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Late-Stage Displacement and the Additionality of Multilateral Development Banks

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Abstract:

The development finance architecture has increasingly relied on multilateral development banks (MDBs) to mobilise private capital in support of the Sustainable Development Goals. Practitioners, however, describe a recurring frustration: MDBs entering transactions after the private sector has already established contact and shown appetite to invest. This thesis examines whether this pattern on the project-level matches the aggregate data on the country-level and uses a mixed-methods design combining thirteen semi-structured interviews with cross-sector practitioners across eight regions with a two-way fixed effects panel of 105 developing countries over 2000–2024. Disaggregated OECD DAC data isolates IFC-specific flows from general MDB lending, enabling a more precise test than prior aggregate specifications. The qualitative results document late-stage displacement as a consistent pattern grounded in practitioner perceptions. The quantitative analysis documents a robust positive within-country correlation between general MDB lending and gross fixed capital formation, alongside a null result for IFC-specific flows. The absence of a detectable IFC effect at the country level is consistent with the mechanism operating beneath the aggregate level. If the IFC displaces private capital in certain transactions whilst catalysing it in others, the net-country effect could be indistinguishable from zero. The thesis contributes a theoretical account of late-stage displacement as a form of crowding-out in the development finance context, the first recurrent practitioner-based documentation of the late-stage displacement mechanism, and a quantitative decomposition isolating IFC activity from aggregate MDB flows.

Keywords: Multilateral development banks, private capital mobilisation, additionality, development finance, mixed methods

JEL Classification: F21, F35, G24, H81, O16, O19

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List of Abbreviations:

AAAA	Addis Ababa Action Agenda
AfDB	African Development Bank
AIIB	Asian Infrastructure Investment Bank
AsDB	Asian Development Bank
CAF	Capital Adequacy Framework
DAC	Development Assistance Committee (OECD)
DFI	Development Finance Institution
DSP	Domestic Market Development
ECA	Eastern Europe and Central Asia
FDI	Foreign Direct Investment
G20	Group of Twenty
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFC	International Finance Corporation
IMF	International Monetary Fund
LAC	Latin America and the Carribean
LIC	Low Income Country
LMIC	Low-Middle Income Country
MDB	Multilateral Development Bank
MENA	Middle East and North Africa
MFA	Ministry of Foreign Affairs
MIC	Middle-Income Country
ODA	Official Development Assistance
ODI	Overseas Development Institute

OECD	Organisation for Economic Co-operation and Development
OOF	Other Official Flows
PPP	Public-Private Partnership
PPI	Private Participation in Infrastructure
RDB	Regional Development Bank
SDG	Sustainable Development Goal
SSA	Sub-Saharan Africa
WBG	World Bank Group
WDI	World Development Indicators
WGI	Worldwide Governance Indicators

1. Introduction

1.1 Context

There has been a shift in how development finance is approached during the past decade (Mazzucato and Vieira de Sá, 2025). The annual gap between available public capital and estimated development needs today is at approximately USD 4 trillion, a shortfall that official development assistance can not bridge alone (United Nations, 2024, 2026). Multilateral institutions and donor governments are turning to private capital mobilisation. The 2015-Addis Ababa Action Agenda formalised this shift, embedding private sector mobilisation within the SDG financing framework and calling on multilateral development banks (MDBs) to catalyse greater volumes of private investment (United Nations, 2015; Mazzucato and Vieira de Sá, 2025). The G20 Capital Adequacy Framework Report in 2022 reinforced this direction further, urging MDBs to stretch their balance sheets to mobilize private capital at scale (G20 Independent Expert Group, 2023).

The urgency of this agenda has grown as public finance has decreased. Official Development Assistance budgets across major donor countries have faced sustained pressure, with several prominent bilateral programmes scaling back (Human Rights Watch, 2025; Gichuki, 2026). The dismantling of USAID in early 2025 represented a major disruption to the global development assistance system (Human Rights Watch, 2025). Thus, the question is whether or not the multilateral development- and global political system, ultimately, is prepared to face these recent developments.

1.2 The Problem

The role of multilateral development aid has been both a tale of great success at times but equally one that in various contexts has failed to implement and achieve what it is mandated to deliver, which has been a contentious topic within economics and political development alike for decades (Easterly, 2001; Woods, 2001). Given the decrease in ODA and the fact recipient countries' needs for financing still remains prevalent (United Nations, 2024, 2026), usage of

resources by International Financing Institutions like the multilateral- and regional development banks (MDBs & RDBs) become increasingly important to understand.

Recently, through the work experience of the authors of this paper with MDBs, IFIs and the Ministry of Foreign Affairs (MFA), there was attention brought to an emergence of practitioner accounts that potentially has received insufficient analytical attention. Specifically, independent accounts made by private sector practitioners working in contexts in low-income countries (LICs), low-middle income countries (LMICs) and middle-income (MICs) proclaimed that on different project-levels had experienced difficulties in collaborating with MDBs and IFIs. These were accounts made by project managers for infrastructure and project finance banks, fund managers and institutional investors operating across these regions. Consequently, this was brought to the attention of the Ministry of Foreign Affairs and Finance and to high-level decision makers. As multiple independent accounts described the same phenomenon, it became clear that the topic should be evaluated. Specifically, the observation that MDBs such as the IFC would enter transactions/projects at late stages of the financing process, for example after private sector consortia have already completed due diligence, negotiated terms and contracts, and in some cases received credit approval or closed first-round financing.

This thesis will refer to this phenomenon as "*late-stage displacement"* throughout the text, which could be described as a form of crowding-out, but is different in some regards in contrast to the larger crowding-out literature which traditionally refers to aggregate channels of public capital absorbing financing that private capital might otherwise have provided (Carlson & Spencer, 1975; Friedman, 1978). Late-stage displacement in this paper is defined as an MDB or IFI entering into a transaction after private sector participants have committed capital, completed due diligence and absorbed general transaction costs - entering the transaction at the point of lowest residual risk, offering terms that the private sector are unable to match. The consequence is displacement instead of catalysis of private capital, welfare implications are that the total pool of investments shrink and inflow of MDB capital is a substitute, whilst impacting the private sector's incentives to engage in these markets. Not entirely unrelated to the theoretical foundations within transaction cost economics, such as the hold-up problem in incomplete contracts literature (Klein et al., 1978; Williamson, 1985).

The rational response would be to reduce upfront investment in due diligence and transaction development, generating an underinvestment equilibrium that undermines the private capital mobilisation agenda from within (Grossman & Hart, 1986; Hart & Moore, 1988). This becomes problematic as the MDBs operate under explicit additionality mandates that formally preclude displacing pre-existing private sector alternatives (Attridge & Engen, 2019). Shareholder governments may also influence MDB lending allocation based on strategic interests (Dreher et al., 2009), whereas MDBs' capital structure creates structural financing advantages (Humphrey, 2014). Together, these incentive structures could produce late-stage displacement as a predictable institutional outcome rather than individually project-level misconduct. This distinction is, if verifiable in data, both analytically important and central to the framing this thesis adopts.

