	(7.006)
GDP growth (t-1)	-0.058	-0.458	-0.461	-0.260	-0.015
	(0.206)	(0.299)	(0.313)	(0.222)	(0.161)
Real effective exchange rate (t-1)	0.057	0.050	0.023	0.016	0.031
	(0.029)	(0.027)	(0.034)	(0.039)	(0.038)
Long term interest rate (t-1)	0.556	0.584	0.543	0.674	0.577
	(0.313)	(0.408)	(0.366)	(0.400)	(0.347)
Labor market reform	-0.956*	-1.749***	-0.020	1.355	1.337*
	(0.557)	(0.612)	(0.977)	(1.067)	(0.669)
Time Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Country Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5
Pesaran CD test statistic	7.48	6.24	5.70	3.25	-3.13
N	600	576	553	529	505

Notes: Estimations are based on equation (1). The Pesaran (2015) test for cross-sectional dependence is conducted on the disturbances from a model with standard errors clustered at the country level. The tests indicate spatial dependence in the errors. Spatial correlation consistent standard errors are therefore shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Table A8 . The impact of product market reforms on portfolio investment using the simple unweighted LP.

	Year 1	Year 2	Year 3	Year 4	Year 5
Portfolio investment (t-1)	-0.925***	-1.080***	-0.945***	-1.319***	-1.279***
	(0.229)	(0.144)	(0.125)	(0.130)	(0.200)
Portfolio investment (t-2)	0.002	-0.048	-0.210	-0.265	-0.784***
	(0.042)	(0.080)	(0.119)	(0.149)	(0.174)
Portfolio investment (t-3)	-0.012	-0.227	-0.218	-0.725***	0.575*
	(0.114)	(0.118)	(0.109)	(0.145)	(0.274)
Portfolio investment (t-4)	-0.155	-0.234*	-0.714**	0.633**	-0.264
	(0.101)	(0.102)	(0.219)	(0.198)	(0.318)
Portfolio investment (t-5)	-0.589*	-0.460*	0.381	-0.468*	0.026
	(0.260)	(0.182)	(0.290)	(0.220)	(0.243)
Chinn Ito Index (t-1)	3.736	4.371	5.186	5.620	6.785
	(7.722)	(5.971)	(5.912)	(7.502)	(10.606)
Unemployment (t-1)	0.160	0.200	-0.095	-0.017	-0.298
	(0.205)	(0.251)	(0.243)	(0.238)	(0.217)
Government debt (t-1)	-0.019	-0.035	-0.025	-0.017	-0.048
	(0.053)	(0.055)	(0.039)	(0.036)	(0.044)
Sovereign rating (t-1)	1.329	1.519	1.126	1.465	0.344
	(0.845)	(0.944)	(1.080)	(1.295)	(1.228)
Rule of law (t-1)	5.263	15.793	18.758	27.948	-1.497
	(17.654)	(22.379)	(25.994)	(39.309)	(45.200)
Financial development (t-1)	27.571*	32.572*	22.176*	15.523	1.487
	(11.169)	(14.206)	(9.909)	(10.604)	(10.312)
GDP growth (t-1)	-0.185	-0.029	-0.063	0.221	0.053
	(0.459)	(0.220)	(0.230)	(0.276)	(0.298)
Real effective exchange rate (t-1)	0.064	0.013	-0.024	-0.001	-0.016
	(0.048)	(0.040)	(0.031)	(0.042)	(0.036)
Long term interest rate (t-1)	0.464	0.593	0.673	0.623	0.232
	(0.381)	(0.426)	(0.595)	(0.896)	(1.014)
Product market reform	1.571**	1.218**	1.952	0.997*	0.334
	(0.608)	(0.534)	(1.309)	(0.544)	(1.029)
Time Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Country Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5
Pesaran CD test statistic	4.95	5.06	3.41	3.27	3.47
N	590	566	542	518	494

Notes: Estimations are based on equation (1). The Pesaran (2015) test for cross-sectional dependence is conducted on the disturbances from a model with standard errors clustered at the country level. The tests indicate spatial dependence in the errors. Spatial correlation consistent standard errors are therefore shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Table A9. The impact of labor market reforms on portfolio investment using the simple unweighted LP.

