The Institutional Politics of Development Finance: ODA's Role in Shaping Subnational DFI Investments

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August 2025[¶]

Abstract

Development finance institutions (DFIs), operated by donor governments to support private sector development in the Global South, often face informational barriers when deciding where to invest abroad. We argue that traditional Official Development Assistance (ODA), delivered through bilateral aid agencies, can play a catalytic role in guiding these investment decisions. Specifically, aid agencies generate valuable, location-specific, investment-relevant knowledge through their ODA-funded activities across regions of the Global South. When shared with DFIs, this information reduces uncertainty and increases the likelihood of DFI investment in those same regions. To test this expectation, we leverage an original geocoded dataset comprising investments by 12 DFIs from 12 OECD-DAC donor countries, matched with subnational ODA data from the GODAD dataset for the period 2000–2020. Our quantitative analyses reveal a robust and consistent association between ODA activity and DFI entry at the subnational level. To probe the mechanism, we conduct qualitative case studies of Germany, France, and the United States, illustrating how aid agencies and DFIs exchange information and coordinate investment decisions. Our findings contribute to a growing literature on the spatial allocation of development finance and provide new insight into how traditional ODA and national DFIs interact as part of an evolving development cooperation bureaucracy.

Keywords: Development Finance Institutions (DFIs), Official Development Assistance (ODA), Subnational Aid Allocation, Information Asymmetries, Institutional Coordination

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[¶]We thank Tobias Heidland and participants at the 2024 GODAD Workshop, Göttingen, March 13-14, 2025 and the Workshop on the Political Economy of Aid and International Organizations June 12-13, 2025, Milan for helpful comments and suggestions.

1 Introduction

As foreign aid budgets stagnate or decline across many OECD Development Assistance Committee (DAC) donors, national Development Finance Institutions (DFIs) have gained prominence in development cooperation. National DFIs are stand alone agencies that are owned and mandated by donor governments to extend loans or equity financing to the private sector of a developing country (Hos et al. 2024). The 2015 Addis Ababa Conference and subsequent initiatives, such as the "From Billions to Trillions" agenda (World Bank 2015) and the European Consensus on Development (European Commission 2017), have considered DFIs as a key driver in advancing the 2030 Agenda. These institutions, pursuing positive development outcomes alongside the commercial success of their clients, provide long-term public financing to boost market creation in country regions under-served in private capital.

Over the past decade, national DFIs of OECD DAC donor countries have significantly expanded their investment portfolios (see Figure 1), and this growth is expected to continue. Between 2018 and 2021, 85 percent of bilateral aid to the private sector was allocated by DFIs, underscoring their lead role in this area (Craviotto 2023). Most recently, the Trump administration's fiscal budget proposal for 2026 suggested a USD 3 billion capital increase for the U.S. Development Finance Corporation (DFC).[1] In the reauthorization plan sent to the U.S. House of Representatives in June 2025, the White House details its plan to increase the DFC budget from USD 60 billion to USD 250 billion by the end of 2031, which would make the DFC the largest international development agency in the United States.[2] European governments also expect a significant and sustained expansion of their DFIs. The European Union's first draft budget for 2028-2023 announced a 75% increase for its Global Europe instrument which backs DFI investments with guarantees.[3] Similarly, the Danish government has announced plans to double the investment portfolio of Denmark's national DFI,

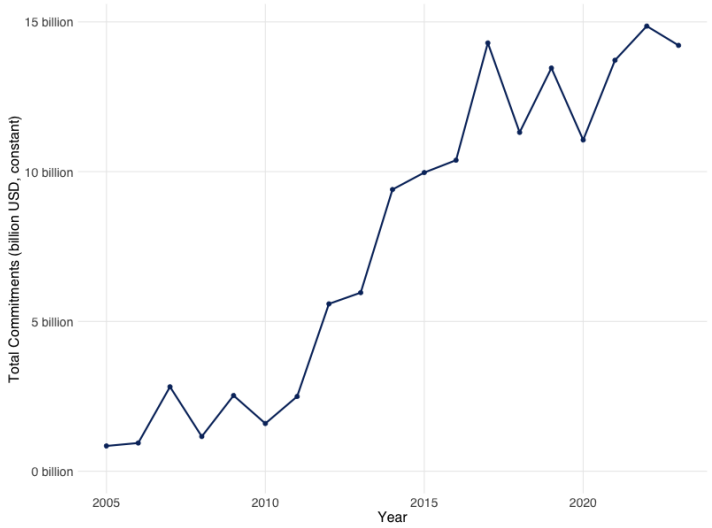
1. https://www.devex.com/news/trump-has-big-plans-for-dfc-as-reauthorization-deadline-looms-110592. Consulted on August 13, 2025.

2. https://www.reuters.com/world/us/trump-administration-proposes-bigger-role-development-finance-corporation-2025-07-25/. Consulted on August 13, 2025

3. https://www.devex.com/news/devex-invested-the-eu-advances-its-europe-first-plan-110552. Consulted on August 14, 2025.

the IFU.[4]

Figure 1: DFI investment commitments over time (2005–2023)



Note: Authors' data. Commitments are reported in constant US dollars, expressed in billions.

Despite the growing importance and scale of national DFIs, we only have a limited systematic understanding about their behavior. Supporters consider DFIs pivotal actors for providing public investments that advance development objectives in markets where private capital is scarce but development needs are high (OECD 2016a). Critics, on the other hand, highlight that national DFIs are, in part, profit-driven and may thus prioritize commercial success over development impact (Craviotto 2023). Or, in spite of financing needs, they may underinvest in distant markets where risks are high and relatively difficult to assess.

This critique highlights a central challenge for DFIs: although they are increasingly expected to finance private sector development across recipient regions under-served in capital, they face significant information asymmetries. They lack contextual and investment-specific knowledge to accurately assess local market conditions, identify investable opportunities, and evaluate local political and institutional risks across regions of the Global South. They also lack the expertise to ensure that their investments have development impact, which DFI funded projects expect to generate.

In this paper, we posit that information exchange with traditional bilateral aid agencies—

4. https://amwatch.com/AMNews/Fund_Management/article18247031.ece. Consulted on August 14, 2025.

and the grant-based development assistance they provide—reduces informational asymmetries for DFI decision-makers and act as catalysts of DFI investment in more high-risk regional markets. Traditional bilateral aid agencies are typically embedded in local contexts through long-standing aid partnerships, in-country offices, and sectoral expertise. This expertise enables them to generate and interpret local information that DFIs do not have but require to make informed investment decisions.

At the same time, traditional aid agencies possess the necessary technical competency in development that makes it more likely that DFI financing contains elements that lead to development impact, including, for example, climate- or gender-related objectives. DFIs need information and development expertise to fulfill their mandate and thus create incentives for inter-agency coordination. We expect that ODA activities in regions across the Global South thus facilitate DFI investment in firms that are located in these same regions.

We test our argument using an original dataset of DFI investments from 2000-2020 that covers 12 DFIs from 12 traditional donor countries.[5] We geo-code DFI investments at the subnational level using geographical coordinates derived from Orbis, a comprehensive, global database that contains firm-level data on more than 580 million firms around the world. We regress our outcome variable of interest on traditional ODA activities using the Global Official Development Assistance Dataset (GODAD). We find empirical support for our argument: the presence and size of traditional ODA in a particular region leads to higher likelihood of DFI investments in that same region. We further probe the causal mechanism of information exchange via inter-agency coordination through qualitative evidence derived from extensive interviews with officials from traditional aid agencies and national development finance institutions and/or analyses of policy and institutional documents as well as seconardy literature on the United States, Germany, and France.

Our study advances a still limited systematic understanding of national DFIs by theorizing inter-agency coordination as a central mechanism that shapes the international development strategies of Global North donors.[6] This perspective extends and refines theoretical

5. Although our DFI investment data cover the period from 2000 to 2024, the GODAD data is limited to 2020 and therefore restricts our analysis to the 2000-2020 time frame.

6. For a study of the lending practices of one multilateral DFI, the World Bank's International Finance Corporation, see Dreher, Lang, et al. (2019).

debates on bureaucratic organization and politics in donor countries (Bau et al. 2025; Carcelli 2024; Carnegie et al. 2024; Dietrich 2021).

Finally, our analysis adds to a growing body of literature that examines aid allocation at the subnational level, offering new insights into how aid and national development finance intersect spatially within recipient countries (Bomprezzi, Dreher, et al. 2025; Briggs 2017, 2018, 2019, 2021; Dreher, Fuchs, et al. 2019; Nunnenkamp et al. 2017; Öhler et al. 2019). It is at the subnational where aid and DFI activities intersect most directly. Aid flows may be nationally negotiated, but political and economic characteristics affect how they are allocated within recipient countries. DFI investments are typically local or regional in scope, targeting specific markets, sectors, or infrastructure corridors. By leveraging geocoded data on both aid and development finance projects, our study reveals how information generated through traditional aid activities at the regional level helps guide where DFIs choose to invest—thus shaping the geography of donor-driven private sector engagement.

2 The Private Sector in Development Cooperation

2.1 Donor governments and the Pursuit of Private Sector Development

The 2030 Agenda, the Addis Ababa Action Agenda, and the "From Billions to Trillions" vision frame private sector development as essential for growth, job creation, improved living standards, and stronger public revenues. Reflecting this consensus, donor governments have oriented their development cooperation strategies and aid bureaucracies toward supporting private sector development abroad—a trend that is evident across many bilateral donors. For example, in 2013, U.S. President Barack Obama launched Power Africa, a five-year initiative to channel bilateral aid into private-led energy sector development in six focus countries: Tanzania, Kenya, Ethiopia, Ghana, Nigeria, and Liberia. This orientation was further deepened in 2018, when the U.S. Government broadened its focus on private sector development to encompass its entire development cooperation policy through the Private Sector Engagement Policy. This strategy shifted the emphasis from a standalone,

sector-specific approach to an integrated priority that was championed by all U.S. foreign aid agencies, mission strategies, sectors, and operating units (USAID 2018). While a prioritization of private sector development has been particulary pronounced in the U.S. case, OECD DAC donor governments also have consistently promoted this agenda.

Traditionally, these efforts have been pursued by donor aid agencies and the official development assistance that they provide: ODA supports regulatory reforms, the rule of law, and institutional capacity building to foster environments conducive to private sector–led growth in different ways. For example, USAID's Broad Agency Announcements invite private sector partners to define problems and co-develop solutions (USAID 2020). Germany's Development Cooperation Scouts Program embeds development personnel in local and regional business associations to build financial partnerships, facilitate policy dialogue, and promote responsible business (OECD 2021a). Aid agencies may also provide direct grants to generate development outcomes; for example, the Netherlands financed the Health Insurance Fund to subsidize premiums for low-income groups in Africa, increasing demand for health services and improving their quality (OECD 2016b, 39). These projects seek to strengthen private sector development and make investment in developing countries more attractive to private finance. However, ODA alone has proven insufficient to spur investment. Studies document that ODA-funded private sector initiatives have only had marginal impact on the mobilization of private finance (Gräfin 2021; IDOS 2024).

In response, many donor governments have expanded their development cooperation policies to include national development finance institutions (DFIs) as publicly backed investors that complement aid efforts, help close financing gaps, and advance the SDGs. As government agencies, DFIs raise capital through markets or their own equity to address shortages of long-term private finance in developing economies. They provide loans and equity to early-stage, commercially viable, development-relevant firms and invest in financial institutions that extend credit to businesses with the potential to drive transformative change across countries, regions, and sectors.

2.2 Development Finance Institutions and Development Cooperation

Although national DFIs have been considered as viable means for providing and mobilizing finance for Global South countries since the 2007-2008 global financial crisis (Mawdsley 2017), the 2015 Addis Ababa Action Agenda explicitly urged donors to prioritize them within development cooperation. This position was reinforced in 2016, when the OECD DAC recognized DFIs as key instruments of development cooperation and began promoting standards and best practices for their use (Hos et al. 2024; OECD 2016a).

One example of DFI integration into development cooperation is France, which in 2016 incorporated its DFI, Proparco, into the French Development Agency Group and designated it as the primary vehicle for bilateral private sector development. Around the same time, the UK committed a £1.8 billion multi-year capital increase to its DFI, British International Investment, between 2015 and 2018, also for private sector development. Since 2017, national DFIs have been firmly considered core instruments to finance and implement the European Union's development cooperation policy abroad (Bau and Dietrich 2025).