1.3 Purpose and Motivation

This thesis examines whether the supposed crowding-out or crowding-in occurs, and aims to identify if it *de facto* is that the mechanism is late-stage displacement, or due to other factors. The motivation is both academic and policy-practical. Academically, late-stage displacement represents a gap in the development finance literature that existing crowding out frameworks do not capture. The mechanism is different analytically compared to general crowding out, and raises theoretical questions about hold-up problems, information asymmetries, and institutional incentive structures, not previously applied to MDB literature. From a policy perspective, the thesis is written at a moment when the development finance architecture is under active reconsideration (Gichuki, 2026; Mazzucato and Vieira de Sá, 2025; Human Rights Watch, 2025). Lastly, the intention is to evaluate whether the provided accounts are true and verifiable quantitatively using globally available and published data.

1.4 Structure of the Thesis

The remainder of this thesis is organised as follows. Section 2 reviews the academic literature on crowding-out theory, hold-up problems, information economics, and the political economy of MDB governance. Section 3 presents the hypotheses, and Section 4 presents the

mixed-methods methodology, data sources, and analytical limitations. Section 5 presents qualitative findings from practitioner interviews and quantitative analysis. Section 6 discusses the findings in relation to the theoretical framework and draws out implications for MDB reform. Section 7 is the conclusion.

2. Literature Review

2.1 Welfare-Theoretic Foundations of MDB Intervention

Multilateral development banks and blended finance is fundamentally grounded in a public-economics dimension which is in favor of public intervention in capital markets (Attridge and Engen, 2019). Such intervention is justified in the presence of market failures that lead to suboptimal investment outcomes (Attridge and Engen, 2019; Rodrik, 2008a). Whilst one can discuss what suboptimal investment outcomes are, typically in developing and emerging economies, these failures are particularly pronounced and include externalities, such as; coordination failures that prevent efficient equilibrium outcomes, and information asymmetries that increase the perceived risk of investment (Stiglitz, 1989; Rodrik, 2008a; Rodrik, 2008b).

Given these conditions the risk is that the private capital markets may underprovide investment relative to the social optimum needed. This is where MDBs are introduced, and are intended to play a corrective role by directing capital toward projects that generate broader economic benefits that the private sector would not, given perceived risk (Attridge and Engen, 2019; Nakhooda, 2008). However, welfare does not occur instantaneously in these contexts simply because of an increase in total investment, but is highly dependent on whether capital is allocated efficiently; financing that merely substitutes for privately available capital could in reality be welfare-reducing (Cavallo and Daude, 2011).

Whether MDB financing actually improves welfare depends on whether intervention leads to an increase in aggregate investment rather than the reallocation of capital (Carter et al., 2018). If MDB interventions enable projects that would not have been realised without public support,

this constitutes financial additionality (Attridge and Engen, 2019). Conversely, if MDBs finance projects that private actors would have undertaken, the resulting capital reallocation may reflect an inefficient use of public or concessional resources without a corresponding development benefit (Attridge and Engen, 2019;Carter et al., 2018). This distinction is closely related to the concept of additionality, which will be discussed below and serves as the normative benchmark against which MDBs are evaluated throughout this paper.

2.2 The Normative Standard Additionality and the Crowding In

The theoretical case for MDB intervention in private capital markets rests on a well-established body of economic reasoning. Stiglitz (1989) shows that market failures and incomplete information can lead to suboptimal capital allocation. Infrastructure markets in developing economies exhibit these characteristics, as the returns to infrastructure investment are long-term and uncertain, and the political risks associated with long-term capital commitment in low- and middle-income countries (LICs/MICs) frequently exceed the risk tolerance of private investors operating under fiduciary constraints (Bhattacharya et al., 2012). Public-Private Partnerships have been proposed as a way to mobilise private finance for such projects (Engel et al., 2014;United Nations, 2015). In this context, the theoretical justification for public intervention is not merely redistributive, it is efficiency-based. As the government can spread the cost of risk-bearing across a large population, public institutions can rationally undertake investments whose risk-adjusted returns would deter private investors (Arrow and Lind, 1970).

This logic underpins what has become known in the development finance literature as the crowding-in thesis, the proposition that well-designed public investments complements and encourages, rather than displaces private capital (Erden and Holcombe, 2005). Hirschman's (1958) concept of backward and forward linkages provided an early articulation of how a given economic activity can stimulate further activity elsewhere in the economy, a logic later extended to the crowding-in argument for public investment. Particularly, in infrastructure finance, this mechanism operates through several channels. Public investment can reduce the risk profile of a project to a level that private capital is willing to accept by mobilising

financing partners through syndications and co-financing arrangements, thus improving the bankability of development projects through technical expertise that raises their likelihood to succeed (Chelsky et al., 2013). Through strategic collaboration between governments and the private sector, public actors can help identify investment opportunities that might otherwise fall prey to coordination failures (Rodrik, 2008). In addition, by financing pioneering transactions in new markets or sectors, MDBs are able to generate information about both and return, which in turn reduces uncertainty for other investors (Chelsky et al., 2013).

The blended finance literature has formalised and extended these theoretical arguments. Convergence (2020) and the OECD (2018) have documented private finance mobilised through official development finance interventions across a range of sectors and regions. The theoretical underpinning of blended finance, not unlike the above, is relevant as it aims to ease crowding-in by using public capital to de-risk transactions, fill financing gaps, or improve rates of return. Simply put, these blended structures are designed to attract private capital that would not otherwise engage and have become increasingly relevant this past decade (OECD, 2018).

There is a body of empirical evidence that supports the proposition that MDB involvement could stimulate private investment under the right conditions. Studies of emerging market debt have shown that bond spreads respond to macroeconomic fundamentals and to shifts in market sentiment, while MDB participation in syndicated lending is associated with broader syndicates and longer maturities, consistent with the view that multilateral involvement reduces perceived default risk (Eichengreen and Mody, 2000; Broccolini et al. 2018). Additionally, the participation of development banks in syndicated lending is more likely the higher the political risk in the borrower's country, an effect that becomes particularly pronounced at high risk levels (Hainz and Kleimeier, 2012).

Similar to most academic topics, the theoretical case for crowding in is not uncontested. A parallel strand of the literature emphasises that public financing may instead displace private investment, particularly in environments where institutions are weak and financial markets are imperfect, even if in theory it should raise marginal productivity of private capital (Cavallo and Daude, 2011). The concern is that MDB intervention, rather than mobilising additional private

capital, may simply substitute for it (Attridge and Engen, 2019). This concern is related to the broader investment literature, which has long debated whether external and public financing complements or displaces private and domestic investment (Easterly, 2001; Servén and Solimano, 1993). From this perspective, the impact of MDB financing on total investment is theoretically ambiguous and one must apply a critical lens on project selection, market conditions, and institutional context to reach optimal results (Easterly, 2001; Cavallo and Daude, 2011).

The crowding-in thesis can be summarized as the quantitative and normative benchmark for which MDB behaviour should be evaluated against and what additionality is in fact realized. This is the benchmark the authors of this thesis aims to test, and to see what results are analytically significant within this. The same mechanisms that enable MDBs to mobilise private capital may, under different conditions, lead to substitution effects and crowding out. The question is therefore not whether MDBs can crowd-in private capital, but under what conditions they do so, and when their intervention instead displaces private investment.