	Year 1	Year 2	Year 3	Year 4	Year 5
Portfolio investment (t-1)	-1.070***	-0.946***	-1.320***	-1.290***	-1.879***
	(0.043)	(0.044)	(0.044)	(0.049)	(0.081)
Portfolio investment (t-2)	-0.045	-0.215***	-0.265***	-0.800***	0.621***
	(0.041)	(0.041)	(0.044)	(0.081)	(0.091)
Portfolio investment (t-3)	-0.227***	-0.218***	-0.730***	0.567***	-0.317***
	(0.041)	(0.044)	(0.071)	(0.084)	(0.089)
Portfolio investment (t-4)	-0.228***	-0.720***	0.633***	-0.249**	0.094
	(0.043)	(0.072)	(0.078)	(0.086)	(0.097)
Portfolio investment (t-5)	-0.454***	0.373***	-0.471***	0.004	0.147
	(0.061)	(0.070)	(0.070)	(0.079)	(0.084)
Chinn Ito Index (t-1)	5.413	4.236	6.351	6.565	3.589
	(4.416)	(4.523)	(4.626)	(5.153)	(5.542)
Unemployment (t-1)	0.144	-0.060	-0.091	-0.337	-0.495
	(0.261)	(0.269)	(0.275)	(0.309)	(0.336)
Government debt (t-1)	-0.020	-0.017	-0.010	-0.053	-0.083
	(0.038)	(0.040)	(0.041)	(0.046)	(0.050)
Sovereign rating (t-1)	1.588***	1.360**	1.521**	0.478	-0.407
	(0.466)	(0.490)	(0.521)	(0.601)	(0.692)
Rule of law (t-1)	21.228	22.236	35.991	3.118	10.267
	(39.865)	(41.374)	(44.009)	(49.485)	(55.753)
Financial development (t-1)	33.906***	24.932*	18.054	2.279	-5.359
	(10.051)	(10.276)	(10.453)	(11.674)	(12.617)
GDP growth (t-1)	-0.050	-0.100	0.166	0.045	-0.136
	(0.239)	(0.240)	(0.238)	(0.262)	(0.312)
Real effective exchange rate (t-1)	0.001	-0.033	-0.015	-0.019	-0.060
	(0.047)	(0.048)	(0.049)	(0.054)	(0.058)
Long term interest rate (t-1)	0.425	0.647	0.497	0.211	0.122
	(0.340)	(0.348)	(0.354)	(0.395)	(0.436)
Labor market reform	-0.744	1.765	0.080	0.064	0.778
	(1.045)	(1.317)	(0.709)	(0.963)	(1.539)
Time Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Country Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5
Pesaran CD test statistic	4.51	4.63	3.30	2.95	2.67
N	590	566	542	518	494

Notes: Estimations are based on equation (1). The Pesaran (2015) test for cross-sectional dependence is conducted on the disturbances from a model with standard errors clustered at the country level. The tests indicate spatial dependence in the errors. Spatial correlation consistent standard errors are therefore shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Table A10. The impact of joint counter reforms on portfolio investment using the simple unweighted LP.

	Year 1	Year 2	Year 3	Year 4	Year 5
Portfolio investment (t-1)	-0.489***	-0.589***	-1.055***	-1.526***	-2.066***
	(0.054)	(0.067)	(0.070)	(0.074)	(0.095)
Portfolio investment (t-2)	0.148*	-0.156*	-0.393***	-0.756***	-0.102
	(0.058)	(0.072)	(0.078)	(0.093)	(0.127)
Portfolio investment (t-3)	-0.284***	-0.364***	-0.745***	0.072	-0.094
	(0.060)	(0.074)	(0.091)	(0.113)	(0.161)
Portfolio investment (t-4)	-0.514***	-0.590***	0.203	-0.272	-0.034
	(0.072)	(0.088)	(0.109)	(0.148)	(0.173)
Portfolio investment (t-5)	-0.037	0.157	-0.617***	-0.572***	-0.617**
	(0.079)	(0.098)	(0.118)	(0.146)	(0.219)
Chinn Ito Index (t-1)	4.960	9.568*	4.951	5.062	9.378
	(3.862)	(4.765)	(5.142)	(5.239)	(5.844)
Unemployment (t-1)	0.091	0.217	0.161	-0.172	-0.373
	(0.214)	(0.265)	(0.289)	(0.306)	(0.358)
Government debt (t-1)	-0.005	0.006	0.050	0.157**	0.122
	(0.035)	(0.043)	(0.048)	(0.053)	(0.063)
Sovereign rating (t-1)	0.539	1.931**	3.074***	3.259***	1.942
	(0.554)	(0.684)	(0.844)	(0.905)	(1.036)
Rule of law (t-1)	-3.331	21.968	2.934	27.232	39.735
	(38.159)	(47.073)	(50.190)	(51.488)	(58.007)
Financial development (t-1)	18.251*	20.920*	27.786**	11.524	0.981
	(7.781)	(9.599)	(10.316)	(10.565)	(12.137)
GDP growth (t-1)	0.243	-0.310	-0.562*	-0.632*	-0.513
	(0.202)	(0.249)	(0.266)	(0.279)	(0.331)
Real effective exchange rate (t-1)	0.066	-0.021	-0.062	-0.071	0.024
	(0.040)	(0.049)	(0.056)	(0.060)	(0.072)
Long term interest rate (t-1)	-0.471	-0.537	-0.900	0.017	1.942*
	(0.476)	(0.587)	(0.654)	(0.696)	(0.774)
Joint Counter reforms	0.251	-3.586**	-2.791**	-1.287	0.930
	(0.950)	(1.716)	(1.297)	(0.972)	(0.998)
Time Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Country Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5
Pesaran CD test statistic	-3.32	-2.43	-2.17	-0.93	-2.55
N	441	440	416	391	366

Notes: Estimations are based on equation (1). The Pesaran (2015) test for cross-sectional dependence is conducted on the disturbances from a model with standard errors clustered at the country level. The tests indicate spatial dependence in the errors. Spatial correlation consistent standard errors are therefore shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1·

Table A11. The impact of joint counter reforms on direct investment using the simple unweighted LP.