The integration of DFIs into broader development cooperation frameworks has reshaped their mandates and investment decisions. Historically, DFI operations focused on providing finance in emerging and developing markets, with investment decisions guided primarily by the anticipated commercial viability of investees. Because DFIs, as government agencies, had to satisfy self-sustainability requirements and needed to meet investment return and performance targets, investments typically took place in less difficult markets where risks were relatively low and easy to assess (Hos et al. 2024; ODI 2021). Contrary to ODA agencies, DFIs are not grant-based agencies and need to ensure that loans get repaid and equities can be resold on private markets. Under this model, DFIs operated in a largely demand-driven manner: Potential clients approached them with financing requests, and DFIs accepted to finance the most commercially viable clients among them.

In the context of development cooperation, however, the donor government mandates DFIs to balance financial returns with development impact. This requires the structuring of investments to include explicit environmental, social, and governance (ESG) standards,

align with Sustainable Development Goals (SDGs), and include robust impact measurement frameworks that require enhanced assessment and evaluation capacities. In addition, donor governments want DFIs to finance the private sector in regions of the world that lack commercial capital (ODI 2021). Because these regions typically exhibit higher risks and are difficult to assess remotely from DFI offices in donor countries, DFIs have struggled to identify investment opportunities that simultaneously meet commercial sustainability and development criteria.

A widely acknowledged constraint, noted by DFI officials, is the lack of a field presence and expertise that would enable DFI officials to generate and assess important contextual and investment-specific knowledge (Landers et al. 2020). To make targeted investment decisions that balance financial performance and development outcomes, DFIs need to have a comprehensive understanding of regional markets as well as their environmental, political and social characteristics.

However, recent accounts indicate that DFIs often lack such detailed information to support their investment decisions. A 2022 Devex report on DFI investment porfolios of 16 mulilateral and bilateral DFIs finds that impact data beyond aggregate estimates is "hard to find and is not typically measured robustly or publicly shared" (Devex 2022, 12). Echoing earlier accounts (CSIS 2016), a recent survey found that DFI monitoring systems remain for the most part, in the initial stages of development, and are primarily oriented toward financial performance targets (Támola et al. 2024). Of the 16 organizations surveyed, 12 reported having no procedure to embed monitoring into their organizational culture, alongside a lack of formal systems, clear information guidelines, standardized methodologies, and systematic use of results (15). Moreover, DFIs reported the greatest monitoring challenges in precisely those areas most critical for development progress—namely, environmental and climate initiatives; MSMEs, employment, and production; and infrastructure development projects.

Unlike traditional aid agencies, DFIs operate on the basis of lean staffing structures. In 2023, for instance, the U.S. International Development Finance Corporation (DFC) employed just 681 staff—compared to nearly 10,000 at USAID—in spite of their significant financing

volume, amounting to 50 percent of USAID financing (DFC 2024). As a result, DFIs often struggle to systematically screen markets and assess their development potential.

This informational asymmetry limits the ability of a DFI to source viable investment opportunities that align with their dual mandate (Landers et al. 2020).[7] As a result, DFIs depend on external sources of information—particularly from traditional aid agencies—to help identify, evaluate, and de-risk potential investments, a dynamic we theorize in the next section.

3 From Aid to Investment: ODA as a Catalyst for DFI Investment

We argue that traditional aid agencies play a catalytic role in facilitating DFI investments by helping to overcome informational constraints. Their long-standing local presence, sectoral expertise, and relationships with local actors position them to gather and interpret the information DFIs need to identify viable investees and make sound investment decisions. Recognizing this potential, donor governments having increasingly established mechanisms for inter-agency coordination that allow aid agencies to channel investment-relevant knowledge to DFI decision-makers.

To illustrate how aid agencies are linked up with DFIs, we use the example of the Business Sector Advocacy Challenge. This initiative, spearheaded by the Danish International Development Agency, Danida, is embedded in a long-standing partnership between Denmark and Ghana that supports the country's national industrial strategy. Although Ghana is a major exporter of raw cashews, it has long lacked the capacity to process and market them globally.[8] Through ODA-financed policy advice and capacity-building to develop local processing plants, Danida's stakeholder network identified underinvestment in domestic

7. For example, Swedfund's investees must increase turnover and profitability by at least 60% during the investment lifespan, while the Swiss Investment Fund for Emerging Markets targets an internal rate of return (IRR) of 3% and a total value paid-in (TVPI) of 1.15. The IRR and TVPI are two standard private-equity style performance metrics. The IRR is a measure of annualized rate of return while the TVPI refers to the magnitude of the gains over the investment life-time. Moderate figures indicate positive but slow to materialize, low-yield financial returns (Hos et al. 2024, 21).

8. In 2015, 95% of Ghana's raw cashew production was exported to India, Brazil, and Vietnam for processing and packaging before reaching global consumer markets (OECD 2016b, 48).

processing and presented potentially viable investees. This information directly informed the Investment Fund Denmark's decision to invest DKK 60.5 million in Mim Cashew, a Danish–Ghanaian venture that expanded processing facilities, boosted exports, and created more than 2,000 local jobs.

The case of cashew production in Ghana illustrates how information shared by Danida enabled the Danish Investment Fund to invest in productive capacity. This exchange, facilitated through the Business Sector Advocacy Challenge, was possible because Danida had an institutional platform for coordinating and transfering local knowledge to IFU.

Similar arrangements exist in other donor contexts. In the United States, for instance, the 2018 BUILD Act mandated that the DFC be chaired and its investments overseen by the Department of State and USAID. It also created the Development Finance Coordination Group (DFCG) as a formal platform to align DFC activities with broader U.S. international development efforts through regular meetings (Green and David 2019). Coordination efforts have centered on information exchange across agencies to support DFC operations, with a particular emphasis on U.S. Embassy staff and USAID Missions that provide country context, facilitate in-country interviews, and identify potential partners with whom DFC "has not engaged in the past" (11). These examples underscore the pivotal role of coordination in enabling aid agencies to share local knowledge with DFIs, especially in regions where they lack prior experience but are expected to operate in order to meet their mandate.

3.1 The Production of Investment-Relevant Information by Aid Agencies

We argue that traditional aid agencies are well-positioned to provide in-country information that is relevant for DFIs. They typically have a long-standing presence in developing countries and have experience implementing aid programs that directly target local markets and actors.

What type of information do aid agencies accumulate that matters for DFIs? In the context of private sector development projects, aid agencies support regulatory reforms, provide subsidized training, directly engage with business associations, and integrate pro-

ducers' exports into global value chains, facilitating market access (Brazys 2025). This allows them to actively map the organization of the private sector in developing countries and identify its development needs and constraints.

More broadly, we argue that donor agencies gain investment-relevant insights through their aid-granting processes that hires local firms in both hard and soft aid sectors. Recent efforts to promote local ownership have considerably expanded the pool of domestic firms that compete for and secure development contracts—with winning firms getting incorporated into contract monitoring systems that track their performance. For example, between 2008 and 2016, USAID awarded USD 13 billion in contracts, many of which were awarded to local private suppliers (Harris 2023). Moreover, the contracting process requires agencies to specify detailed objectives and deliverables, which in turn demands a close understanding of local market conditions, firms, and their operations (Pfanner 2025, 4).

Scholars of bureaucratic politics might argue that aid agencies might be unlikely to share information because of inter-agency competition, which can create incentives for withholding information (Kilby 2011). Agencies may fear losing control over resources or mandates if other institutions gain access to their information. They might also worry that exchanging their local knowledge and information could reduce their visibility and influence within the donor government. From this perspective, sharing information with DFIs would run counter to the self-interest of the aid bureaucracy.

Yet, our in-depth interviews with officials from aid agencies and DFIs suggest that aid agencies share information with DFIs because their incentives differ from traditional bureaucratic rivalries: successful DFI investments can advance the the aid agencies' own development objectives, demonstrate policy relevance, and strengthen their influence over the broader donor strategy (Carcelli 2024). Moreover, aid agencies understand that scaling up private sector capacity requires financing that they do not typically offer. While they extend grants, firms often need equity investment. Financial institutions such as local banks or microfinance providers require loan guarantees to expand their lending. Such financing, tailored to private sector needs, falls in the remit of DFIs. This complementarity suggests that aid agencies have incentives to share their information and knowledge and coordinate

with DFIs.

3.2 How Investment-Relevant Information Shapes DFI Investment Decisions

Traditional aid organizations can facilitate DFI investment in regional markets in a number of ways: they can transfer expertise and knowledge to DFIs, advise and cooperate on the provision of investment-relevant technical assistance, help prepare pipelines of bankable projects, share evaluations and contracting information of their aid activities. To coordinate the flow of information and expertise, donor governments have set up arrangements that formalize coordination, including regular and scheduled inter-agency meetings and working groups, and, at times, specific bureaucratic units that formalize inter-agency cooperation.

In the United States, the U.S. DFC has a Mission Transaction Unit where liaison officers coordinate with the 94 USAID field missions to identify credit challenges and collect market information (Akhtar and Brown 2022). A similar approach exists in the United Kingdom. British International Investment (BII) relies on the field presence of its shareholder, the Foreign, Commonwealth and Development Office (FCDO) to expand its investment portfolio. BII consults with aid agencies to learn from ongoing ODA activities across sectors and to explore how they support local private businesses and how this information can catalyze DFI investment.[9] More broadly, DFI officials acknowledge that access to investment-relevant information from aid agency field offices significantly enhances their ability to identify and develop viable projects (Landers et al. 2020, 6).

The sharing of investment-relevant, ODA financed-information is a cornerstone of DFI investment decisions and plays out in three ways (Hos et al. 2024; Ngom et al. 2025). DFIs are mandated to balance commercial performance with development outcomes in their portfolios (Léon 2025; Peitz 2023). However, they rarely possess prior knowledge of the private sector and the social and political conditions that they need to understand to identify viable

9. Remarks by Chris Chijiutomi, Managing Director and Head of Africa at BII, collected during the "Investing in fragile markets: Lessons and ambitions from BII in Africa" event organized by Devex on June 5, 2025.

investees and set up investment frameworks that allow them to generate positive development outcomes. Moreover, due to their limited presence, DFIs are not well-understood by local firms—thus suppressing the demand side of DFI investment.

In contrast, traditional aid agencies are more attuned to local businesses and their needs. Through their networks they often become alerted when local firms seek financing and they can facilitate connections with their agency peer, the national DFI. As a result, DFIs are more likely to receive financing proposals from regions where aid agencies are already active, maintaining an established network of partners.

Second, DFIs benefit from ODA-funded information in the pre-screeningn of investment proposals. In this stage, DFIs evaluate both the potential development impact and the suitability of candidate firms to deliver it. The process typically involves checklists, client questionnaires, exclusion lists, and contextual analysis—all of which require detailed knowledge of a firm's operating environment. Aid agencies can supply this information, drawing on the knowledge they generate through their own programs and field activities

Finally, DFIs evaluate the current and projected commercial performance of firms. In this context, they conduct thorough client due diligence, they examin the firms‘ governance structures, staff capacities, market positioning, assets and liabilities, liquidity, as well as benchmark comparisons. This stage is essential for DFIs to make sure that the investment is commercially sustainable. Although DFIs rely primarily on financial data, their analysis depends on a solid empirical base. Here, aid agencies provide contact information for clients of potential investees, business associations, and relevant public authorities. Such inputs help DFIs verify the reputation of prospective partners and assess their commitment over the course of the investment.

In sum, coordination between traditional aid agencies and DFIs reduces information asymmetries that might otherwise lead DFIs to invest in financially weaker firms and/or firms that can generate only limited development impact. By sharing local knowledge generated through their ODA activities, traditional aid agencies help guide DFIs toward more viable and impactful investments. As a result, we expect the geographic distribution of traditional aid to shape the spatial allocation of DFI investments.

Hypothesis: *Regions with a greater presence of Official Development Assistance (ODA) will also be more likely to receive Development Finance Institution (DFI) investment*

4 Data

To evaluate whether traditional ODA predicts investments by national DFIs, we draw on three main sources: an original dataset of DFI investment projects dating back to the 1970s, a commercial database of private companies worldwide, and the Geocoded Official Development Assistance Dataset (GODAD) (Bomprezzi, Dreher, et al. 2025). This section describes the data sources and the procedures used to construct the variables for our analysis.