2.3 Does Public Capital Displace Private Capital - The Crowding Out Theory

The possibility that public investment displaces rather than complements private capital has a long history in economic thought (Friedman, 1978; Bernheim, 1989). The classical crowding out argument, developed in the context of macroeconomic fiscal policy, holds that government borrowing absorbs savings that would otherwise finance private investment, driving up interest rates and reducing private capital formation (Friedman, 1978; Servén & Solimano, 1993). The empirical relevance of this mechanism is dependent on whether the economy is operating at full employment, on the openness of capital markets, and on the stance of monetary policy, the balance-of-trade, simply put these conditions have generated decades of contested empirical debate in the macroeconomics literature and academia (Carlson & Spencer, 1975; Bernheim, 1989; Eichengreen & Mody, 2000).

In the development finance context, the crowding-out concern is whether MDB presence in a transaction or market reduces private capital engagement, undermines financial additionality, or leads to the distortion of markets (MDB Task Force on Additionality, 2018; Attridge & Engen,

2019). Drawing on this literature, this thesis distinguishes three mechanisms through which displacement can occur, each operating at a different level of aggregation and through different channels.

The first is direct crowding-out, which occurs when an MDB finances a project that private capital would have financed on comparable terms in the absence of MDB involvement, precisely, what the additionality assessment is designed to prevent (MDB Task Force on Additionality, 2018). Attridge and Engen (2019, p. 29) warn that mobilisation targets "may encourage MDBs and DFIs to provide unnecessary subsidy and invest in projects that the private sector would have invested in on a standalone basis." Furthermore, direct crowding out is also difficult to detect, as it would require the counterfactual of what private capital would have done (Attridge & Engen, 2019; MDB Task Force on Additionality, 2018).

The second mechanism, by contrast, operates on the market-level rather than individual-level transaction. In developing markets, the pipeline of bankable projects in developing markets are particularly limited due to binding constraints (Bhattacharya, Romani & Stern, 2012). Consequently, when MDBs compete for this already limited pipeline using structural financial advantages, i.e., cost of capital, preferred creditor status and sovereign relationships - this can allow them to get projects that private capital otherwise would have received and preferred to finance, which can reduce the volume of private sector investment overall. Cross-country evidence further indicates that the strength of crowding-out effects varies systematically with institutional quality and openness to international trade and capital flows (Cavallo & Daude, 2011).

The third mechanism is a consequence of signaling, meaning that when an MDB chooses to engage in a transaction, the decision can function as a 'stamp of approval' (IFC, 2026), from which the bank leverages its financing and repeated government interactions to influence governmental decisions, thereby helping mitigate political risk and crowd in private lenders to the loan syndicate (Hainz & Kleimeier, 2012; Broccolini et al., 2021). If, however, MDB-entry occurs after private capital has been enacted or committed, the signal would be different, at least in the eye of the private investors. As due diligence, transaction costs, legal commitments

are ongoing this becomes problematic. Akin to making involvement be perceived as opportunistic free-riding instead of genuine risk-reduction. This last scenario is the late-stage displacement mechanism this thesis examines, and it represents a signalling dynamic that the existing literature tends to overlook.

2.4 The Theoretical Mechanisms Behind Late-Stage Displacement

The crowding-out mechanisms identified in the previous section were designed to describe what displacement looks like, the differing opinions within academia, and its applications, not only in the general sense rather how it be applied in development economics. However, one must ask why and if it occurs systematically? Three bodies of theoretical literature will help to do this: incomplete-contracting and transaction-cost economics (including the hold-up problem), information economics (imperfect information and credit rationing), and the political economy of MDB governance. Together, they will be applied to the concept of late-stage displacement, such that it is a predictable outcome rather than an accidental failure on the project-level.

The hold-up problem was described by Klein, Crawford and Alchian (1978) and later developed upon by Williamson (1985) and Hart and Moore (1988). In short, the problem arises when one party makes relationship-specific investments, investments whose value is in reality significantly higher within the relationship than outside it, under contracts that are necessarily incomplete (Klein, Crawford and Alchian, 1978 ; Williamson, 1985). Once the specific investment is made, the investing party becomes vulnerable to opportunistic behaviour by the other party, who can appropriate the quasi-rents generated (Klein, Crawford and Alchian, 1978). The anticipation of this dynamic can lead to under-investment relative to the first-best (Hart and Moore, 1988).

In the MDB context, the legal, technical, and advisory work required to structure complex infrastructure projects represents a significant cost. Transaction costs in project finance deals have been estimated at around 5–10% of total investment (Gatti, 2012). Once a private consortium has carried out the structuring and due diligence and demonstrated the project's viability, an MDB is in a position to enter the financing on terms that benefit from its ability to

borrow cheaply on international markets and on-lend at lower rates than borrowers could otherwise obtain (Humphrey, 2014). The ex ante implication, following the logic of Hart and Moore (1988), is that anticipated appropriation reduces the incentive to make those upfront investments in the first place.

Information economics provides a complementary lens. Stiglitz and Weiss (1981) show that in credit markets with imperfect information, the interest rate itself affects the riskiness of the loan pool through adverse selection and incentive effects, so that price alone need not clear the market and credit rationing can persist in equilibrium. Infrastructure project finance involves a wide set of risks and political risk in particular (Hainz and Kleimeier, 2012). Private sector due diligence is the primary mechanism through which this information is produced. As Stiglitz (1989) argues, knowledge has the character of a public good.

The political economy of MDB governance provides a further explanatory layer. Dreher, Sturm and Vreeland (2009) find a robust positive relationship between temporary UN Security Council membership and the number of World Bank projects a country receives. Woods (2001) more broadly documents the disproportionate informal influence of major shareholder governments over IMF and World Bank decision-making. Humphrey (2014) shows that the politics of MDB shareholder composition shape loan-pricing decisions and that MDBs' ability to "borrow cheaply on international financial markets, and hence on-lend resources to borrowing governments at low interest rates" gives them cost advantages over what borrowers could obtain elsewhere (Humphrey, 2014, p. 612) .

2.5 Empirical Evidence on MDB Crowding-Out and Crowding-In

The literature on the broader public-investment results are mixed. Erden and Holcombe (2005) find that public investment complements private investment in developing economies with a ten percent increase in public investment being associated with a two percent increase in private investment, while public investment is seen to crowd out private investment in developed economies. Cavallo and Daude (2011), using a System GMM panel of 116 developing countries, finds that one-percentage-point rise in public investment reduces private investment by 0.22 percentage points of GDP in the short run, with the effect dampened in

countries with stronger institutions and greater openness to trade. Hur, Mallick and Park (2010), examining fiscal expansion in a panel of 24 countries and a time-series sample of 10 developing Asian economies, find no significant effect on private consumption or investment in either direction and conclude that fiscal expansion in the region is essentially neutral (Hur, Mallick and Park, 2010).