	Year 1	Year 2	Year 3	Year 4	Year 5
Direct investment (t-1)	0.117	-0.908***	-0.998***	-1.042***	-0.788***
	(0.062)	(0.149)	(0.130)	(0.093)	(0.105)
Direct investment (t-2)	-0.051	-0.042	-0.062	0.195*	0.082
	(0.121)	(0.163)	(0.047)	(0.077)	(0.102)
Direct investment (t-3)	-0.057	-0.069	0.191*	0.143	-0.062
	(0.062)	(0.053)	(0.077)	(0.121)	(0.076)
Direct investment (t-4)	-0.163	0.239***	0.209	0.008	0.107
	(0.099)	(0.061)	(0.111)	(0.078)	(0.187)
Direct investment (t-5)	0.142	0.194	-0.009	-0.024	-0.124
	(0.091)	(0.094)	(0.083)	(0.180)	(0.127)
Chinn Ito Index (t-1)	-2.075	-0.425	-1.683	-3.297	-4.749
	(1.794)	(2.678)	(2.934)	(3.214)	(3.315)
Unemployment (t-1)	0.106	0.314	0.213	-0.054	-0.155
	(0.184)	(0.159)	(0.166)	(0.279)	(0.246)
Government debt (t-1)	0.046	0.041	0.028	0.028	0.027
	(0.040)	(0.033)	(0.037)	(0.037)	(0.031)
Sovereign rating (t-1)	-0.433	-0.002	0.058	-0.438	-0.328
	(0.564)	(0.343)	(0.431)	(0.213)	(0.242)
Rule of law (t-1)	-25.346	0.897	-18.645	-36.779	-13.032
	(12.976)	(11.730)	(17.677)	(25.185)	(24.163)
Financial development (t-1)	5.191	8.960	5.635	-2.932	-5.383
	(8.861)	(4.429)	(4.486)	(7.366)	(8.874)
GDP growth (t-1)	-0.226	0.029	-0.199	-0.348	-0.421*
	(0.178)	(0.131)	(0.204)	(0.249)	(0.198)
Real effective exchange rate (t-1)	0.051	0.097***	0.070***	0.050	0.033
	(0.029)	(0.020)	(0.016)	(0.033)	(0.037)
Long term interest rate (t-1)	-0.182	0.328	-0.116	-0.389	0.402
	(0.228)	(0.293)	(0.356)	(0.392)	(0.359)
Joint Counter reforms	0.856	-0.432	-1.636**	-0.750	-0.255
	(0.612)	(0.763)	(0.734)	(0.858)	(1.105)
Time Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Country Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5
Pesaran CD test statistic	3.32	3.25	3.47	12.04	0.27
N	432	408	384	359	336

Notes: Estimations are based on equation (1). The Pesaran (2015) test for cross-sectional dependence is conducted on the disturbances from a model with standard errors clustered at the country level. The tests indicate spatial dependence in the errors in some horizons. Spatial correlation consistent standard errors are therefore shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Table A12. The impact of the change of cabinet state-market index on direct investment using the simple unweighted LP.

	Year 1	Year 2	Year 3	Year 4	Year 5
Direct investment (t-1)	-0.008	-0.111	0.029	0.017	-0.022
	(0.047)	(0.055)	(0.032)	(0.043)	(0.056)
Direct investment (t-2)	-0.118***	0.004	-0.033	-0.028	-0.086
	(0.023)	(0.043)	(0.047)	(0.061)	(0.097)
Direct investment (t-3)	0.112*	0.052	0.043	-0.048	0.039
	(0.041)	(0.049)	(0.092)	(0.077)	(0.104)
Direct investment (t-4)	-0.059**	-0.092	-0.104	-0.013	0.012
	(0.018)	(0.053)	(0.090)	(0.102)	(0.095)
Direct investment (t-5)	-0.021	0.053	0.198	0.189	0.087
	(0.021)	(0.065)	(0.112)	(0.094)	(0.117)
Chinn Ito Index (t-1)	1.178	0.603	-1.443	-0.703	-0.318
	(1.905)	(2.965)	(3.542)	(4.559)	(5.409)
Unemployment (t-1)	0.060	0.209*	0.199	0.189	0.258
	(0.118)	(0.099)	(0.149)	(0.156)	(0.265)
Government debt (t-1)	0.021	0.062**	0.065**	0.072	0.054
	(0.020)	(0.022)	(0.020)	(0.036)	(0.047)
Sovereign rating (t-1)	0.140	0.435	0.233	0.590	1.144*
	(0.319)	(0.241)	(0.402)	(0.383)	(0.530)
Rule of law (t-1)	-6.814	17.356	1.070	-29.383	-49.215
	(15.391)	(21.411)	(27.194)	(30.645)	(39.408)
Financial development (t-1)	11.733**	14.519*	10.002	10.426	7.619
	(4.093)	(5.752)	(6.755)	(7.276)	(7.614)
GDP growth (t-1)	-0.491	-0.942	-0.922*	-1.507*	-1.426*
	(0.283)	(0.471)	(0.363)	(0.725)	(0.541)
Real effective exchange rate (t-1)	0.036	0.076**	0.053	0.077	0.071
	(0.029)	(0.027)	(0.041)	(0.042)	(0.043)
Long term interest rate (t-1)	0.105	0.128	0.019	0.351	0.451
	(0.119)	(0.129)	(0.176)	(0.339)	(0.350)
change of state market index	0.398	0.015	0.662***	0.388*	1.265***
	(0.326)	(0.138)	(0.142)	(0.196)	(0.295)
Time Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Country Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5
Pesaran CD test statistic	-3.79	4.40	-2.33	-3.59	0.32
N	545	523	501	479	457