4.1 DFI Investments

To capture the timing, scale, and location of DFI activities, we use an original, work-in-progress global dataset of investment-level projects undertaken by national DFIs in developing countries. The dataset covers 7,248 individual investments financed by 12 DFIs from 12 traditional donor countries between 1970 and 2024. These DFIs are: the Austrian Development Bank (OeEB, Austria); the Belgian Investment Company for Developing Countries (BIO, Belgium); the German Investment Corporation (DEG, Germany); British International Investment (BII, United Kingdom); the U.S. International Development Finance Corporation (DFC, United States); the Finnish Fund for Industrial Cooperation (Finnfund, Finland); the Dutch Entrepreneurial Development Bank (FMO, Netherlands); the Investment Fund for Developing Countries (IFU, Denmark); the Norwegian Investment Fund for Developing Countries (Norfund, Norway); the French Development Finance Institution (Proparco, France); Swedfund International (Swedfund, Sweden); and the Swiss Investment Fund for Emerging Markets (SIFEM, Switzerland). All twelve are government-backed institutions from high-income donor countries, primarily mandated to promote private-sector development in lower- and middle-income economies.

The dataset records, for each investment, the donor country, recipient country, investee

name, year of commitment, and committed amount. To construct the time–series cross-sectional dataset, we identified unique investments through systematic searches of DFI annual reports and official websites. Each investment was coded independently by two separate teams, following detailed coding protocols. Coders extracted investment-level information from donor websites, press releases, annual reports, and—when available—internal project databases, supplementing these with third-party sources such as investee websites, national news outlets, and specialized industry platforms. For U.S. investments approved between 2000 and 2019, we incorporated data from the Center for Global Development (CGD), cross-checking all entries against our own sources. Discrepancies between sources were resolved through clarification and triangulation with CGD, while disagreements between coders were adjudicated by a senior member of the research team.

Our empirical analysis primarily focuses on the extensive margin of DFI activity—whether a DFI is present in a given region–year. Commitment data are nevertheless collected in full to allow examination of the intensive margin in supplementary analyses.[10] All financial amounts are expressed in constant U.S. dollars. We first converted all commitments to U.S. dollars using annual exchange rates from the Bank for International Settlements (BIS 2025), and then adjusted for inflation using the yearly U.S. GDP deflator from the World Bank's World Development Indicators.

We subsequently match the DFI investment dataset with firm-level data from Orbis (Moody's 2024), a commercial database compiling information from government and private sources on over 550 million entities worldwide. In the first step, we matched DFI investee names with firm names in Orbis. For cases without an exact match—or where multiple potential matches appeared—we manually confirmed the correct match by cross-referencing DFI project documentation and specialist platforms such as PitchBook. This procedure yielded 4,696 investments associated with 2,379 unique investees in Orbis, out of the 7,248 total investments in our dataset.[11]

10. In robustness checks, we replace the binary presence indicator with the number or total value of DFI projects in a region–year to examine the intensive margin.

11. Of these 2,379 investees, 593 received more than one investment (see Figure A.1). Coverage varies across donors (Figure A.2). Orbis also provides information on firms' sectors, business activities, and, when available, balance sheet data from national business registers (Figure A.3).

4.2 Geolocating DFI Investments

After combining the project-level DFI investment data with firm-level information from Orbis, we identify the location of each matched investee. We begin by extracting geographic coordinates from Orbis address data, which typically include the country, city, and up to four address lines. The completeness of this information varies: at least city and country are available for approximately 82% of firms, at least one address line for 4,542 firms (≈ 79%), and direct latitude–longitude coordinates for 1,169 firms (≈ 20%).

To maximize geolocation accuracy, we construct search strings from the available address components and cross-validate across three configurations. The `Full` configuration includes all available address lines, the city, and the country. The `City` configuration uses only the city and country. The `Low` configuration combines the lowest-level address line available—such as address line 4 if all four are present—with the city and country.[12]

We geocode these search strings using the *Nominatim* algorithm,[13] which queries OpenStreetMap data.[14]

4.3 Mapping Coordinates to ADM1/ADM2

For each firm in the Orbis address data, we obtain up to four sets of geographic coordinates using different geocoding strategies.[15] Each coordinate set is mapped to ADM1- and ADM2-level administrative units using Version 3.6 of the Database of Global Administrative Areas (GADM).[16] This yields up to four potential ADM1/ADM2 assignments per firm, allowing us to cross-check results and identify the most accurate location.

To assess baseline accuracy, we compare the ADM1/ADM2 units derived from string-based geocoding against those obtained directly from Orbis coordinates for firms where both are available. Across configurations, matches are correct in 93.6–98.2% of cases at the ADM1 level and 91.2–96.5% at the ADM2 level, indicating high reliability.

12. For example, if all four address lines are available, the `Low` configuration uses only address line 4.
13. https://nominatim.org/release-docs/develop/
14. Implementation is carried out using the *tidygeocoder* package in R.
15. These include the raw coordinates provided by Orbis and those generated from the three search string configurations: `Full`, `City`, and `Low`.
16. https://gadm.org/index.html

We then assign each firm to a final ADM1/ADM2 unit using a structured decision process. First, if raw Orbis coordinates are available, we use the ADM unit derived from them. Second, if raw coordinates are unavailable but all geocoding strategies return the same unit, we assign that unit. Third, if results conflict, we apply a majority rule—assigning the location returned by two of the three strategies. If all three differ, the ADM unit is coded as missing. Using this procedure, we successfully identify ADM1 units for 3,777 investees (about 80.4% of matched firms) and ADM2 units for 3,294 investees (about 70.1%).

4.4 Merge DFI Data with GODAD Data

In the final step, we merge the matched and geocoded DFI investment data with the GODAD dataset (Bomprezzi, Longhi, et al. 2025). GODAD provides subnational location information for ODA activities reported by traditional donors to the OECD Creditor Reporting System (CRS), covering 19 bilateral donors—including European providers and the United States—from 1973 to 2020. Geographic coordinates are extracted using Natural Language Processing (NLP) applied to project descriptions in the CRS.

We match DFI and ODA observations at both the donor–recipient ADM1–year and donor–recipient ADM2–year levels. Because DFI coverage is sparse before 2000, the empirical analysis is limited to 2000–2020. For GODAD observations without a corresponding DFI investment, the dependent variable is coded as zero.

5 Research Design

Our empirical strategy directly tests whether subnational ODA activity from a bilateral donor increases the likelihood that the same donor's DFI invests in that region. Consistent with our theoretical focus on the extensive margin of DFI activity, we estimate the probability of DFI presence at the regional level as a function of ODA exposure.

5.1 Outcome and Independent Variable

The dependent variable, `DFI Dummy`, is a binary indicator equal to 1 if a DFI project from donor j is present in region r of recipient country c in year t, and 0 otherwise. This specification captures the *extensive margin* of investment—where DFIs choose to enter—rather than the amount they invest once present.[17]

The key independent variable is ODA from donor j to the same recipient region-year, measured at the ADM1 or ADM2 level. We operationalize ODA using three alternative measures:

1. `ODA dummy` – a binary indicator of any ODA activity in a region-year;
2. `ODA count (log)` – the natural log of the number of ODA projects
3. `ODA Commitment (log)` – the natural log of total ODA commitments in constant USD.[18]

5.2 Control Variables

Our empirical models include several covariates to account for sub-national socio-economic and political conditions that may confound the allocation of DFI investments. These controls help mitigate omitted variable bias by capturing underlying regional characteristics that could independently influence both donor behavior and investment patterns.

To proxy for local economic development and regional size, we control for the logarithm of nighttime light intensity and total population, both measured at the corresponding ADM1 or ADM2 levels depending on the unit of analysis. Both variables are drawn from the GLocal dataset (Morales-Arilla and Gadgin Matha 2024), which harmonizes geospatial data at subnational administrative levels across countries. Due to temporal variation in data availability, we use the DMSP Stable Lights dataset (`dmsp_stable_lights`) through 2013 and the Extended DMSP series (`ntl_dmsp_ext`) from 2014 onward. To ensure comparability over time, we normalize the two measures using data from 2013—the only year in which

17. In Section 6.3, we complement this focus by examining the *intensive margin* in robustness checks, using the number and total value of projects as alternative dependent variables.

18. For the logged count and commitment measures, we add 1 to the raw values before taking the logarithm.

both are available—scaling the latter to maintain consistency across time.[19] The DMSP data are produced by the Earth Observation Group and are derived from the U.S. Air Force's Defense Meteorological Satellite Program, which captures low-resolution visible and infrared imagery to proxy local infrastructure and human activity.[20]

Population data come from NASA's Socioeconomic Data and Applications Center (SEDAC) and reflect estimates of population distribution at a 30 arc-second resolution.[21] Since these data are only available at five-year intervals, we apply linear interpolation to construct annual estimates. Both nighttime lights and population rasters are aggregated to ADM1/ADM2 regions using zonal statistics, as implemented in the GLocal dataset.

Finally, to account for potential political favoritism, we include an indicator equal to one if the region is the birthplace of the country's national leader. This variable comes from the Political Leaders' Affiliation Database (PLAD), which provides geocoded information on leaders' birthplaces and ethnic backgrounds, as well as biographical details such as tenure and education (Bomprezzi, Dreher, et al. 2025).[22] PLAD is compiled through structured online searches drawing on sources including the CIA World Factbook, Encyclopaedia Britannica, Munzinger, Ethnicity of Celebs, and major news outlets such as BBC News, The Guardian, and The Washington Post.

In Section 6.3, we test the robustness of our results to additional sets of controls, including governance quality, environmental conditions, and geographic characteristics.

5.3 Sample

The empirical analysis covers up to 136 recipient countries, 2,488 ADM1 regions, and 32,195 ADM2 regions over the period 2000–2020. We exclude countries that joined the OECD Development Assistance Committee (DAC) prior to 2020 from the recipient pool to maintain a consistent set of developing-country recipients. The unit of observation is a donor–recipient country–region–year dyad at either the ADM1 or ADM2 level.

The sample is unbalanced, as both the spatial coverage of ODA in the GODAD dataset

19. Normalization is not performed in cases where either measure is missing or takes a value of zero.
20. See https://eogdata.mines.edu/products/dmsp/
21. https://www.earthdata.nasa.gov/data/tools/sedac-population-estimator
22. https://plad.uni-goettingen.de/data/

and the availability of geocoded DFI investments vary across donors, recipients, and years. While the GODAD data extend back to 1973, we restrict the analysis to the 2000–2020 period to align with the coverage and quality of the geocoded DFI data. At both ADM1 and ADM2 levels, the data contain a large proportion of zeros in the dependent variable, reflecting the fact that most regions receive no DFI investment in a given year. This sparsity underscores our focus on the extensive margin of investment in the baseline analysis.

5.4 Estimation Strategy

Our baseline specification estimates the relationship between subnational ODA activity and the likelihood of DFI investment using ordinary least squares (OLS) with high-dimensional fixed effects:

$$\texttt{DFI Dummy}_{jrct} = \beta \text{ODA}_{jrct} + \boldsymbol{\gamma} \boldsymbol{X}_{rct} + \mu_{jt} + \lambda_{ct} + \epsilon_{jrct}$$

Here, $\texttt{DFI}_{jrct}$ is a binary indicator equal to one if donor j's DFI invests in region r of country c in year t, and zero otherwise. ODA_{jrct} denotes one of the three ODA measures described in Section 5.1, and $\boldsymbol{X}_{rct}$ is the vector of baseline controls described in Section 5.2. Donor-year fixed effects (μ_{jt}) absorb time-varying shocks to a donor's global development finance portfolio in a given year, while recipient-year fixed effects (λ_{ct}) capture national-level changes in the recipient—such as macroeconomic shifts or political events—that affect all regions equally. Identification therefore comes from within-country, cross-regional variation in ODA exposure in a given year.[23] Standard errors are clustered at the recipient-country level in the baseline models to allow for arbitrary correlation of the error term within countries over time. We evaluate alternative clustering options in Section 6.3.

23. In Section 6.3, we incorporate additional, lower-level fixed effects—such as region and donor–region fixed effects—to absorb time-invariant unobserved heterogeneity at more granular spatial and donor–recipient levels. We do not include these in the baseline because, given the rarity of DFI investments, most identifying variation arises from cross-regional differences within a country–year. Adding lower-level fixed effects would absorb much of this variation, leaving limited scope to estimate the relationship of interest.