Evidence on MDB lending specifically is also divided. Basílio (2017) finds that multilateral support decreases private participation in infrastructure projects as well as implying a substitution effect of MDB involvement (Basílio, 2017; Taguchi & Yasumura, 2021). Against this, Broccolini, Lotti, Maffioli, Presbitero and Stucchi (2018), using loan-level data on syndicated lending to developing countries between 1993 and 2017, find that MDB participation is associated with 0.82 additional syndicated loans the following year, a 0.07 percent of GDP increase in lending volume, 0.55 additional lending banks per loan, and a 0.36-year extension of maturity, with effects persisting up to three years. Notably, however, when Broccolini et al. restrict their sample to the infrastructure sector, they do not observe significant effects on the number of loans or on size, finding only that the number of creditors and maturity continue to respond to MDB participation. Taguchi and Yasumura (2021), using project-level data from the World Bank's Private Participation in Infrastructure, identify significant financial additionality of MDB support across income groups, regions and sectors. Andonov, Li and Smeets (2025), examining development finance institutions as limited partners in venture capital, find that in developing economies, DFIs are more likely to target industries with positive externalities and to provide capital to underrepresented fund managers.

Research on MDB mobilisation of private capital shows varying results depending on the context. Broccolini et al. find that mobilisation effects are weaker and often insignificant in low-income and less financially developed countries. Taguchi and Yasumura find that additionality disappears in countries with the weakest government effectiveness. Griffith-Jones and Tyson (2013) find that development banks, like the EIB, play an important role in filling financing gaps that private markets cannot meet. Taken together, the MDB-specific evidence does not support a uniform conclusion.

2.6 The Existing Gap in Literature

The literature reviewed in the preceding sections establishes a clear gap, the theoretical basis for the hypothetical late-stage transactional displacement is generally lacking. Furthermore, the institutional incentives that would produce it are well documented, there is no mention or direct account of how such a mechanism would function in practice, in the case that it *de facto* is existent. Moreover, while signalling mechanisms in the mobilisation literature have been tested on the country-sector-year level (Broccolini et al., 2018), the transaction-level dynamics through which signalling and late-stage entry operate remain largely unexamined. The hold-up and information economics frameworks provide the theoretical tools to analyse late-stage displacement, but they have not previously been applied to MDB-behaviour in development finance using this method and the political economy literature documents recurrent distortions in MDB governance (Dreher, Sturm and Vreeland, 2009; Humphrey, 2014). Most research examines lending volumes and political determinants and stops prior to discussing transaction-level mechanisms. This thesis aims to address this, by using late-stage transaction-level displacement observations to evaluate whether standard MDB practices can be improved and whether their institutional raison d'être is intact.

2.7 Research Questions

Given the presented theoretical frameworks, existing literature gap, this thesis addresses four related questions, the first two are empirical: what is the late-stage displacement mechanism and how does it operate? Thirdly, what are the institutional incentive structures within MDBs that could lead to late-stage displacement, if there are any, despite mandated additionality requirements? Lastly, the fourth revolves around norms and policy, especially what specific policy reforms could potentially address late-stage displacement.

3. Hypotheses

The hypotheses below are framed as directional hypotheses, the purpose is to establish if the data is consistent with the proposed late-stage mechanism, note: not to establish causality.

3.1 H1: *Late-stage displacement is a distinct mechanism from general crowding-out, characterised by MDBs entry into transactions after private sector due diligence is complete and project viability has occurred.*

This is the foundational hypothesis of the paper. If practitioners' accounts match, i.e., that it seems prevalent in the data analysis, this could be an implication that it is *de facto* an identifiable phenomenon. By contrast, if that is not the case then it could simply be that general patterns of crowding-out are present. Quantitatively, has a negative aggregate coefficient, then accounts could be isolated instances and not an inherently structural issue.

3.2 H2: *Late-stage displacement generates ex ante underinvestment in private sector transactions, due diligence and willingness to engage in investments as investors adjust their behaviour in anticipation of MDB entry.*

Built on the hold-up problem, the objective is to understand whether late-stage displacement in transaction results in behavioral changes of interviewees. The danger being that established investors start to view MDB entry as a threat, reducing willingness to invest.

3.3 H3: *MDB activity and investment patterns are at times inconsistent with additionality, potentially crowding-out private capital in markets where private appetite exists, prioritizing on lower-risk transactions rather than the higher-risk projects where MDB intervention would be unambiguously additional.*

This hypothesis prioritizes the institutional perspective of systemic failure or misalignment of incentives that clash with stated development objectives, despite pre-existing risk appetite and available private capital, i.e., displacement versus mobilization. H3 will be tested through both strands.

3.4 H4: *The persistence of late-stage displacement across regions, institutions, and time periods reflects recurrent institutional incentive misalignment rather than isolated individual errors in additionality assessment.*

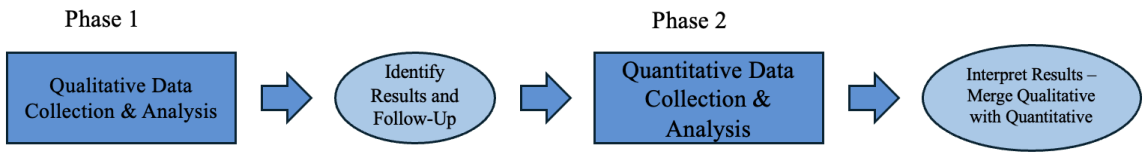
Lastly, H4 is analytically and practically important, if late-stage displacement occurs randomly, then accounts could be attributed to individual experiences, not recurrent failure or poor incentives. If the opposite is true and it is recurring across regions, transactions, industries and time-periods then structural explanations could be the root cause.

To conclude, the four hypotheses will be tested as follows; H1 is assessed primarily through the qualitative evidence from our sample, given that the project-level mechanism it describes cannot be identified in aggregate data. Furthermore, H3 and H4 is tested through both strands of analysis, note that the quantitative results can only offer partial and indirect evidence, whilst H3 is the most testable hypothesis. H2 is assessed through qualitative evidence from our sample and theoretical discussion.

4. Methodology

The chosen methodological approach of this thesis is shaped by the nature of the research question, given that late-stage displacement is a project-level mechanism and its causes are embedded in institutional incentive structures that require interpretive analysis rather than statistical measurement alone. At the same time, the policy relevance of the thesis requires that the mechanism be situated within a broader empirical context to be able to establish that the pattern described by practitioners is consistent with observable data to reaffirm this rather than isolated anecdotes. These dual requirements make a mixed-methods approach not merely appropriate, but entirely necessary. Using an *exploratory sequential design,* where the qualitative interviews guide the researchers to the areas that are analyzed in a subsequent quantitative analysis (*see Figure 1)*.

Figure 1: Exploratory Sequential Design (Two-Phase Design)



(Inspired by Creswell & Creswell, 2018, pp. 218) - based on their exploratory research design method.

In this approach, the qualitative strand is conducted first and typically carries the primary evidentiary weight, however for this thesis given the chosen topic, the following quantitative strand is equally as important. In order to assess whether the aggregate patterns observed in country-year panel data are consistent with the mechanisms identified through interviews. This bears significance particularly for any policy recommendations stemming from the results and analysis. The quantitative analysis consequently serves as a corroborating function rather than the evidentiary one. The two strands are brought together in the discussion section, where convergence or divergence between the findings is interpreted in relation to the theoretical framework developed in Section 2.