Notes: Estimations are based on equation (1). The Pesaran (2015) test for cross-sectional dependence is conducted on the disturbances from a model with standard errors clustered at the country level. The tests indicate spatial dependence in the errors in some horizons. Spatial correlation consistent standard errors are therefore shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Table A13. The impact of the change of cabinet state-market index on portfolio investment using the simple unweighted LP.

	Year 1	Year 2	Year 3	Year 4	Year 5
Portfolio investment (t-1)	-0.855***	-1.080***	-0.947***	-1.314***	-1.298***
	(0.203)	(0.137)	(0.124)	(0.131)	(0.198)
Portfolio investment (t-2)	-0.008	-0.052	-0.211	-0.268	-0.803***
	(0.051)	(0.081)	(0.125)	(0.151)	(0.171)
Portfolio investment (t-3)	-0.051	-0.233	-0.223	-0.752***	0.562*
	(0.118)	(0.121)	(0.113)	(0.170)	(0.267)
Portfolio investment (t-4)	-0.246*	-0.227*	-0.740**	0.631**	-0.250
	(0.109)	(0.103)	(0.226)	(0.211)	(0.302)
Portfolio investment (t-5)	-0.307	-0.475*	0.378	-0.477*	0.025
	(0.180)	(0.190)	(0.271)	(0.218)	(0.243)
Chinn Ito Index (t-1)	13.236	9.947	4.798	6.918	7.779
	(10.400)	(7.776)	(8.053)	(10.457)	(12.304)
Unemployment (t-1)	0.183	0.343	0.006	-0.061	-0.319
	(0.222)	(0.259)	(0.292)	(0.268)	(0.205)
Government debt (t-1)	-0.000	0.027	0.015	0.021	-0.037
	(0.073)	(0.080)	(0.071)	(0.064)	(0.068)
Sovereign rating (t-1)	1.463	2.244	1.732	1.930	0.521
	(0.960)	(1.140)	(1.339)	(1.486)	(1.464)
Rule of law (t-1)	33.238	66.751	64.600	18.662	-1.160
	(43.636)	(43.261)	(39.811)	(74.141)	(49.992)
Financial development (t-1)	21.697	34.662*	29.419*	17.624	5.766
	(12.364)	(13.925)	(10.786)	(10.732)	(10.202)
GDP growth (t-1)	-0.039	-0.091	-0.079	0.287	0.098
	(0.521)	(0.272)	(0.299)	(0.332)	(0.360)
Real effective exchange rate (t-1)	0.095	0.014	-0.017	0.008	-0.008
	(0.049)	(0.060)	(0.045)	(0.055)	(0.070)
Long term interest rate (t-1)	0.567	0.682	0.823	0.647	0.455
	(0.387)	(0.418)	(0.599)	(0.945)	(1.053)
change of state market index	-0.221	0.032	-0.374	0.084	0.463
	(0.334)	(0.320)	(0.314)	(0.262)	(0.461)
Time Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Country Fixed Effects	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5
Pesaran CD test statistic	-3.79	0.34	-3.66	-2.29	15.71
N	544	521	499	477	455

Notes: Estimations are based on equation (1). The Pesaran (2015) test for cross-sectional dependence is conducted on the disturbances from a model with standard errors clustered at the country level. The tests indicate spatial dependence in the errors in some horizons. Spatial correlation consistent standard errors are therefore shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Table A14. The impact of structural reforms on direct investment and portfolio investment using the AIPW method.

	Product market reforms				
	Year 1	Year 2	Year 3	Year 4	Year 5
Direct investment	-0.824**	-0.009	0.866*	0.458	1.711***
	(0.357)	(0.442)	(0.518)	(0.499)	(0.650)
Observations	576	555	532	509	486
Portfolio investment	0.833*	0.471	0.138	0.831	-0.026
	(0.455)	(0.433)	(0.498)	(0.512)	(0.562)
Observations	539	538	516	493	470
	Labor market reforms				
	Year 1	Year 2	Year 3	Year 4	Year 5
Direct investment	-0.696*	-1.330***	0.373	1.201***	0.949**
	(0.372)	(0.409)	(0.554)	(0.415)	(0.469)
Observations	554	530	506	482	459
Portfolio investment	-0.855*	-0.015	1.321***	1.590***	1.968**
	(0.504)	(0.633)	(0.468)	(0.531)	(0.361)
Observations	566	543	519	495	471

Notes: The table shows the average treatment (ATE) effect - calculated via the AIPW method -of product and labor market reforms on direct and portfolio investments. The estimates are based on equation (1), bootstrapped standard errors in parenthesis. ***/**/* Indicate p-value 0.01/0.05/0.10.