6 Results

6.1 Baseline Results

The baseline results support our core hypothesis: regions with higher levels of traditional ODA activity are significantly more likely to receive DFI investment. Table 1 reports OLS estimates using alternative operationalizations of ODA at both the ADM1 and ADM2 levels. Across all specifications, the coefficient on ODA is positive and statistically significant at conventional levels. The magnitude and consistency of these effects indicate that regions with greater engagement from traditional aid donors are systematically more likely to attract investment from development finance institutions.

Table 1: Official Development Finance and DFI Investment, 2000-2020

	DV = DFI Dummy					
	ADM1			ADM2		
	(1)	(2)	(3)	(4)	(5)	(6)
ODA Dummy	0.00395***			0.00363***		
	(0.00070)			(0.00068)		
ODA Count (log)		0.00555***			0.00545***	
		(0.00096)			(0.00101)	
ODA Commitment (log)			0.00055***			0.00052***
			(0.00009)			(0.00010)
Population (log)	0.00117**	0.00105**	0.00114**	0.00008***	0.00008**	0.00008***
	(0.00036)	(0.00034)	(0.00035)	(0.00002)	(0.00002)	(0.00002)
Nighttime Light (log)	0.00315***	0.00309***	0.00313***	0.00020***	0.00019***	0.00020***
	(0.00056)	(0.00055)	(0.00056)	(0.00005)	(0.00005)	(0.00005)
Leader Birthplace	0.00736***	0.00722***	0.00731***	0.00579***	0.00561***	0.00573***
	(0.00198)	(0.00196)	(0.00197)	(0.00148)	(0.00145)	(0.00147)
Donors	12	12	12	12	12	12
Recipients	145	145	145	121	121	121
Regions	2611	2611	2611	33060	33060	33060
Mean DV	0.001766	0.001766	0.001766	0.000114	0.000114	0.000114
Obs	664212	664212	664212	8959560	8959560	8959560
R2	0.034	0.035	0.035	0.005	0.007	0.006
R2 Adj.	0.029	0.031	0.030	0.005	0.006	0.006
Donor-Year FE	✓	✓	✓	✓	✓	✓
Recipient-Year FE	✓	✓	✓	✓	✓	✓

Notes: Results from ordinary least squares regression. Robust standard errors clustered at recipient country reported in parentheses. OECD-DAC recipients excluded.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

While the estimated coefficients may appear modest in absolute terms, their substantive significance becomes clearer when placed in context. The unconditional probability of any DFI investment is just 0.177% at the ADM1 level and 0.0114% at the ADM2 level. By comparison, 10.91% of ADM1 region–year observations and 0.89% of ADM2 region–years receive at least one ODA project. Using the coefficients from columns (1) and (4), a region–year with the average ODA dummy value is associated with a 0.043 percentage point increase in the likelihood of DFI allocation at the ADM1 level, and a 0.0032 percentage point increase at the ADM2 level. Although these changes are small in absolute terms, they represent an increase of roughly 24% at ADM1 and 28% at ADM2 relative to the baseline probabilities—indicating a substantively meaningful association between prior ODA engagement and subsequent DFI investment.

The remaining columns in Table 1 replace the ODA dummy with alternative measures—logged ODA project counts and logged commitment amounts—to capture variation in ODA exposure. Although the coefficients remain modest in absolute terms, the implied effect sizes suggest a substantive relationship between ODA intensity and DFI presence. A higher concentration of ODA activities or the presence of larger development projects typically requires more intensive monitoring and deeper engagement with a broader range of stakeholders relevant to DFIs. Moving from zero to the average logged ODA count or commitment corresponds to an estimated 26%–38% increase in the probability of DFI allocation at the ADM1 level, and 26%–40% at the ADM2 level.[24]

6.2 Sub-sample Analysis

To further probe the relationship between ODA and DFI investments, we disaggregate the analysis by ODA sector and by period.

We begin by disaggregating ODA by sector to examine whether the observed relationship varies across policy domains. While we do not expect inter-agency coordination to differ systematically across sectors, DFIs may be more exposed to ODA in areas where they are more active—particularly economic infrastructure and production sectors. Meanwhile,

24. At the ADM1 level, the mean values of logged ODA count and commitment are 0.12 and 0.84, respectively; at the ADM2 level, the corresponding values are 0.0083 and 0.0579.

aid agencies also channel ODA toward social infrastructure and services, often through public-private partnership in health, education, water, and sanitation, where they monitor or engage with private actors.

Using the GODAD classification, we divide ODA into four categories: Economic Infrastructure and Services, Social Infrastructure and Services, Production Sectors, and Other Sectors. We re-estimate the main specification by including each sector-specific ODA variable separately. The results, presented in Figure 2, reveal a striking degree of similarity across sectors. ODA in all four sectors is positively and significantly associated with DFI investment at both the ADM1 and ADM2 levels, with only modest differences in the magnitude of estimated effects. This suggests that the catalytic role of ODA operates broadly across sectoral lines, rather than being confined to commercially oriented or infrastructure-focused domains.[25]

25. On the distinction between development finance in "hard"and "soft" sectors, see, e.g., Qian et al. (2023), Qian et al. (2025), and Zeitz (2021). Note that Figure 2 presents results from specifications in which sectoral ODA variables are entered separately. In Appendix Figure B.3, we show results from models including all four sectoral ODA variables simultaneously.

Figure 2: By Sector: Official Development Finance and DFI Investment

(a) ADM1 (b) ADM2

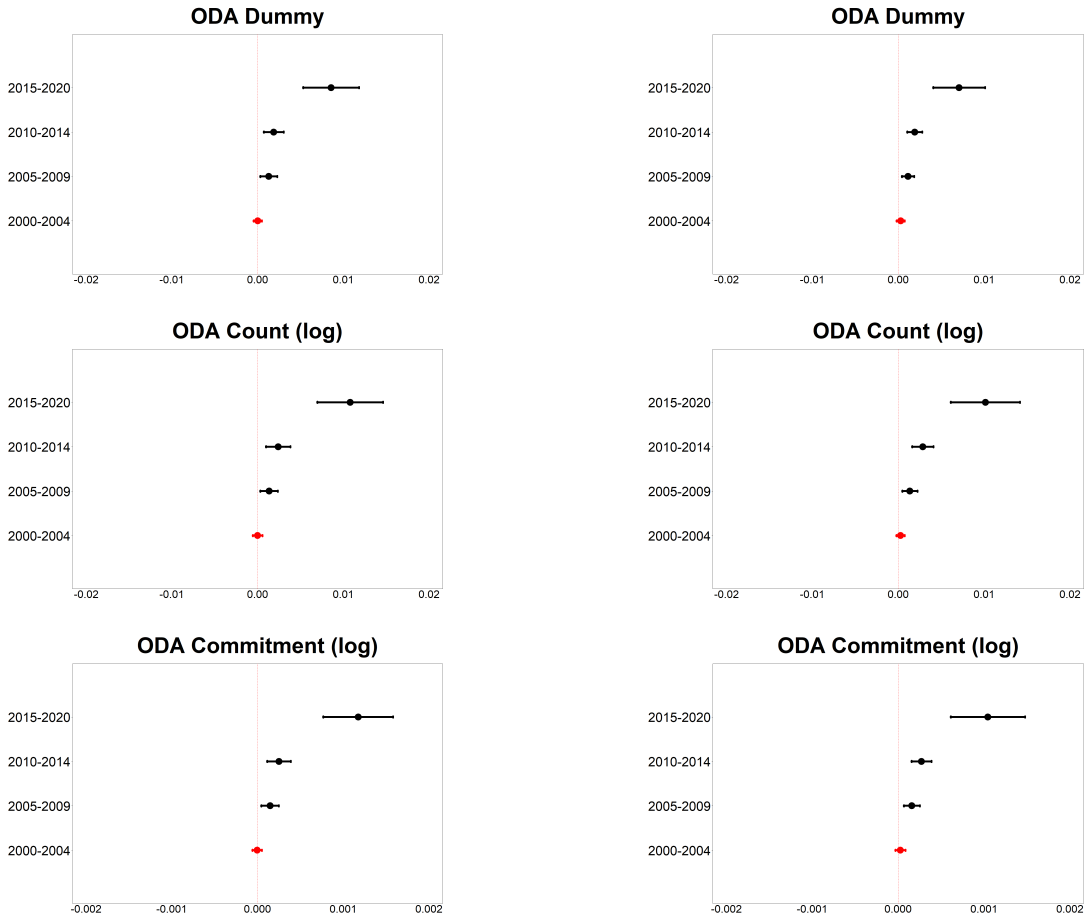
Note: Coefficient estimates with 95% confidence intervals from regressions of DFI presence on sector-specific ODA measures at the ADM1 (a) and ADM2 (b) levels. Each sector is entered separately. All models include donor–year and recipient–year fixed effects and baseline controls; standard errors are clustered at the recipient-country level.

To assess whether the relationship between ODA and DFI investment has evolved over time, we re-estimate the baseline models separately by period. Our theory considers that DFIs have gradually become more embedded with donor bureaucracies and subject to stronger development mandates. As these mandates evolved, the incentives and capacity for coordination with traditional aid agencies may have increased as well. In earlier years, information sharing was often informal, whereas in the most recent period donor systems have increasingly featured formal coordination mechanisms. The 2015 Accra Agenda for Action

led donor governments to further embody DFIs in their bureaucracy and prioritize them in their development cooperation policy. To facilitate DFIs' meeting their development mandate, numerous donors established formal coordination mechanisms with traditional aid agencies, as further explained in section 7.

As shown in Figure 3, the association between ODA and DFI investment is positive and statistically significant in all post-2005 subsamples. Across all three ODA measures and both ADM1 and ADM2 levels, the estimated effects grow larger over time. The strongest associations are observed in the most recent period (2015-2020), consistent with the notion that formal coordination has become more widespread and effective in recent years.

Figure 3: By Period: Official Development Finance and DFI Investment



(a) ADM1

(b) ADM2

Note: Coefficient estimates with 95% confidence intervals from regressions of DFI presence on ODA measures by subperiod at the ADM1 (a) and ADM2 (b) levels. Each subperiod is estimated separately. All models include donor–year and recipient–year fixed effects and baseline controls; standard errors are clustered at the recipient-country level.

6.3 Robustness

We conduct several robustness checks to assess the stability of our core finding—the positive and statistically significant association between ODA activity and subsequent DFI investments. First, we test whether our results are sensitive to alternative strategies for clustering standard errors. While the baseline specification clusters at the recipient-country level, we re-estimate the models using four alternative clustering schemes: (1) region level; (2) coun-

try and year; (3) region and year; and (4) region and country-year. As shown in Figure B.1, the results remain statistically significant across all specificationss, demonstrating the robustness of our findings to both one-way and multiway clustering strategies (Cameron et al. 2011).

Second, we test robustness to alternative fixed-effect specifications. Beyond the baseline, which includes donor-year and recipient-year fixed effects, we estimate models adding either region fixed effects or donor–region fixed effects to absorb time-invariant unobserved heterogeneity at these levels. As shown in Figure B.2, the ODA–DFI association remains positive and statistically significant in nearly all cases, indicating that the results are not driven by persistent regional characteristics or stable donor–region targeting patterns.

Third, we introduce additional covariates to address potential confounding in the ODA–DFI relationship. We sequentially add three sets of controls: (1) environmental conditions—average precipitation[26] (log) and average daily temperature[27]; (2) governance and stability indicators—subnational corruption[28] and the occurrence of coercion or protest events[29]; and (3) geographic and economic characteristics—presence of capital cities, land borders, ports, road density, and mineral deposits.[30] As shown in Tables B.1 and B.2, ODA measures remain positive and statistically significant across all specifications at both the ADM1 and ADM2 levels, underscoring the robustness of our findings to a wide range of potential omitted variables.

While our main analysis centers on the extensive margin—whether a region receives any DFI investment—we also examine the intensive margin, measured by the number and total value of DFI projects. Table B.3 presents results using these alternative dependent variables alongside our baseline specification. The estimated coefficients are similar in sign and magnitude to the baseline, but when both dependent and independent variables are in logs (project count or amount), the implied effect sizes are small. This suggests that ODA

26. Global Precipitation Climatology Centre (GPCC); see https://psl.noaa.gov/data/gridded/data.gpcc.html.
27. Climate Research Unit (CRU) at the University of East Anglia; see https://crudata.uea.ac.uk/cru/data/hrg/cru_ts_4.05/.
28. Global Data Lab's Subnational Corruption Database (SCD), aggregated to ADM1 or ADM2 boundaries using population-weighted averages; see Crombach and Smits (2024).
29. GDELT Project; see https://www.gdeltproject.org/.
30. GLocal database; see Morales-Arilla and Gadgin Matha (2024).

is more strongly associated with the likelihood of any investment than with the scale of investment once it occurs.