4.1 Qualitative Methodology

4.1.1 Research Design

In order to answer this research question properly, given the origin of the idea, a mixed-methods design was following the method described by Creswell and Creswell (2018), an exploratory sequential design. Furthermore, late-stage transactional displacement is a project-level mechanism whose operation cannot be inferred from the publicly available aggregate data alone; hence it becomes necessary to hold interviews with practitioners and professionals with direct project- and transactional experience linked to development finance and MDBs. MDBs governance structures differ, nevertheless, the same remains true for practitioners' behaviour. Therefore, an interpretive analysis has to be conducted, where interviews are the first step in the process. Cresswell and Cresswell (2018) note in their foundational treatment of sequential mixed-methods design, that this approach is particularly well-suited to research questions where the phenomenon of interest is not directly observable in existing datasets and where qualitative results must first establish what variables are to be measured, before quantitative patterns can be meaningfully interpreted.

The choice to begin with qualitative analysis is therefore not merely a pragmatic response due to data limitations, but reflects the theoretical structure of the thesis. The mechanism is established qualitatively via the interviews, given that the research idea and original hypotheses emerged from professional engagements at the MFA, where accounts of displacement was brought to attention to the authors. However, for these interviews to be meaningful and to deliver meaningful results, considering that these can contain sensitive questions and information, an anonymization protocol was implemented(Gibbs, 2018). Procedurally, this is not only done to protect the identity of the interviewee, but it is also practical. In the sense that it allows the participants to feel secure and confident to talk openly about potentially disturbing or uneasy topics without having to worry about any negative ramifications. In regard to the interviews themselves, a semi-structured approach is implemented. Meaning that they are directional and explorative in nature, rather than direct. The idea is essentially that there is a higher chance that more unique themes will be uncovered in other interviews, only when themes become recurring is the sample size deemed satisfactory (Dearnley, 2005). Lastly, the thematic analysis is based on transcriptions that are coded based on (Braun & Clarke, 2006) per the identified recurring themes (Stuckey, 2015).

4.1.2 Origins of the Research Question

The research question examined in this thesis emerged from direct professional engagement with multilateral development bank representatives and private sector financial institutions during the authors' time at the Swedish Ministry for Foreign Affairs. In this capacity, the authors participated in discussions between Swedish government officials, World Bank Group representatives, private sector banks and other MDBs regarding MDBs' collaboration with market practitioners. This was the original motivation for systematic investigation and aided both the framing of the research question and the subsequent identification of the sample.

4.1.3 Interview Sample

The primary qualitative data for this thesis consists of semi-structured interviews with private sector financial institutions, MDB representatives, consultants/intermediaries and other development finance professionals with ranging experience pertaining to the topic. The sample

comprises 13 interviews with practitioners working across Eastern Europe, the Middle East and North Africa, Sub-Saharan Africa, Latin America, Central America, Central Asia, South Asia, and South East Asia.

The sample was constructed purposely rather than randomly, a method commonly used in qualitative research with expert practitioners, where the goal is to identify informants with direct relevant experience rather than to achieve statistical representativeness (Patton, 2002). Interviewees were selected on the basis of experience within development finance in with direct transactional engagement with MDB co-financing processes. Access was facilitated partly through professional networks and partly through direct outreach to relevant institutions.

The inclusion of MDB-related interviewees serves a specific methodological function, as it helps provide the necessary triangulation to conclude whether late-stage displacement is not simply unique to the interviewees that have been displaced, but reflects an overarching pattern visible from both sides of the transaction.

4.1.4 Anonymisation Protocol

All interviewees are anonymous meaning that no names, institutional affiliations or other identifying professional details are reported in accordance with Gibbs (2018) and standard methodology. Specific transactions and the detail reported will remain on a regional, sectoral and temporal level. The choice for this is to both preserve the identity of the interviewees and to allow for interviewees to feel safe in disclosing information without fearing for losing job opportunities and/or employment. Specific documentation, correspondence, or transaction records are undisclosed throughout.

The idea behind the applied mechanisms and presentation of the results is to keep the level of patterns revealed on an aggregated level throughout in terms of recurring themes, instead of revealing specific instances. Each interviewee was given the opportunity to review the specific passages referencing their accounts prior to submission and to flag any content they considered identifiable or sensitive.

The IFC is named as the institution most frequently cited in interviewees' accounts, however, MDBs within the WBG, and banks such as; NDB, AfDB, AIB, AsDB amongst others were also cited. The institutional naming was justified for the following consideration; it was viewed to help with the additionality analysis as specific mandates implies inherent differing interpretations of these results depending on the MDB; equally to align with the reform framing of the thesis; IFC and other MDBs role in various contexts, industries and sectors have previously received publicly available critique regarding these issues.

4.2 Quantitative Methodology

4.2.1 Rationale and Design

The quantitative component of this thesis serves both as a contextualising and corroborating function to contrast the qualitative primary strand, using the Creswell & Creswell (2018) model. Specifically, the purpose is to establish whether aggregate patterns of MDB activity and private investment flows in the chosen region are consistent with the late-stage displacement mechanism described in the qualitative results. However, the aim is not to establish causal effects of MDB lending on private investment; the endogeneity problems inherent in MDB activity as a treatment variable, combined with the project-level specificity of the mechanism examined, means that aggregate causal identification is not achievable with the available data (Angrist & Pischke, 2009).

The quantitative design follows a country-year panel approach, consistent with the dominant methodology in the empirical literature (Erden and Holcombe, 2005; Cavallo and Daude, 2011). By using this approach, it allows for the estimation of within-country variation both in the relationship between MDB related activity and private investment over time (Angrist & Pischke, 2009), this is more informative than a cross-sectional comparison and partially helps address the endogeneity concern by absorbing time-invariant country characteristics through fixed effects (Nickell, 1981). Whilst, the analysis covers the time period 2000–2024.

4.2.2 Sample Selection and Justification

Starting off, the quantitative analysis covers 105 developing countries in six World Bank regions, between the period of 2000–2024. The sample was constructed using the full universe of countries available in the WDI (World Bank, 2026a; 2026b; Kaufmann et al., 2010; World Bank, 2026c) and OECD DAC datasets (OECD, 2024a; 2024b; 2024c), these were subject to the following exclusion criteria. OECD high-income countries were excluded since the MDB-activity in those contexts was not of importance for this thesis and not applicable given the vast differences in investment dynamics that are significantly structurally different from developing economies, given the topic it was a conscious decision to research LICs/LMICs/MICs. Micro-states and non-sovereign territories were dropped due to idiosyncratic economic structures that potentially could introduce noise in the models. Countries with fewer than five years of gross fixed capital formation data were excluded to ensure sufficient within-country variation for fixed effects estimation (Angrist and Pischke, 2009). The resulting sample of 105 countries comprises a maximum of 2,625 observations over a 25-year panel and with variation in coverage across specifications, depending on available data for missing for specific control variables in the full preferred specification the observations reduce to 1,800 and 97 countries.

The six regions represented in the sample are Eastern Europe and Central Asia (ECA, 21 countries), Sub-Saharan Africa (SSA, 40 countries), Latin America and the Caribbean (LAC, 15 countries), the Middle East and North Africa (MENA, 12 countries), East Asia and Pacific (EAP, 9 countries), and South Asia (SA, 6 countries). The expansion beyond the original three-region focus was due to limited data availability of these datasets, and that a broader sample could strengthen the external validity of the findings. ECA, MENA, and SSA remain the primary regions of analytical interest given their centrality to the qualitative strand and the extent of IFC activity therein. Similarly, SA and EAP subsamples contain 6 and 9 countries respectively, and results for the regions that are reported separately in the heterogeneity analysis should also be interpreted with appropriate caution given the limited degrees of freedom (Angrist and Pischke, 2009).