Table A15. The impact of structural reforms on direct and portfolio investment in cases of above and below sample median (s/m) public debt AIPW.

	Product market reforms				
	Year 1	Year 2	Year 3	Year 4	Year 5
	Direct investments				
Above s/m public debt	-0.665	-0.863	0.929	0.327	0.270
	(0.479)	(0.624)	(0.901)	(0.678)	(0.724)
Below s/m public debt	-0.970*	0.567	0.716	0.959	2.274**
	(0.559)	(0.686)	(0.780)	(0.682)	(1.089)
Observations	561	540	517	494	471
	Portfolio investments				
Above s/m public debt	1.112	0.553	0.295	0.528	-0.797
	(0.754)	(0.701)	(0.760)	(0.835)	(0.819)
Below s/m public debt	0.588	0.368	-0.006	1.166**	0.610
	(0.513)	(0.511)	(0.557)	(0.526)	(0.725)
Observations	538	516	493	470	447
	Labor market reforms				
	Year 1	Year 2	Year 3	Year 4	Year 5
	Direct investments				
Above s/m public debt	-1.387***	-1.485**	-0.958	0.120	0.441
	(0.523)	(0.583)	(0.700)	(0.591)	(0.585)
Below s/m public debt	0.447	-0.795	1.647	2.381***	1.929***
	(0.560)	(0.565)	(1.077)	(0.741)	(0.645)
Observations	546	525	502	479	456
	Portfolio investments				
Above s/m public debt	-0.574	1.380	0.476	1.052	0.953
	(0.880)	(1.123)	(0.824)	(0.911)	(1.124)
Below s/m public debt	-0.914	-0.655	2.148***	2.178***	2.872***
	(0.641)	(0.695)	(0.489)	(0.611)	(0.647)
Observations	537	515	492	469	446

Notes: The table shows the average treatment (ATE) effect - calculated via the AIPW method - of product and labor market reforms on direct and portfolio investment in cases of above and below public debt sample median. The estimates are based on equation (2), bootstrapped standard errors in parenthesis.***/**/* Indicate p-value 0.01/0.05/0.10.

Table A16. The impact of structural reforms on direct and portfolio investment in cases of above and below sample median (s/m) financial development index AIPW.

	Product market reforms				
	Year 1	Year 2	Year 3	Year 4	Year 5
	Direct investments				
Above s/m financial development index	-0.786*	0.160	1.054*	0.373	1.759**
	(0.416)	(0.509)	(0.636)	(0.590)	(0.738)
Below s/m financial development index	-1.205***	-1.027**	-0.303	0.463	0.832
	(0.369)	(0.438)	(0.466)	(0.478)	(0.606)
Observations	576	555	532	509	486
	Portfolio investments				
Above s/m financial development index	0.938*	0.756*	0.199	1.334**	0.382
	(0.482)	(0.455)	(0.575)	(0.528)	(0.681)
Below s/m financial development index	0.672	-0.037	0.067	0.091	-0.665
	(0.873)	(0.913)	(0.832)	(0.867)	(0.918)
Observations	538	517	494	471	448
	Labor market reforms				
	Year 1	Year 2	Year 3	Year 4	Year 5
	Direct investments				
Above s/m financial development index	-0.453	-1.089**	0.739	1.141**	1.180**
	(0.444)	(0.447)	(0.713)	(0.530)	(0.494)
Below s/m financial development index	-0.384	-1.026	0.051	2.120***	1.263*
	(0.388)	(0.679)	(0.480)	(0.510)	(0.710)
Observations	525	502	479	456	434
	Portfolio investments				
Above s/m financial development index	-0.577	-1.088	1.564***	2.476***	2.028***
	(0.612)	(0.708)	(0.464)	(0.595)	(0.763)
Below s/m financial development index	-1.021	2.715**	0.994	0.414	1.890*
	(0.973)	(1.240)	(1.009)	(0.962)	(1.005)
Observations	538	516	493	470	447

Notes: The table shows the average treatment (ATE) effect - calculated via the AIPW method - of product and labor market reforms on direct and portfolio investment in cases of above and below financial development index sample median. The estimates are based on equation (2) with bootstrapped standard errors in parenthesis. ***/**/* Indicate p-value 0.01/0.05/0.10.

Table A17. The impact of structural reforms on direct and portfolio investment in cases of high and low state market index using the smooth transition function AIPW.