To further distinguish between these margins, we estimate two-step hurdle models (Tables B.4–B.5). The first stage ("zero model") uses a binomial specification to estimate the probability of any DFI investment, while the second stage ("positive model") estimates the logged count or amount of investment conditional on at least one project. This approach explicitly separates the decision to enter a region from the decision on how much to invest—processes that may be shaped by different factors—and is well-suited for settings with sparse data and excess zeros (King and Zeng 2001; Feng 2021). Consistent with the alternative dependent variable results, ODA measures are strongly predictive in the zero model but not in the positive model, underscoring that ODA's catalytic role operates mainly through influencing where DFIs invest rather than how much they commit once active.

7 Probing the Mechanism: Coordination for Information Sharing

We theorize that ODA serves as a catalyst for DFI investment. Our argument posits that traditional aid agencies generate investment-relevant information through their localized aid activities, which can be shared with DFI officials. This information reduces uncertainty, enhances the identification of viable opportunities, and ultimately facilitates DFI investments in the same geographic areas. We follow Dörfler and Heinzel (2023) and select pathway cases to probe the plausibility of the mechanism behind our argument. While a case study approach allows us to reinforce our confidence in the direction of causality (Collier 2011; George and Bennett 2005), pathway analysis helps us better understand the mechanisms underlying our theoretical argument (Gerring 2007, p. 241). Scholars of pathway analysis are usually interested in elucidating the mechanisms behind a theory, instead of falsifying a general proposition.

We study how information-sharing takes place through inter-agency coordination for three cases, the United States, Germany, and France. Like other OECD DAC donors, these

three countries have all embraced a bigger focus on private sector development, having established numerous ODA-financed projects and programs that promote business-led development in the Global South. Our case selection is driven by general recommendations provided by pathway analysis scholars (Weller and Barnes 2016, pp. 439-440). The country cases should be expected to feature the relationship of interest tested using large-*N* data but may observe different characteristics. For our purpose, pathway cases are cases where inter-agency coordination for the purpose of information sharing between aid agencies and DFIs is well established but which exhibit differences in bureaucratic structures and the institutional architecture of development cooperation. This selection strategy makes it possible to probe the mechanism we outline in our theory while accounting for different manifestations of inter-agency coordination.

We analyze our pathway cases through a combination of different types of evidence including policy reports and organizational documents, secondary literature and a set of in-depth author interviews with aid and DFI officials from Germany and France. Because of the current political climate in the United States we have not been able to conduct interviews with DFC officials. The analysis of our U.S. pathway case thus draws on documents and existing survey research that is relevant for our research question.

7.1 The United States

The United States has always been a strong supporter of private sector development in the Global South. Over the years, the USAID has implemented a number of programs to facilitate business-led growth. Examples include the Feed the Future Enabling Environment for Food Security (EEFS), a global ODA-financed initiative that aims at creating regulatory environments that allow agriculture sectors to thrive and grow across many regions of the world. Or, the Financing Growth initiative, which was created to improve business access to external financing, and which provided ex-ante financial and economic return analyses. Over the years, these among many other programs, helped build finance and investment expertise within USAID (USAID 2018).

To complement USAID and to allow for private sector financing at greater scale in

emerging economies, the United States established the Overseas Private Investment Corporation (OPIC) as its national development finance institution in 1971. Between 1971 and 2019, OPIC extended nearly USD 200 billion in investments would encourage U.S. firms to invest and operate across regions of the Global South that exhibited risks such as currency inconvertibility, expropriation, and political violence (Akhtar 2016, 1, 4). Designed to be financially self-sustaining, OPIC operated largely on its own revenue, generated by fees paid by investees and interest on U.S. Treasury securities.

As national DFI, OPIC was embedded within the broader U.S. development finance and foreign assistance architecture, alongside USAID, the Department of State, the Department of the Treasury, the Millennium Challenge Corporation (MCC), and the Development Credit Authority. Yet, senior policymakers often debated whether OPIC was too insulated from the rest of the bureaucracy and sufficiently oriented toward development impact (Landers et al. 2020, 3). Until 2007, coordination with other U.S. agencies was mostly informal: OPIC staff consulted with USAID or MCC to identify investment opportunities, but collaboration rarely went beyond ad hoc exchanges.

Then, in its Fiscal Year 2007 Congressional Budget Justification, OPIC highlighted the importance of inter-agency coordination for its investment and committed to aligning its investment pipeline more with U.S. foreign policy (OPIC 2006, 2). OPIC also indicated support for more formalized arrangements that could explore follow-up financing for USAID and MCC projects. This demand for further formalized inter-agency coordination was a reaction to ad-hoc exchanges that often proved inefficient. For instance, in Malawi MCC launched an energy-focused compact that could have generated investment opportunities for OPIC. However, OPIC's financing for renewable energy was only considered as the compact was nearing completion. The ODA program catalyzed public investment way after it started—illustrating the persistent misalignment of programming across agencies (Landers et al. 2020, 12).

In 2013, the U.S. Government intensified efforts to improve coordination between OPIC and other aid agencies. President Obama's Power Africa initiative established the first formal inter-agency coordination platform to regularly bring high-level officials and technical

experts across agencies together (Landers et al. 2020, 16). These formal meetings occurred frequently and on a regular basis to exchange information, coordinate projects, share resources, and collectively address obstacles to decision-making. Much of the group's work occurred at the deal level, where the goal was to identify and prioritize investment opportunities. USAID and MCC provided OPIC with information on potential investments and candidate investees as well as local operating conditions. The State Department offered and facilitated contacts with local politicians that were important when political obstacles emerged before investments were made. The Power Africa Working Group is often cited as a successful inter-agency coordination mechanism, enabling OPIC to participate in large-scale energy investments across sub-Saharan Africa.

Despite being one of the largest national DFIs, OPIC was not expanding as rapidly as its European counterparts. To increase its financing volumes abroad, U.S. Congress passed the Better Utilization of Investments Leading to Development (BUILD) Act in 2018, which merged OPIC with USAID's Development Credit Authority to establish the U.S. DFC. The Act doubled the DFI's portfolio cap from USD 29 billion to USD 60 billion and introduced a stronger mandate that would prioritize investments in low- and lower-middle-income countries and regions of the world (LICs and LMICs), emphasizing the importance of measurable development impact (5). While the DFC retained the ability to operate in upper-middle-income countries (UMICs), the Act markedly restricted the types of investments that could be made there.

This reform created challenges: although LICs and LMICs are countries and regions where capital is scarce but desperately needed, they represent riskier, less mature, and less known and understood markets for investment. Recognizing these constraints, the creaters of the BUILD Act put in place inter-agency coordination mechanisms. At the level of agency headquarter, the Act established the Development Finance Coordination Group (DFCG), inspired by the Power Africa's Working Group (Green and David 2019, 5, 15). Chaired by the DFC Chief Development Officer, the DFCG convenes representatives from all U.S. aid agencies at least four times a year. Its role is to highlight investment opportunities for the DFC, ensure coordination throughout the full lifespan of investments, and raise and discuss

unresolved issues at DFC Board meetings. To secure the exchange of investment-relevant information between USAID field missions and the DFC, the Act also emphasized country-level coordination, requiring each USAID Mission Director to appoint a formal DFC liaison across field missions. In addition, Mission Transaction Units were established in D.C. and across USAID field offices to serve as local coordination hubs that link USAID's development programming with potential DFC investments.

7.2 Germany

Germany is a leading European provider of bilateral development finance. In Germany, the development cooperation policy is set by the Federal Ministry of Cooperation and Development (BMZ -'Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung'), and its implementation is ensured by Germany's financial and technical cooperation aid agencies, the KfW Group ('Kreditanstalt für Wiederaufbau Bankengruppe') and the German Agency for International Cooperation (GIZ, 'Gesellschaft für Internationale Zusammenarbeit'). The KfW Group is composed of two development finance agencies : the KfW Development Bank (KfW DB), Germany's national public development bank which also extends ODA to developing countries, and the country's national DFI, DEG.

The German government maintains a sharp organizational distinction between financial and technical development cooperation with a high degree of autonomy of its aid agencies and limited shared decision-making processes between KfW-DB and GIZ (Erforth and Keijzer 2022, p. 3). In the area of private sector development, however, the German government has insisted on and markedly increased inter-agency coordination between DEG, GIZ and KfW-DB over the last two decades. In its last peer-review of Germany, conducted in 2021, the OECD DAC highlighted the good formal integration of DEG within the broader German development cooperation bureaucracy (OECD 2021b, p. 54).

The BMZ play a key role in steering and aligning DEG's activities in development cooperation. In 2001, the DEG was incorporated into the KfW Group, which has not only promoted information exchange and more policy alignment but also led to a substantial expansion of its investment portfolio (65). To this end, BMZ chairs the DEG Board and par-

ticipates in appointments of board representatives, which include actors from the private sector and civil society. These institutional arrangements ensure that DEG's investment strategy reflects German development priorities.

Coordination between German aid agencies and the DEG also extends to country-level activities, where DEG benefits from investment-relevant knowledge and expertise generated by the GIZ and the KfW-DB about their local operating contexts and networks. To identify potential investments, the DEG seconds members of its staff to so-called "German Desks" that are hosted by financial partners in developing countries. For example, German Desks in Ghana and Nigeria are hosted by Access Bank, the largest commercial bank in Africa; the German Desk Kenya, on the other hand, is hosted by Equity Group Holdings, a large Kenyan holding company. The German Desk mission is to build a client portfolio for the DEG through active participation in conferences and business events. However, while "DEG scouts for companies on their own, [they also] draw on assistance…" (interview 3). For example, GIZ provides DEG with lists of projects on which they are working. DEG also participates to assemblies and meetings hosted either in Germany or in the German embassies located in developing countries to exchange with GIZ and KfW-DB about investment opportunities (interviews 2, 3).

DEG-seconded staff are also integrated in Germany's development cooperation outreach activities in recipient countries. For example, staff members attend regular meetings in recipient country capitals to learn about the activities conducted by German aid agencies. These meetings are called "Mittlerrunde", where all development actors present and share information about their activities on the ground, provide feedback on each other's initiatives, and explore potential synergies and partnerships (interview 4). In addition to these information-sharing arrangements, the BMZ has established formal structures that institutionalize cooperation between financial and technical cooperation agencies. In 2016, the BMZ created the Agency for Business and Economic Development. This agency, jointly implemented by the DEG and the GIZ, formally leverages the GIZ's extensive country presence and advisory capacities for DEG financing—by enabling the identification of viable private sector investment opportunities in contexts where reliable market information is scarce

(interview 2). More recently, the BMZ launched the develoPPP program, which provides modest financing instruments, ranging between €100,000 and €2 million, to local firms in developing markets[31]. While relatively small by national DFI standards, these projects help companies establish a track record that may later qualify them for DEG financing (interview 6). The GIZ often supports these firms in the early stages through technical assistance and advisory services to ensure that they can be considered for development impact. The DEG steps in somewhat later in the process to scale up successful ventures. The develoPPP program illustrates how technical cooperation and financial instruments can be sequentially linked to build a coherent investment pipeline that advances both commercial viability and development impact.

Finally, the DEG has a specialized unit, called DEG Impact, that receives ODA funding and whose mandate is to identify and advise local firms on how to ensure development impact. DEG Impact sources a large part of this information from exchanges with the GIZ whose field operations generate knowledge on the extent to which local firms may (not yet) meet DEG's investment standards (interviews 1, 2). Another DEG consulting arm, DEG Impulse, provides targeted technical assistance and early-stage financing to help local firms improve their environmental, social, and governance (ESG) practices. To ensure this, regular meetings between leadership of DEG Impulse and GIZ's Private Sector Development division ensure close coordination and make sure that advisory support and financing instruments are well aligned (interviews 1, 2). This mechanism not only fosters inter-agency collaboration but also makes it possible that businesses initially supported with ODA-based instruments will later transition to DEG's mainstream portfolio.