Two main data limitations with the data, the WGI (World Bank, 2026c) series was published biennially prior to 2003, meaning 2001 falls outside the available series, creating a one-year

gap that affected the lag construction for 2002. Furthermore, the WDI (World Bank, 2026a) download also excluded the year 2009, which created a one-year gap that affected the lag construction for 2010–2011. Private Sector FCF (Fixed Capital Formation) or PFCF has limited coverage across the sample with 902 observations across 59 countries and is strictly only for robustness analysis rather than as the primary dependent variable, even though the theoretical case for its use as the primary outcome would be beneficial and a stronger measurement.

4.2.3 Data Sources

The quantitative analysis draws on six data sources, merged into a country-year panel. Firstly, the World Bank Private Participation in Infrastructure (PPI) database which provides project-level data on private investment in infrastructure by country, sector, and year, covering energy, transport, water, ICT, and municipal solid waste across LICs/LMICs (World Bank, 2026b). The database was filtered to study the period (2000–2024) and collapsed from project-level to country-year aggregates. Key variables include total PPI investment, project count, share of projects with MDB support, average private ownership share, and total multilateral and commercial debt. Country names were converted to ISO3 codes using the Stata kountry package (Raciborski, 2008).

Next, the World Development Indicators (WDI) helped to provide macroeconomic variables at the country-year level (World Bank, 2026a). Seven indicators were used: gross fixed capital formation as a share of GDP (total and private sector separately), domestic credit to the private sector as a share of GDP, GDP per capita growth, inflation, trade openness, and government final consumption expenditure (Cavallo and Daude, 2011). Whilst, the WDI download excludes the year 2009, creating a one-year gap in the panel. Private sector FCF has severe missing data, with only approximately 902 observations across 59 countries in the analysis sample, and is therefore used only in robustness analysis rather than as a primary dependent variable.

The OECD DAC2A (OECD, 2024a) table provides ODA disbursement data by donor, recipient, and year. The dataset was filtered to ODA disbursements only and to the following disaggregated MDB-donor codes: IDA (5WB002), AfDB (5AFDB001), AsDB (5ASDB01),

EBRD (5RDB007), and AIIB (5AIIB0). Furthermore, the choice to exclude parent-level aggregate codes was to avoid double-counting between parent and subsidiary entities, as this was a source of inflation in totals that was identified during the data audit. IFC is classified as other official flows rather than ODA and does not appear in DAC2A (OECD, 2024a) . Values are in millions of constant 2023 USD.

The OECD DAC2B (OECD, 2024b) table provides data on other official flows, capturing non-concessional MDB lending. The IFC is separately identifiable in DAC2B under donor code 5WBG002, enabling IFC-specific analysis which is the primary contribution of the quantitative analysis. The dataset uses disaggregated donor codes covering IFC, IBRD, AfDB, AsDB, EBRD, AIIB, ISDB, and the OPEC Fund, and was collapsed into total OOF and IFC-specific OOF by country-year. Missing IFC values are coded as zero, indicating no IFC activity rather than unknown activity, though an acknowledgement was made in the robustness analysis - this zero-coding procedure is standard for treatment variables with zero values, simply they are not treated as missing as that could introduce bias.

The OECD DAC3A table provides ODA commitment data, used as a robustness check against DAC2A disbursements (OECD, 2024c). Commitments capture the decision to lend rather than actual capital flows and are closer in timing to the actual displacement mechanism that is being tested. The same disaggregated donor codes and double-counting correction applied to DAC2A are applied to DAC3A (OECD, 2024a; 2024c).

The Worldwide Governance Indicators (WGI) provide six governance dimensions: Control of Corruption, Government Effectiveness, Political Stability, Regulatory Quality, Rule of Law, and Voice and Accountability (Kaufmann et al., 2010; World Bank, 2026c). Hence, a composite governance index was constructed as the unweighted mean of the six indicators, following standard practice in the literature (Kaufmann et al., 2010; World Bank, 2026c). WGI data was published biennially prior to 2003, meaning that 2001 falls outside the available series within the chosen sample period, the resulting gap was treated as missing.

4.2.4 Panel Construction

The six cleaned datasets were merged sequentially into a master panel using WDI as the base, given its broadest country-year coverage. PPI and DAC variables were recoded from missing to zero where appropriate no activity equals zero flow, not unknown flow whilst WGI governance scores were left as missing where unavailable. The master panel was then filtered to the 105 developing countries across six WBG regions, and treatment variables were constructed.

The panel is structured at the country-year instead of the country-sector-year level originally envisioned. The PPI database, which provides project-level data with sector classification, was found to have major gaps during the data audit on the key financial variables: commercial debt data exists for only approximately 1,000 of 11,640 observations, and multilateral debt for only 667 (World Bank, 2026b). Due to the fact that reliable level-disaggregation had several data gaps, consequently, sector-level insights were therefore drawn from the qualitative result instead and the PPI was added to the descriptive analysis.

4.2.5 Treatment and Control Variables

Regarding the treatments and control variables, the primary treatment variable is total MDB flows, constructed as the sum of ODA disbursements from DAC2A and other official flows from DAC2B, measured in millions of constant 2023 USD (OECD, 2024a; 2024b). This combines concessional lending-IDA, regional development banks and non-concessional lending IFC, IBRD into a single intensity measure.

Next, the secondary treatment variable is IFC-specific OOF (donor code 5WBG002 in DAC2B), which enables for direct testing whether or not IFC activity has different effects on private investment compared to general MDB lending (OECD, 2024b). One residual variable, the non-IFC MDB flows, is constructed as total MDB flows minus IFC OOF to decompose the two channels. The IFC share of total MDB flows is also constructed as an additional measure of IFC concentration.

Lag variables (standard practice see Cavallo and Daude (2011) were generated at one and two years for total MDB flows, IFC OOF, and ODA disbursements separately, testing whether MDB activity affects investments with a delay. The 2009 gap in WDI means that the one-year

lag is unavailable for 2010 and the two-year lag for 2010–2011. The inverse hyperbolic sine (IHS) transformation was introduced as an alternative functional form for the treatment variables, given its capacity to handle zero values and negative observations whilst approximating a log transformation for large values (Norton, 2022). The log transformation presented in Robustness 7 was preferred for interpretability and comparability with the existing literature, given the low frequency of zeros in the treatment variables across the sample.

Additionally, the interaction terms were constructed to test the hypotheses about any moderating effects (Angrist & Pischke, 2009). Subsequently, MDB flows interacted with the WGI composite governance index to test whether institutional quality moderates the MDB-investment relationship and IFC OOF interacted with domestic credit to the private sector to test whether financial market depth conditions the IFC-specific relationship. Total MDB flows interacted with domestic credit provides a broader test within the same channel

Control variables include GDP per capita growth, inflation, trade openness as a share of GDP, domestic credit to the private sector as a share of GDP, the WGI composite governance index, and government final consumption expenditure as a share of GDP (Kaufmann et al., 2010; World Bank, 2026c). The inclusion of government expenditure is necessitated by the use of total rather than private GFCF as the dependent variable. A similar control is used by Cavallo and Daude (2011).