	Product Market reforms				
	Year 1	Year 2	Year 3	Year 4	Year 5
	Direct investments				
High state market index	0.127	-0.514	1.198	1.013	0.224
	(0.685)	(0.943)	(0.954)	(0.904)	(1.216)
Low state market index	-1.442**	0.546	-0.200	1.137	3.817***
	(0.712)	(0.849)	(0.907)	(0.924)	(1.053)
Observations	393	378	361	344	327
	Portfolio investments				
High state market index	-0.158	-0.632	-0.211	0.035	-0.034
	(0.953)	(1.104)	(0.962)	(1.301)	(1.196)
Low state market index	1.488*	1.940**	0.764	1.172	-0.579
	(0.804)	(0.835)	(1.105)	(1.410)	(1.583)
Observations	373	372	356	339	322
	Labor market reforms				
	Year 1	Year 2	Year 3	Year 4	Year 5
	Direct investments				
High state market index	-0.987	-1.154	1.501	3.374**	2.297**
	(0.804)	(0.853)	(1.768)	(1.353)	(1.088)
Low state market index	0.709	0.178	-0.557	-0.052	0.199
	(0.743)	(0.692)	(0.915)	(0.851)	(0.718)
Observations	380	365	348	331	314
	Portfolio investments				
High state market index	-1.438	0.139	2.036**	3.004**	2.822**
	(1.037)	(1.003)	(1.032)	(1.349)	(1.127)
Low state market index	-0.459	1.335	0.665	-0.354	0.341
	(0.933)	(1.736)	(1.528)	(1.737)	(2.106)
Observations	371	355	338	321	304

Notes: The table shows the average treatment (ATE) effect - calculated via the AIPW method - of product and labor market reforms on direct and portfolio investments in cases of high and low cabinet statemarket index using the smooth transition function . The estimates are based on equation (2) with bootstrapped standard errors in parenthesis. ***/**/* Indicate p-value 0.01/0.05/0.10.

Table A18. The impact of structural reforms on direct and portfolio investment in cases of left, center and right government political ideology AIPW.

	Product market reforms				
	Year 1	Year 2	Year 3	Year 4	Year 5
	Direct investments				
Right	1.634	-1.226*	-0.527	1.221	1.094
	(1.21)	(0.691)	(0.914)	(1.111)	(0.727)
Center	-0.448	-0.713	1.194	1.784	3.587
	(1.418)	(1.127)	(1.509)	(1.771)	(4.348)
Left	-0.797*	0.406	0.415	-0.301	1.277
	(0.430)	(0.534)	(0.646)	(0.778)	(0.892)
Observations	526	509	491	471	451
	Portfolio investments				
Right	1.128*	0.250	-0.030	1.045	0.910
	(0.597)	(0.647)	(0.680)	(0.648)	(0.853)
Center	0.071	0.156	1.576	0.342	-2.179
	(1.110)	(1.303)	(2.013)	(0.934)	(1.543)
Left	0.769	0.723	0.457	1.130*	-0.422
	(0.690)	(0.648)	(0.737)	(0.555)	(0.707)
Observations	504	502	485	467	447
	Labor market reforms				
	Year 1	Year 2	Year 3	Year 4	Year 5
	Direct investments				
Right	-0.786	-1.283**	1.006	1.205**	1.051**
	(0.678)	(0.651)	(0.844)	(0.553)	(0.525)
Center	-0.069	0.356	3.279	0.360	0.562
	(1.292)	(1.335)	(3.877)	(1.762)	(0.988)
Left	-0.266	-1.705***	-0.658	1.167	0.715
	(0.555)	(0.514)	(0.835)	(0.888)	(0.807)
Observations	511	494	476	456	436
	Portfolio investments				
Right	-0.171	-0.705	1.700**	1.774*	2.191***
	(0.665)	(0.946)	(0.630)	(0.983)	(0.567)
Center	-1.061	2.872	2.685***	1.291	0.450
	(1.792)	(2.982)	(0.747)	(1.568)	(1.835)
Left	-0.821	-0.104	2.070**	1.857**	1.877***
	(0.542)	(0.973)	(0.827)	(0.667)	(0.492)
Observations	498	497	474	449	424

Notes: The table shows the average treatment (ATE) effect - calculated via the AIPW method - of product and labor market reforms on direct and portfolio investment in cases of left, center, and right government ideology. The estimates are based on equation (2) with bootstrapped standard errors in parenthesis. ***/**/* Indicate p-value 0.01/0.05/0.10.