7.3 France

Like the United States and Germany, French development cooperation policy has also gradually embraced the promotion of private sector development. The Strategic steering of French development cooperation is carried out by the Ministry of Foreign Affairs, the Ministry of Economy and Finance, and the Ministry for Overseas Territories for operations concerning

31. https://www.developpp.de/en/

those territories. The implementation of development cooperation policy is the responsibility of the AFD Group, which is composed of the French Development Agency (AFD), a development bank that typically provides concessional loans and implements grants allocated by the MFA, alongside Expertise France, a technical cooperation agency and Proparco, France's national DFI. Like Germany with DEG and KfW-DB, Proparco is owned by AFD. Over decades, the AFD has assumed a key role in French development cooperation, providing concessional sovereign loans to improve macroeconomic performance in partner countries.

France's support for macroeconomic policies was pursued alongside efforts to develop the private sector. In 2008, the French government decided to promote the development of specific business-support policies that would connect regions of the Global South to make countries more attractive to international capital and fostering competitive integration into global trade (Marniesse et al. 2016). In the coming years, private sector support became a top priority of the French development cooperation. The French government endowed AFD with new private sector development programs. For example, the AFD launched the ARIZ guarantee to back loans by local banks that would cover credit risk and unlock SME lending. The AFD also began to provide grants to finance technical assistance programs that sought to make business environments more investment-friendly, including support for professional associations, chambers of commerce, or so called investment incubators.

Moreover, the government reinforced the role of Proparco in French development cooperation policy. Created in 1977 as a subsidiary of AFD's predecessor—the *Caisse centrale de coopération économique* (CCCE, which became AFD in 1998), Proparco had long been overshadowed by AFD in the area of development finance. Now, the French government started to view Proparco as a central instrument of its development cooperation policy. In 2008, Christine Lagarde, then Minister of Finance, led a €300 millions euro capital increase to Proparco (Proparco 2008, 20). While, up to this point, Proparco's geographical focus was on Africa, Proparco now started investing in Latin America and Asia. To enable Proparco to invest more broadly within France's development cooperation framework, inter-agency coordination with AFD was strengthened in 2009 through the creation of the Facility for

Investment and Support to Firms in Africa (FISEA). (Proparco 2025). Funded by the Ministry of Foreign Affairs with an initial €250 million in ODA, FISEA was designed to support firms in markets typically outside the radar of DFIs but with significant development potential. In this arrangement, AFD's extensive field presence and client knowledge allowed it to identify promising clients and share this information with Proparco, which then provided financing.

In the following years, Proparco increased its business volume, and the government enhanced coordination with AFD. In 2016, Socialiste President Hollande reorganized the French aid bureaucracy to increase coordination between AFD, Expertise France, and Proparco. Under his leadership, the government merged the three institutions under the umbrella of the AFD Groups to ensure that AFD can exercise not only strategic but also more routine oversight of Proparco's activity (Dufief 2022). This oversight is ensured by quarterly meetings of Proparco's Board of Directors, which include representatives of the AFD.

In addition, each month, Proparco's investment committee reviews the alignment of the largest proposed projects with Proparco's own strategy and the mission assigned to the AFD Group as a whole. The committee also also assesses financial conditions and risks. These institutional reforms strengthened information sharing between AFD and Proparco.

AFD is responsible for information production and the development of "sectoral intervention frameworks." These documents outline the policy priorities tat all members of the AFD Group, including Proparco, should follow (Sénat 2012, 17). These guiding documents are broad and not binding for Proparco's investment decisions. However, they are accompanied by supporting documents that facilitate aid decision-making across aid agencies. The AFD also conducts a number of feasibility studies, environmental and social impact assessments, and makes research research notes available to Proparco (interview 7). These documents are usually produced by AFD officials based in field offices and have proven effective sources of information for facilitating Proparco's investment decision-making.

The 2016 reform transformed FISEA into FISEA+, giving it a clearer mandate to promote market development in fragile states. While still managed by AFD and Proparco, the instrument was largely financed by the Ministry of Foreign Affairs, which supports op-

erations in generally poorer geographies (OECD 2024). The Ministry's involvement not only expanded the financial base but also increased reporting requirements and information exchange across ministries and agencies. It provided Proparco with insights from AFD-financed grants targeting riskier regional markets and beneficiaries that had previously lacked access to finance. Although financial returns have, at times, been negative, Proparco's strategic emphasis on development impact and policy objectives, reinforced by inter-agency information flows, has allowed it to prioritize longer time horizons even when short-term loss occurs(Dufief 2022).

Finally, the AFD facilitates Proparco's work through its policy dialogue with recipient governments. Negotiations between AFD and sovereign partners often create opportunities that allow for the integration of non-sovereign operations. In some cases, the AFD proposes "sub-participation agreements" as part of broader development projects. Although the main financing agreement is signed between AFD and the recipient government, a portion is delegated to Proparco to conduct non-sovereign activities that contribute to the project's objectives (Sénat 2012, p. 11). These arrangements are largely of informational character, since they allow Proparco to access the contextual knowledge, monitoring data, and government relationships cultivated by the AFD. This reduces the information asymmetry that typically constrains private sector operations across markets and regions of developing countries.

8 Conclusion

As traditional aid faces increasing fiscal and political pressures, national DFIs have assumed a more prominent role in the architecture of development cooperation, especially in recipient contexts characterized by limited private investment. DFIs are expected to help bridge the development financing gap. Yet, they frequently encounter significant informational barriers, including uncertainty about market conditions, investment opportunities, and firm credibility.

In this paper, we examined whether the information generated through ODA-funded activities facilitates DFI investment. We argued that traditional aid can shape DFI investment through inter-agency coordination. Traditional aid agencies produce information through

their ODA-financed projects and activities, building up information about regional markets in developing countries. DFIs use this information to identify investment opportunities across regions of the Global South that are commercially viable and that can generate positive development outcomes. We hypothesized that national DFIs are more likely to invest in regions where there is more ODA.

Using an original geocoded dataset of DFI investments around the world, we find strong empirical support for our hypothesis. Across a range of specifications, we show that regions with higher levels of ODA activity—measured using the GODAD dataset—are significantly more likely to receive DFI investments. This positive association holds across a wide range of robustness checks and is evident for ODA in different sectors. The pattern also becomes noticeably stronger in more recent years, coinciding with the increasing institutionalization of coordination between traditional aid agencies and DFIs. Together, these findings offer compelling evidence that traditional ODA plays a catalytic role in guiding DFI engagement by reducing information barriers.

To further probe our proposed inter-agency coordination mechanism, we conducted extensive qualitative research on three donor countries: the United States, Germany, and France. Drawing on in-depth interviews with aid and DFI officials in Germany and France, as well as an analysis of organizational and policy documents, and secondary literature, we find ample empirical support for our mechanism. In all three cases, coordination arrangements facilitating information exchange from donor agencies to DFIs are evident. Moreover, we observe an increasing formalization of inter-agency coordination over time. The growing importance assigned by donor governments to DFIs in financing international development is consistently associated with the introduction of formal coordination mechanisms with aid agencies.

Our study makes several empirical contributions. First, we extend the literature on foreign aid by studying national DFIs. We shed light on DFIs as an important bilateral development cooperation instrument for Global North donors. Previous research has explored how national DFIs have emerged within the European Financial Architecture for Development (Bau and Dietrich 2025) and the impact of DFIs on the on-lending of financial institutions in

recipient countries (Léon 2025). However, scholarship lacked systematic empirical evidence on factors that shape DFI investment across donor countries. We leveraged an original, geocoded database of global bilateral DFI investments across 12 countries to fill this gap.

Second, we advance our overall understanding of bilateral development finance by introducing DFIs as a complementary instrument to ODA. We contribute to a growing literature that studies aid allocation at the subnational level, which has largely examined multilateral flows (Briggs 2017, 2018, 2021; Jablonski 2014), by extending the focus on bilateral providers (Dreher, Fuchs, et al. 2019; Bomprezzi, Dreher, et al. 2025; Bomprezzi, Longhi, et al. 2025; Eichenauer et al. 2020; Bommer et al. 2022; Asmus-Bluhm et al. 2025; Dreher et al. 2025).

Our work also provides a number of theoretical contributions. First, we add to existing debates on aid coordination. In contrast to existing research that focuses on coordination among donors, we propose another understanding of the concept as we study the interactions between agencies within donors. We thus speak to the literature on donor bureaucracy (Carcelli 2023, 2024), suggesting that while DFIs and traditional aid organizations may have different mandates and preferences, they still coordinate to enable information exchange. Our findings add more nuance to claims advanced in this literature that coordination would be weaker for donor with more fragmented bureaucracies (Carcelli 2024). Second, we conceptualize traditional aid as a catalyst for other forms of bilateral development finance, notably national DFIs. So far, the existing understanding of foreign aid as catalyst has exclusively focused on the particular role of international organizations (Dellmuth 2025; Ferrière 2022; Stubbs et al. 2016). We show that traditional aid agencies can leverage their ODA-fiananced knowledge and expertise to inform the decision-making of other bilateral development finance institutions.

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Appendix

Table of Contents

A Orbis Matched Firms

Figure A.1: Distribution of DFI firms with Orbis match, by number of times firm received investment

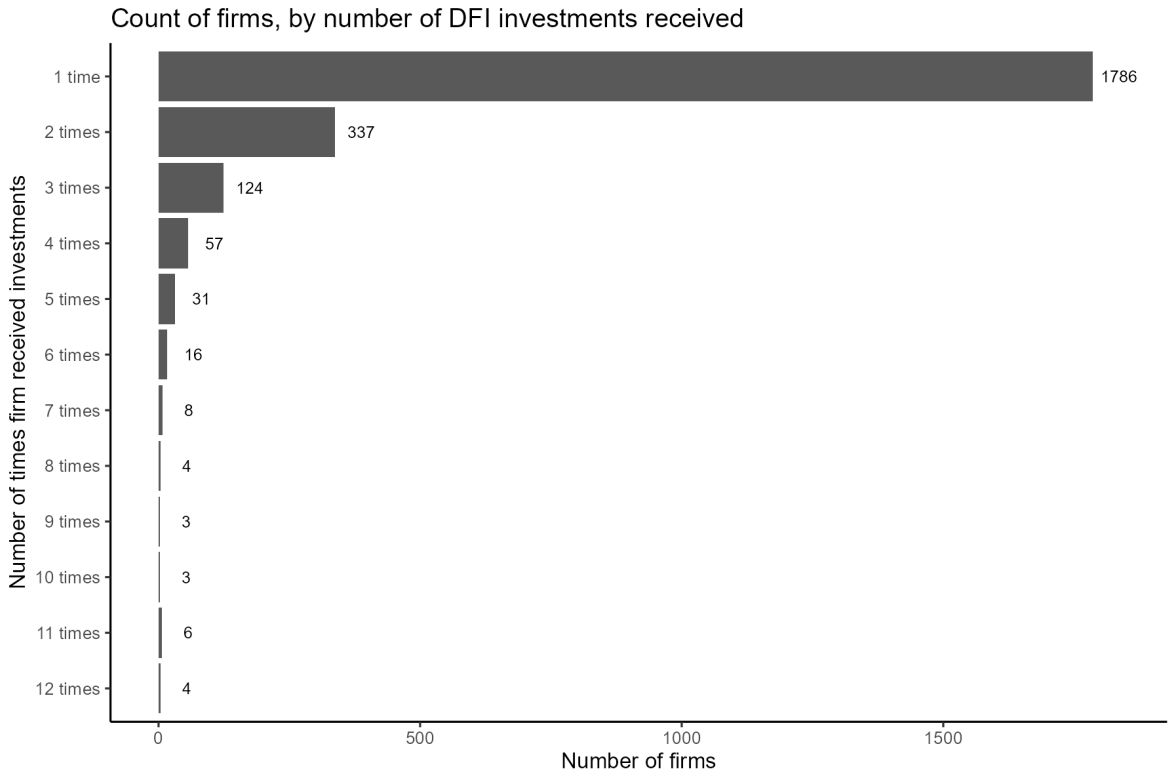


Figure A.2: Number of DFI projects in the dataset, by donor country and commitment year.