4.2.6 Empirical Specification

The preferred specification is a two-way fixed effects model estimated on a panel of 105 developing countries over the period 2000–2024:

$$GFCF_{it} = \alpha_i + \delta_t + \beta_1 MDB\_flows_{it} + \gamma \boldsymbol{X}'_{it} + \varepsilon_{it}$$

where i denotes country and t denotes year. $GFCF_{it}$ is gross fixed capital formation as a share of GDP, measured in percentage points. α_i is the country fixed effect, absorbing all time-invariant country characteristics, such as; geography, legal origin, colonial history, and long-run institutional quality that might otherwise confound the relationship between MDB

activity and investment (Angrist & Pischke, 2009). δ_t is the year fixed effect, absorbing common time shocks affecting all countries simultaneously, including the 2008–2009 global financial crisis, the post-2015 shift in the development finance landscape following the Addis Ababa Action Agenda, and the COVID-19 shock (United Nations, 2015). MDB_flows_{it} is the primary treatment variable, where total MDB flows in billions of constant USD and $\mathbf{X}'_{it}$ is the vector of control variables described in Section 4.2.5. ε_{it} is the idiosyncratic error term.

The coefficient of primary interest is β_1, which the within-country correlation between MDB activity and GFCF, conditional on country and year fixed effects and the full set of controls. A negative and statistically significant β_1 is consistent with crowding out; a positive and significant β_1 is consistent with crowding in or complementarity (Erden and Holcombe, 2005; Cavallo and Daude, 2011).

The IFC decomposition is estimated as a separate specification to test whether any aggregate association is driven by IFC-specific activity or by general MDB lending:

$$GFCF_{it} = \alpha_i + \delta_t + \beta_1 IFC_{it} + \beta_2 NonIFC\_MDB_{it} + \gamma \boldsymbol{X}'_{it} + \varepsilon_{it}$$

where IFC_{it} denotes IFC other official flows from DAC2B (donor code 5WBG002) and $NonIFC\_MDB_{it}$ denotes total MDB flows net of IFC OOF, both measured in billions of constant USD (OECD, 2024b). This decomposition is central, due to the fact that if the displacement mechanism described in the qualitative results operates primarily through IFC rather than concessional MDB lending, the estimate of β_1 in the decomposed specification should diverge from the aggregate result detected otherwise.

Year fixed effects are included in the preferred specification because global shocks that simultaneously affect MDB deployment decisions and private investment conditions would otherwise produce spurious correlation in its estimation. The joint significance of year effects is confirmed by a formal F-test ($F = 4.77$, $p = 0.000$), meaning that common time trends are a source of variation in the dependent variable and that their exclusion would risk confounding the estimates. Standard clustered standard errors address within-country correlation but do not account for cross-sectional dependence arising from common global shocks; the Driscoll-Kraay

procedure is robust to both, and is therefore the preferred inference approach here (Driscoll & Kraay, 1998). The lag truncation parameter is set at two periods following the rule of thumb T^(1/4) ≈ 2.2 for T = 25 (Newey and West, 1994).

Table 1 presents the baseline specifications with controls added progressively across six columns. Column 1 includes only MDB flows and country fixed effects. Columns 2 through 5 add controls sequentially in this order: macroeconomic conditions, financial depth, governance quality, and government expenditure. Column 6 adds year fixed effects and constitutes the preferred specification. This sequential presentation was used to highlight coefficient stability as controls were added, the logic being that a positive coefficient that is stable in sign and significance across all six columns is itself evidence against spurious confounding caused by omitted variables (Angrist & Pischke, 2009).

Standard errors are clustered at the country-level throughout to account for within-country serial correlation in the residuals. Fixed effects were adopted on theoretical grounds, since MDB lending decisions are correlated with various unobserved country characteristics, violating the random effects orthogonality assumption, though the Hausman test ($\chi^2 = 0.46$, $p = 0.50$) - ran on the bivariate specification with MDB-total flows (yielding 1-degree of freedom), does not reject random effects, however, random effects estimates are reported in Robustness 8 for transparency (Hausman, 1978). The Generalised Method of Moments estimation was considered, due to a lack of credible instruments for MDB-activity at the country-year level and the risk of weak instrument bias given the panel structure available, it was disregarded (Arellano and Bond, 1991; Blundell and Bond, 1998).

The Breusch-Pagan test strongly rejects pooled OLS ($\chi^2 = 7{,}482$, $p = 0.000$), confirming the need for individual effects (Breusch & Pagan, 1980). Regional subsamples covering all six World Bank regions are estimated separately in Table 5 to test for heterogeneity in the MDB-investment relationship across income levels and regional contexts. Interaction models in Table 4 test the moderating roles of governance quality and financial market depth directly.

Driscoll-Kraay standard errors, robust to both serial correlation and cross-sectional dependence, are employed throughout, alongside nine robustness checks covering alternative

estimators, functional forms, and dependent variables to increase the validity of the results (Driscoll & Kraay, 1998). These features do not resolve the fundamental identification challenge, but they do strengthen confidence that the associations reported are not artefacts of specification choice.

4.2.7 Methodological Limitations

Several limitations have to be acknowledged, firstly, the endogeneity of MDB activity in general is highlighted as the most significant risk. MDBs do not deploy capital randomly either, investment decisions are made based on factors like; country conditions, financing gaps, and political priorities that may independently affect private investment flows. Fixed effects absorb time-invariant confounders, but not time-varying ones, meaning coefficient estimates capture correlation rather than causal effects. No credible instrument for MDB activity was available in the data, and a related concern is reverse causality in the control variables themselves; lagging all time-varying regressors by one period would provide additional protection against potential simultaneity bias, implementing another methodological approach could help solve this.

Another issue is the potential for Nickell bias, which arises in the fixed effects estimators when the time dimension is short relative to the number of groups (Nickell, 1981). With T = 25 years and N = 105 countries, the panel is still moderately long, which substantially attenuates, though does not eliminate, the downward bias on autoregressive coefficients that characterises shorter panels. The primary specifications do not include a lagged dependent variable, which limits the direct applicability of the Nickell critique; that said, the persistence evident in the AR(1) residual test (coefficient = 0.681, p = 0.000) suggests that a dynamic specification could be warranted. System GMM, as developed by Arellano and Bover (1995) and Blundell and Bond (1998), would provide a more robust approach to dynamic panel bias. The sample size is sufficient for GMM estimation, though instrument proliferation is a risk given the number of periods within the sample to overfit the endogenous variables.

This is compounded by the potential for omitted variable bias (OVB). Since time-varying unobserved factors may simultaneously influence both MDB activity and private investment. Similarly, macroeconomic deterioration may prompt increased MDB engagement whilst

simultaneously reducing private investment appetite, producing a spurious negative correlation. The control variables mitigate the most significant sources of such bias, following Erden and Holcombe (2005) and Cavallo and Daude (2011), but cannot eliminate it completely. Coefficient estimates are therefore presented as descriptive for the within-country correlation rather than as causal displacement effects.