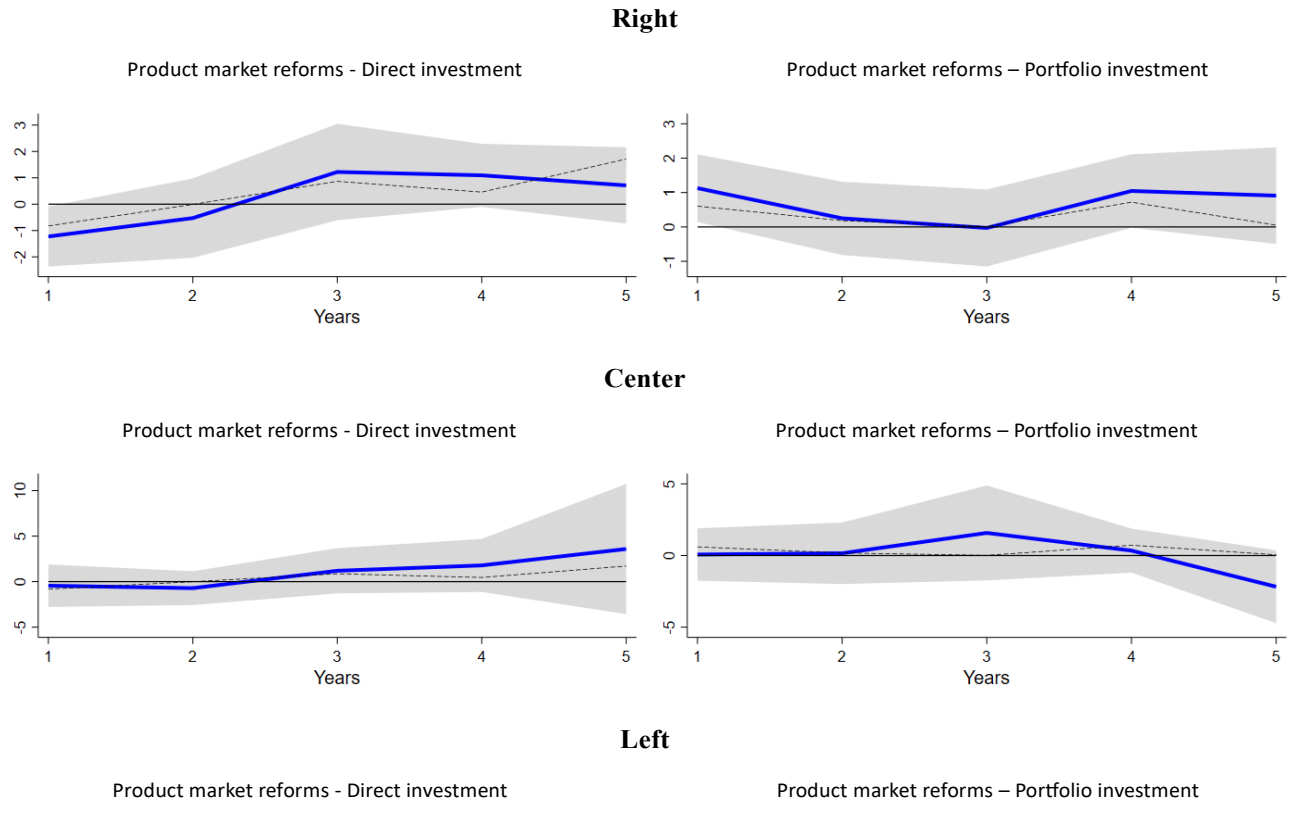
Appendix B

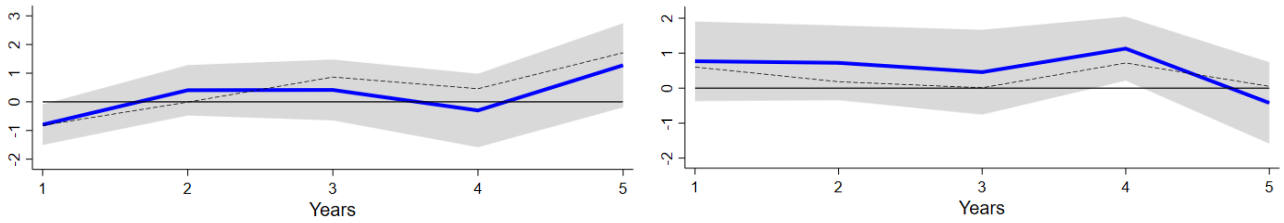
1. Robustness political ideology

In this section, we investigate whether the results reported in section 7.1 are indeed driven by the policy implementation orientation or merely reflect political ideology. Instead of the dummy variable (D) in equation 2 we introduce three dummy variables, taking the value 1 if the government party's ideology is left (center / right) and zero otherwise. The variable used to create the three dummy variables is derived from the Database of Political Institutions (DPI) see Cruz et al. (2021). However, this approach has the limitation that it considers only the first party in the cabinet and does not account for coalition governments.

The impulse responses of direct and portfolio investment after the materialization of product market reforms do not differ in statistical significance terms, so the ruling party ideology does not seem to play a significant role (see Figure B1). This suggests that investors are mainly influenced by a government's implemented policy rather than its ideology.

Figure B1. The impact of product market reforms on direct investment and portfolio investment in cases of left, central and right government's political ideology.