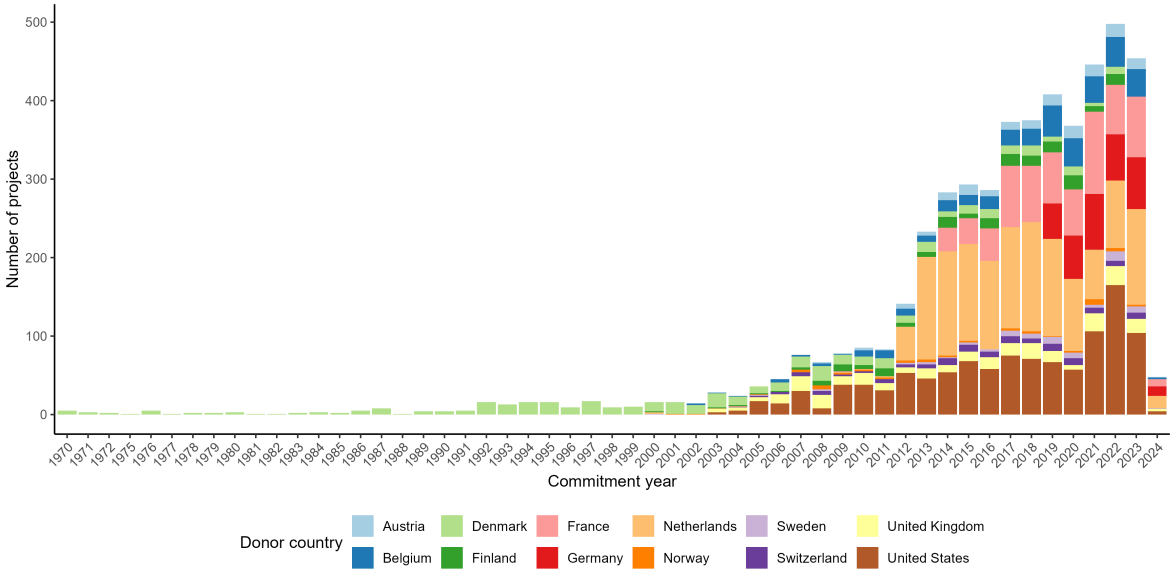
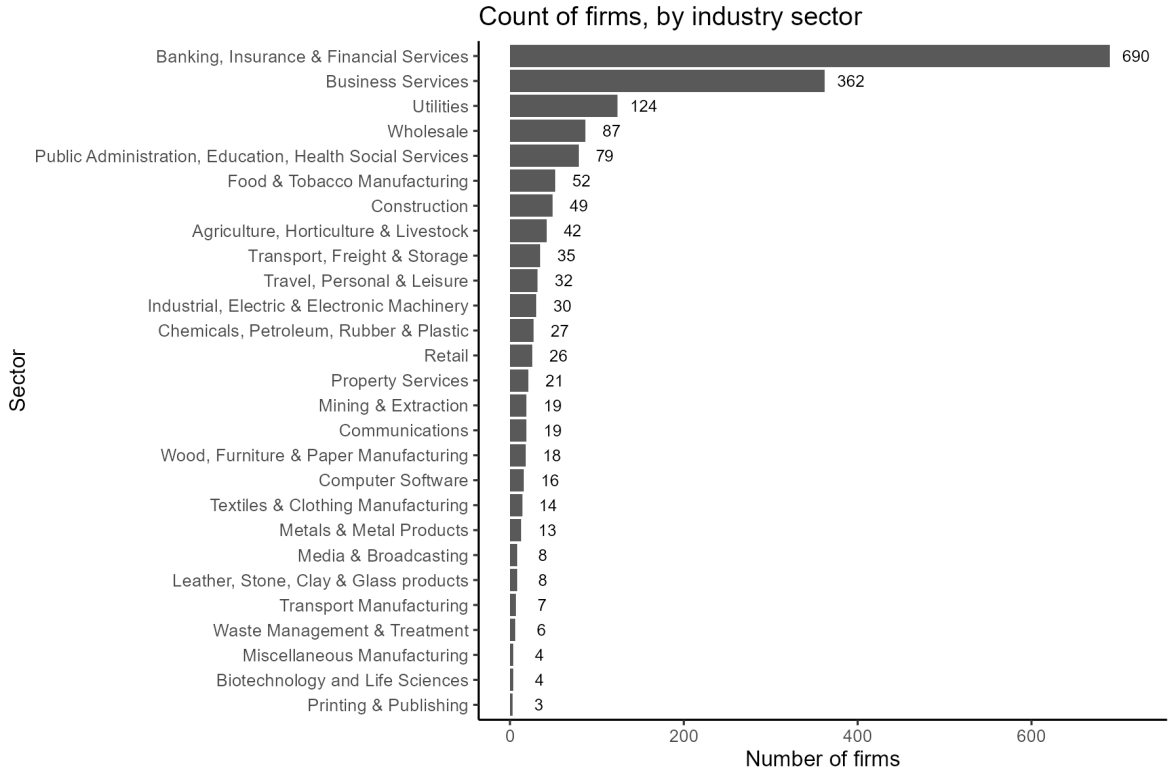


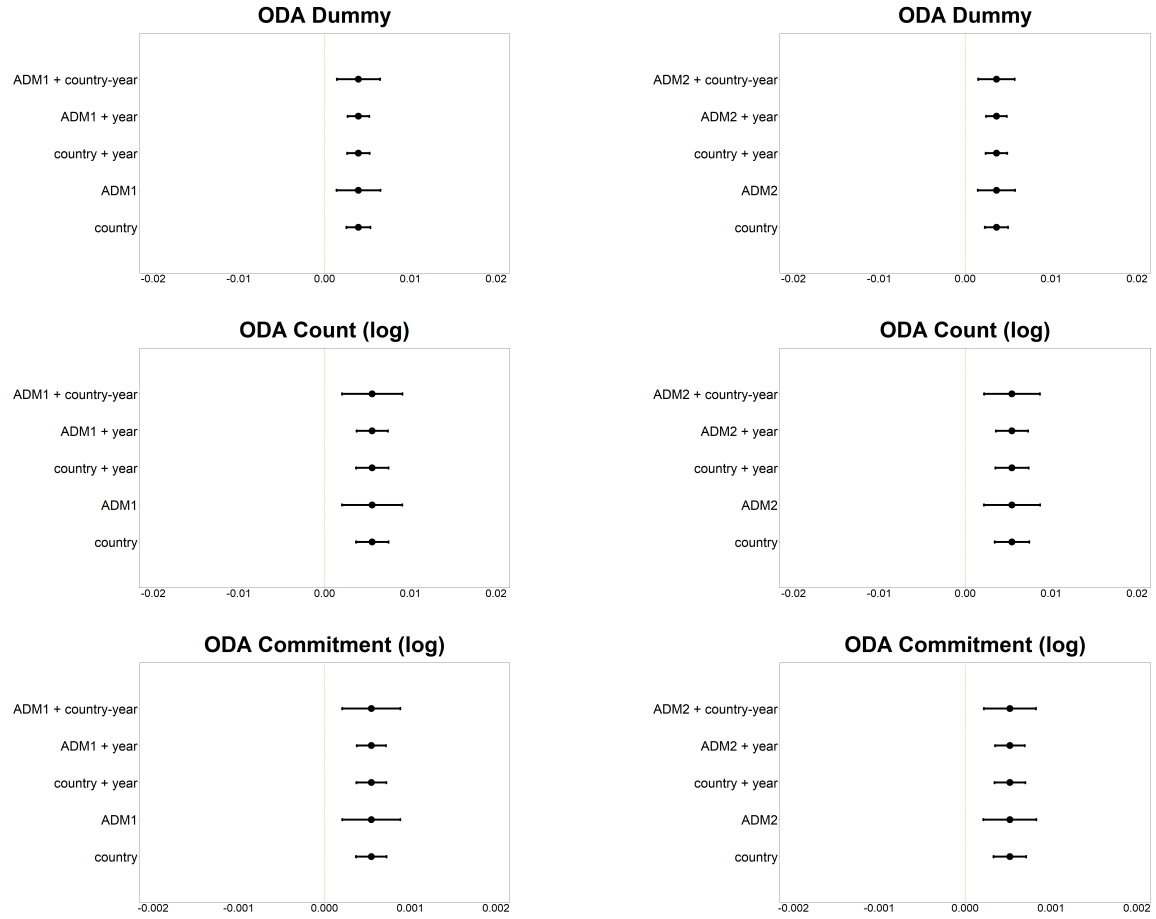
Figure A.3: Distribution of matched DFI with Orbis match by industry sector. Sectoral information is sourced from national business registers and recoded by Orbis.



B Robustness Checks

B.1 Alternative Clustering of Standard Errors

Figure B.1: Alternative Clustering Specifications: Official Development Finance and DFI Investment

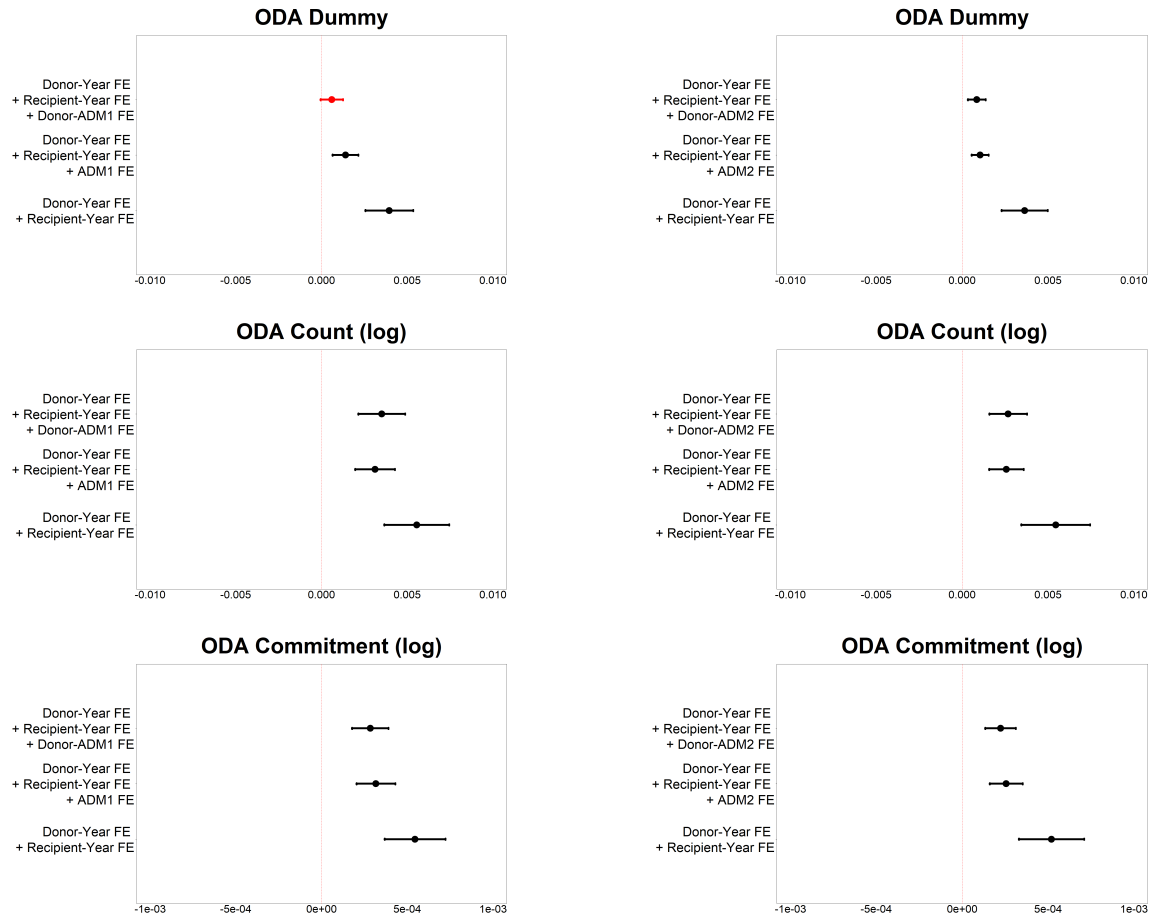


(a) ADM1 (b) ADM2

Note: Coefficient estimates with 95% confidence intervals from regressions of DFI presence on ODA measures at the ADM1 (a) and ADM2 (b) levels under alternative clustering schemes, as indicated on the y-axis. All models include donor–year and recipient–year fixed effects and baseline controls.

B.2 Alternative Fixed Effects Specifications

Figure B.2: Alternative Fixed Effects Specifications: Official Development Finance and DFI Investment



(a) ADM1

(b) ADM2

Note: Coefficient estimates with 95% confidence intervals from regressions of DFI presence on ODA measures at the ADM1 (a) and ADM2 (b) levels under alternative fixed effects specifications, as indicated on the y-axis. All models include baseline controls; standard errors are clustered at the recipient-country level.

B.3 Additional Control Variables

Table B.1: Additional Covariates (ADM1): Official Development Finance and DFI Investment

	DV = DFI Dummy								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ODA Dummy	0.00336***			0.00298***			0.00316***		
	(0.00060)			(0.00056)			(0.00066)		
ODA Count (log)		0.00467***			0.00476***			0.00486***	
		(0.00082)			(0.00084)			(0.00093)	
ODA Commitment (log)			0.00047***			0.00047***			0.00047***
			(0.00008)			(0.00008)			(0.00009)
Population (log)	0.00109***	0.00099**	0.00106***	0.00021	0.00009	0.00018	0.00078*	0.00065+	0.00075*
	(0.00031)	(0.00030)	(0.00031)	(0.00029)	(0.00029)	(0.00028)	(0.00037)	(0.00035)	(0.00037)
Nighttime Light (log)	0.00288***	0.00283***	0.00286***	0.00251***	0.00251***	0.00252***	0.00127+	0.00129+	0.00128+
	(0.00052)	(0.00050)	(0.00051)	(0.00056)	(0.00055)	(0.00055)	(0.00071)	(0.00071)	(0.00071)
Leader Birthplace	0.00643***	0.00631***	0.00638***	0.00539*	0.00531*	0.00535*	0.00466*	0.00463*	0.00466*
	(0.00181)	(0.00180)	(0.00181)	(0.00209)	(0.00207)	(0.00208)	(0.00180)	(0.00179)	(0.00179)
Precipitation (log)	-0.00134**	-0.00131***	-0.00133**						
	(0.00040)	(0.00039)	(0.00040)						
Temperature	0.00001	0.00000	0.00000						
	(0.00007)	(0.00007)	(0.00007)						
Corruption				-0.00006+	-0.00006+	-0.00006+			
				(0.00003)	(0.00003)	(0.00003)			
Coercion				0.00173***	0.00163***	0.00168***			
				(0.00040)	(0.00038)	(0.00039)			
Protest				0.00323***	0.00310***	0.00317***			
				(0.00073)	(0.00070)	(0.00072)			
Capital							0.01356***	0.01310***	0.01334***
							(0.00278)	(0.00274)	(0.00276)
Land Border							0.00002	0.00001	0.00001
							(0.00051)	(0.00050)	(0.00051)
Ports							0.00037	0.00035	0.00037
							(0.00024)	(0.00023)	(0.00024)
Road Density							0.00063	0.00061	0.00062
							(0.00066)	(0.00066)	(0.00066)
Mineral Deposit							-0.00107	-0.00099	-0.00105
							(0.00201)	(0.00194)	(0.00199)
Donors	12	12	12	12	12	12	12	12	12
Recipients	145	145	145	128	128	128	144	144	144
Regions	2607	2607	2607	2294	2294	2294	2473	2473	2473
Obs	631548	631548	631548	504420	504420	504420	628980	628980	628980
R2	0.033	0.034	0.033	0.040	0.041	0.041	0.040	0.041	0.040
R2 Adj.	0.028	0.029	0.029	0.035	0.036	0.035	0.035	0.036	0.035
Donor-Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Recipient-Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes: Results from ordinary least squares regression. Robust standard errors clustered at recipient country reported in parentheses. OECD-DAC recipients excluded.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Table B.2: Additional Covariates (ADM2): Official Development Finance and DFI Investment

	DV = DFI Dummy								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ODA Dummy	0.00313***			0.00377***			0.00273***		
	(0.00060)			(0.00071)			(0.00062)		
ODA Count (log)		0.00469***			0.00591***			0.00442***	
		(0.00090)			(0.00111)			(0.00093)	
ODA Commitment (log)			0.00045***			0.00058***			0.00042***
			(0.00009)			(0.00011)			(0.00009)
Population (log)	0.00008**	0.00007**	0.00008**	0.00009	0.00007	0.00009	0.00005+	0.00005+	0.00005+
	(0.00002)	(0.00002)	(0.00002)	(0.00008)	(0.00008)	(0.00008)	(0.00003)	(0.00003)	(0.00003)
Nighttime Light (log)	0.00018***	0.00018***	0.00018***	0.00030***	0.00029***	0.00030***	0.00006+	0.00006+	0.00006+
	(0.00005)	(0.00005)	(0.00005)	(0.00008)	(0.00008)	(0.00008)	(0.00004)	(0.00003)	(0.00004)
Leader Birthplace	0.00512***	0.00498***	0.00507***	0.00654**	0.00636**	0.00647**	0.00348*	0.00343*	0.00346*
	(0.00129)	(0.00126)	(0.00128)	(0.00206)	(0.00203)	(0.00205)	(0.00142)	(0.00141)	(0.00142)
Precipitation (log)	-0.00005	-0.00005	-0.00005						
	(0.00003)	(0.00003)	(0.00003)						
Temperature	0.00000	0.00000	0.00000						
	(0.00000)	(0.00000)	(0.00000)						
Corruption				-0.00003**	-0.00003**	-0.00003**			
				(0.00001)	(0.00001)	(0.00001)			
Coercion				0.00116***	0.00111***	0.00114***			
				(0.00026)	(0.00026)	(0.00026)			
Protest				0.00175***	0.00167***	0.00172***			
				(0.00037)	(0.00036)	(0.00037)			
Capital							0.01359***	0.01302***	0.01336***
							(0.00227)	(0.00219)	(0.00224)
Land Border							-0.00004	-0.00004	-0.00005
							(0.00004)	(0.00004)	(0.00004)
Ports							0.00016	0.00015	0.00016
							(0.00011)	(0.00010)	(0.00011)
Road Density							0.00013**	0.00013**	0.00013**
							(0.00005)	(0.00005)	(0.00005)
Mineral Deposit							0.00009+	0.00009+	0.00009+
							(0.00005)	(0.00005)	(0.00005)
Donors	12	12	12	12	12	12	12	12	12
Recipients	121	121	121	115	115	115	121	121	121
Regions	32996	32996	32996	20663	20663	20663	25753	25753	25753
Obs	8518728	8518728	8518728	2094240	2094240	2094240	6933276	6933276	6933276
R2	0.005	0.006	0.005	0.015	0.016	0.015	0.011	0.012	0.011
R2 Adj.	0.004	0.006	0.005	0.013	0.015	0.014	0.010	0.011	0.011
Donor-Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Recipient-Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes: Results from ordinary least squares regression. Robust standard errors clustered at recipient country reported in parentheses. OECD-DAC recipients excluded.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

B.4 Alternative Dependent Variables

Table B.3: Alternative Dependent Variables: Official Development Finance and DFI Investment

	DFI Dummy		DFI Count (log)		DFI Amount (log)	
	ADM1	ADM2	ADM1	ADM2	ADM1	ADM2
	(1)	(2)	(3)	(4)	(5)	(6)
Aid Dummy	0.00395***	0.00363***				
	(0.00070)	(0.00068)				
Aid Count (log)			0.00520***	0.00499***		
			(0.00099)	(0.00098)		
Aid Commitment (log)					0.00939***	0.00874***
					(0.00156)	(0.00162)
Population (log)	0.00117**	0.00008***	0.00097**	0.00007**	0.01852**	0.00132***
	(0.00036)	(0.00002)	(0.00032)	(0.00002)	(0.00574)	(0.00038)
Nighttime Light (log)	0.00315***	0.00020***	0.00268***	0.00016***	0.04968***	0.00319***
	(0.00056)	(0.00005)	(0.00050)	(0.00004)	(0.00894)	(0.00086)
Leader Birthplace	0.00736***	0.00579***	0.00703***	0.00527***	0.12054***	0.09333***
	(0.00198)	(0.00148)	(0.00191)	(0.00137)	(0.03197)	(0.02377)
Donors	12	12	12	12	12	12
Recipients	145	121	145	121	145	121
Regions	2611	33060	2611	33060	2611	33060
Obs	664212	8959560	664212	8959560	664212	8959560
R2	0.034	0.005	0.035	0.007	0.034	0.006
R2 Adj.	0.029	0.005	0.030	0.006	0.030	0.006
Donor-Year FE	✓	✓	✓	✓	✓	✓
Recipient-Year FE	✓	✓	✓	✓	✓	✓

Notes: Results from ordinary least squares regression. Robust standard errors clustered at recipient country reported in parentheses. OECD-DAC recipients excluded.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

B.5 Two-Step Hurdle Models

Table B.4: Two-Step Hurdle Model – Zero Model

	DV = DFI Dummy					
		ADM1			ADM2	
	(1)	(2)	(3)	(4)	(5)	(6)
ODA Dummy	0.62801***			0.98155***		
	(0.11175)			(0.17682)		
ODA Count (log)		0.50476***			0.69884***	
		(0.07244)			(0.12641)	
ODA Commitment (log)			0.06396***			0.09710***
			(0.00897)			(0.01405)
Population (log)	1.27188***	1.23772***	1.25568***	1.21979***	1.21876***	1.21521***
	(0.12402)	(0.12141)	(0.12324)	(0.14293)	(0.13986)	(0.13991)
Nighttime Light (log)	1.66051***	1.63780***	1.64943***	1.44220***	1.44161***	1.44481***
	(0.14608)	(0.14286)	(0.14477)	(0.16112)	(0.16516)	(0.16253)
Leader Birthplace	0.80527*	0.80542*	0.79687*	1.61530***	1.60966***	1.62464***
	(0.37318)	(0.37340)	(0.37482)	(0.39506)	(0.38132)	(0.38910)
Donors	12	12	12	12	12	12
Recipients	145	145	145	121	121	121
Regions	2611	2611	2611	33060	33060	33060
Obs	664212	664212	664212	8959560	8959560	8959560
Pseudo R2	0.236	0.238	0.238	0.332	0.333	0.334
AIC	13154.0	13112.8	13121.4	13765.8	13738.2	13724.1
BIC	49757.0	49715.8	49724.4	52596.6	52569.0	52554.9
Donor-Year FE	✓	✓	✓	✓	✓	✓
Recipient-Year FE	✓	✓	✓	✓	✓	✓

Notes: Results from binomial regression. Robust standard errors clustered at recipient country reported in parentheses. OECD-DAC recipients excluded.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Table B.5: Two-Step Hurdle Model – Positive Model

	DFI Count (log)		DFI Amount (log)	
	ADM1	ADM2	ADM1	ADM2
	(1)	(3)	(2)	(4)
ODA Count (log)	0.03755	0.01921		
	(0.01930)	(0.01790)		
ODA Commitment (log)			0.01625	0.01659
			(0.02197)	(0.02126)
Population (log)	0.05802*	-0.01336	0.26698	0.24113*
	(0.02330)	(0.01550)	(0.18897)	(0.11186)
Nighttime Light (log)	0.02418	0.05910***	0.34474*	0.35760*
	(0.01277)	(0.00978)	(0.15467)	(0.15190)
Leader Birthplace	0.00272	0.06810	-0.18590	-0.62174
	(0.04631)	(0.05070)	(0.43557)	(0.50114)
Donors	12	12	12	12
Recipients	99	90	99	90
Regions	218	254	218	254
Obs	1173	1022	1173	1022
R2	0.639	0.641	0.794	0.746
R2 Adj.	0.112	0.104	0.492	0.365
Donor-Year FE	✓	✓	✓	✓
Recipient-Year FE	✓	✓	✓	✓

Notes: Results from ordinary least squares regression. Robust standard errors clustered at recipient country reported in parentheses. OECD-DAC recipients excluded.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

B.6 Sectoral Effects (Joint Estimation)

Figure B.3: Official Development Finance by Sector and DFI Investment (Joint Estimation)

(a) ADM1 (b) ADM2

Note: Coefficient estimates with 95% confidence intervals from regressions of DFI presence on sector-specific ODA measures at the ADM1 (a) and ADM2 (b) levels. Are sectors entered together. All models include donor–year and recipient–year fixed effects and baseline controls; standard errors are clustered at the recipient-country level.

C List of Interviewees

1. Interview with DEG Senior Official, 04/17/2025 (virtual)
2. Interview with GIZ Senior Official, 04/11/2025 (virtual)
3. Interview with KfW-DB Senior Official, 04/22/2025 (virtual)
4. Interview with German Desk Official in Ghana, 05/06/2025 (virtual)
5. Interview with AFD Senior Researcher, 05/06/2025 (AFD Head-Quarters, Paris)
6. Interview with DEG Senior Evaluator, 05/08/2025 (virtual)
7. Interview with Proparco Senior Official, 05/15/2025 (virtual)