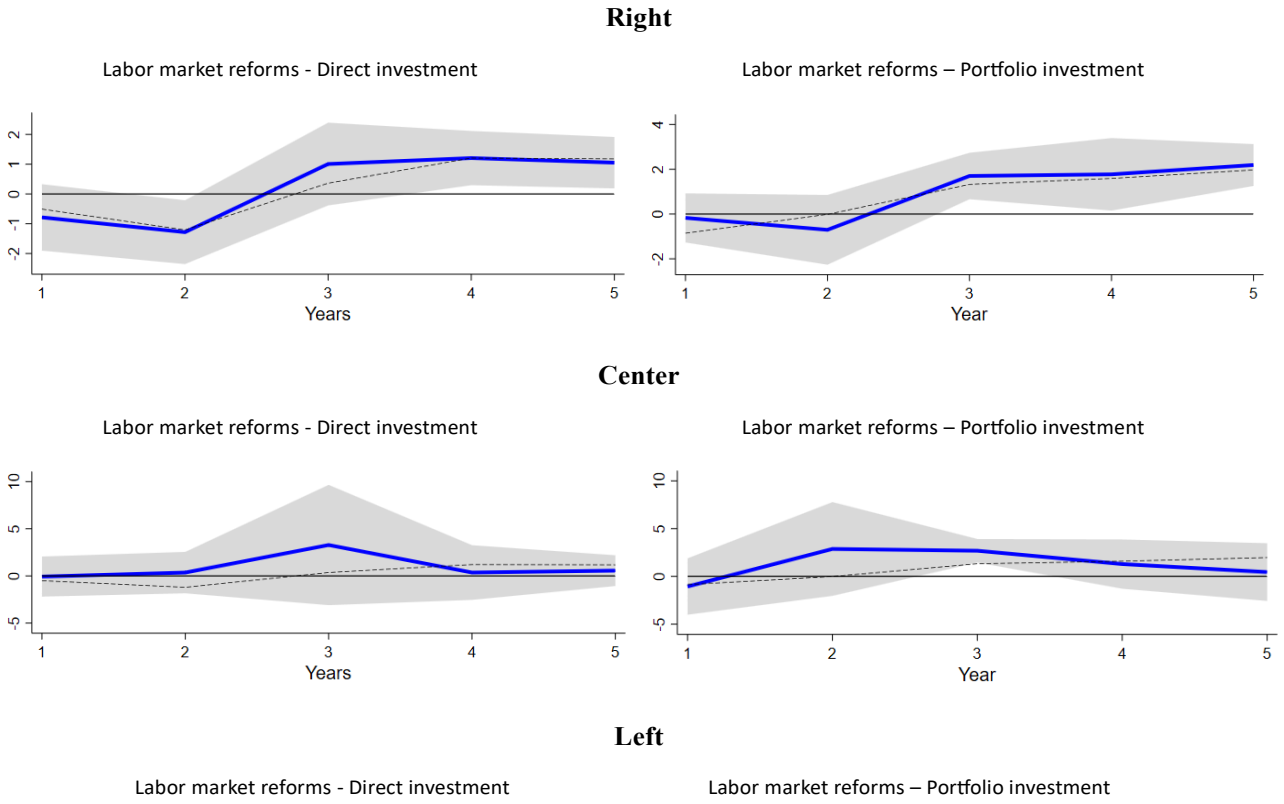


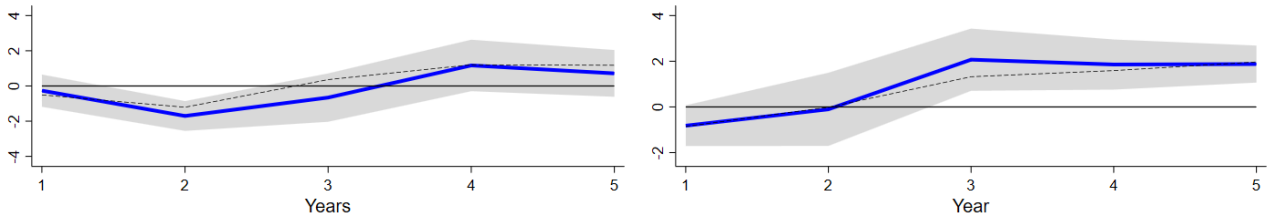


Notes: The solid blue line represents the Average Treatment Effect (ATE) from the AIPW method of product market reforms on direct and portfolio investment in case of left, center, and right government political ideology, as provided by equation 2. The thin dashed black line is the baseline (ATE- AIPW) impulse response as per equation 1. The shaded area indicates the 90% confidence interval using bootstrapped standard errors. For detailed coefficients, see Table A18 in Appendix A.

Right wing governments that implement labor market reforms are more likely to achieve a positive medium term effect on direct investment. However, the effectiveness of labor market reforms in attracting portfolio investment appears to be independent of government ideology (see Figure B2).

Figure B2. The impact of labor market reforms on direct investment and portfolio investment in cases of left, central and right government's political ideology.





Notes: The solid blue line represents the Average Treatment Effect (ATE) from the AIPW method of labor market reforms on direct and portfolio investment in case of left, center, and right government political ideology, as provided by equation 2. The thin dashed black line is the baseline (ATE- AIPW) impulse response as per equation 1. The shaded area indicates the 90% confidence interval using bootstrapped standard errors. For detailed coefficients, see Table A18 in Appendix A.

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