Serial correlation is present in the panel residuals (AR(1) coefficient = 0.681, p = 0.000), meaning that standard errors, even when clustered at the country level, may underestimate true sampling variability (Angrist & Pischke, 2009). As described above, this is addressed directly through re-estimation with Driscoll-Kraay standard errors, which are robust to serial correlation and cross-sectional dependence; the aggregation of MDB flows are largely unchanged, however, the result of IFC-decomposition is impacted under this standard.

Data availability introduces several constraints. The WDI 2009 gap creates a one-year discontinuity that affects lag construction for 2010–2011, with affected observations treated as missing rather than carried forward to avoid introducing artificial persistence into the panel structure. Private sector GFCF (Gross Fixed Capital Formation) has insufficient coverage across the sample 902 observations across 59 countries precluding its use as the primary dependent variable and restricting it to robustness analysis. The DAC2A double-counting between parent and child donor codes was identified and corrected during cleaning, but represents a source of measurement error in any study using DAC data without the same adjustment. While the dependent variable (GFCF) is not censored, the treatment variable (MDB flows) contains structural zeros for country-years with no MDB activity; future work could employ a Tobit specification to explicitly model this censoring, following Berthélemy and Tichit (2004). The more fundamental limitation, however, is that the project-level mechanism examined in the qualitative strand is not directly detectable in country-year panel data which is the reason the qualitative strand carries the primary evidentiary weight throughout this thesis.

5. Results

5.1 Qualitative Results

5.1.1 Overview of Interview Sample and Thematic Findings

Below the results of the semi-structured interviews are presented from professionals and practitioners working across MICs, LMICs and LICs. Roles of practitioners include government officials, representatives of private sector banks, fund managers, financial intermediaries, PPP transaction advisors, and current and former MDB officials. Institutional affiliations, transaction specific information, roles are not reported. However, regional, sector and time period are. Recurring themes are highlighted below and are synthesised as composite cases where (if) needed. Five themes emerged consistently across independent accounts.

Furthermore, it is important to note that these are subjective accounts and perceptions, whilst the interviewees have had direct transactional experience within their professional and organizational roles, these accounts could not be verified against any publicly disclosed transaction records given anonymisation constraints. The implications that follow is that any analytical significance of these results rests on the consistency of recurring patterns, and the merged analysis based on the quantitative results, and these by themselves should be approached with caution.

5.1.2 Late-Stage Entry as a Recurring Pattern

Multiple practitioners described a pattern where MDB participation in transactions occurred after private sector financing/regulatory processes were substantially/entirely complete. Two instances mentioned the same institution, involving separate transactions in different MICs in Eastern Europe, one concerning infrastructure and reconstruction financing, the other infrastructure and energy financing.

Regarding the first instance, the transaction involved a private sector consortium, including banks and companies who had completed first-round financing, and commenced to work on the second-round. The project spanned over several years with significant private sector involvement (local and international), having completed; due diligence, relationship development and deal structuring. Reportedly, an MDB entered the transaction during the

second-round of financing, offering terms that slightly outmatched the consortium. They remarked that the entry occurred after the transaction's viability had been fully presented and its viability had even been validated after the first-round by their counter-party.

Secondly, for the latter instance, negotiations for the structure of the financing instrument had already been concluded prior to entry. Loan disbursement terms were practically finalized and accepted, yet the MDB offered preferential terms, which significantly altered the transaction's outcome. The project involved an infrastructure and energy project and was described as either being of a blended finance structure or a PPP-agreement.

The common theme was that interviewees identified the same institution in question as the IFC. They both hypothesized that it is IFC's ability to offer superior terms in terms of cost of capital, preferred creditor status benefits and larger structural advantages, i.e.; institutional scale, political relationships/status and having a capacity to influence future transaction outcomes (beyond financing terms). For example, local business owners and government counterparts were left without financing from the private sector as they were unable to match MDBs terms, despite submitting competitive offers. One interviewee raised the question of how the institution became aware of transaction terms, like the timing of it as information was not publicly available.

5.1.3 Structural Advantages Beyond Financial Terms

Structural advantages were recurring across interviews, extending beyond the typical dimensions discussed in development finance literature. Exemplified by practitioners stating that in certain MICs, institutional presence and political relationships from large MDB institutions create difficult dynamics for private sector participants. As such the prospect of MDB involvement altered the behaviour of both governmental and private counterparts, which they believed was disadvantageous for existing private sector participants. Especially in certain markets, institutional prestige, capital scale, and political relationships were mentioned to have a significant influence on the behavior of local officials, business owners and project sponsors. Especially concerning the capacity of large MDB institutions to maintain ongoing relationships with sovereign counterparts through high-level officials, which created the fear of information- and relationship asymmetries.

Interviewees further stated that the prospect of future MDB collaboration, specifically for transactions, where collaboration could be genuinely beneficial, created a disincentive to publicly complain about displacement experiences. In fear of impacting their relationships, reaching out to the MFA felt necessary. Leaving them in a position of both having experienced displacement, yet wishing to preserve the institutional relationship for future transactions. The dynamic was labeled as being significantly difficult professionally, and a reason for why they believed this discussion has not surfaced previously.

Two other dimensions that were revealed from expanding the sample add further texture to this picture. The first concerns the MDBs' political and institutional capital, as put by a practitioner with extensive PPP transaction advisory experience across multiple MICs. Stating that MDB institutions tend to have important sovereign relationships, which brings political and economic weight to transactions that smaller private or foreign banks cannot compete with. Similarly, they described instances where, in their assessment, this institutional weight overshadowed what the project's financing structure actually required. In at least one case observed directly, collaboration between local financial institutions and the local government should have been supported by MDB technical assistance rather than direct financing, from their perspective. Saying this could have produced a more durable outcome for domestic market development (DSP) The interviewee was, however, explicit that this was not an argument against MDB involvement *per se*, but rather that MDB technical capacity and the possibility of all actors in a consortium would prove more beneficial, even if it required a longer time to finalize.

The second dimension revolves around regulatory divergence between MDBs and private sector actors, and across country contexts within the same region. One interviewee with country-level management experience at a regional MDB described this as a common structural impediment to co-financing, which receives less attention in institutional discussions than required. Observing that MDB internal governance structures, combined with shareholder expectations, have become increasingly demanding over time creating conditions in which accommodating the private sector on commercially workable terms is institutionally difficult, rather than deliberate preferences for solo activity/ownership.

5.1.4 Behavioural Adjustment in Anticipation of MDB Entry

As abovementioned themes, interviewees claimed that they made behavioral adjustments after having experienced displacement. The overarching reasons being scale, regarding due diligence and project development that preceded it, making them wary of committing equivalent resources to similar transactions in comparable market contexts in the future.

Resulting in increased caution personally and organizationally, rather than it being a change in their original investment strategy. Several interviewees expressed distress of their loss of time and resources invested in transactions that did not materialize, despite years of work. Practitioners indicated that the prospect of future recurrence has influenced their assessment of similar opportunities, though to which extent was not specified.

This dynamic was particularly evident in the context of impact-oriented funds' management, despite mandates requiring engagement with transactions that commercial capital typically avoids. Furthermore, their description of increased wariness was volunteered, rather than 'prompted' by the interview itself, a detail noted only since this may have greater evidentiary impact on the qualitative analysis.

5.1.5 MDB Activity Concentration and Mobilisation Ratio Discrepancies

Interviewees perceived that MDB activity was particularly concentrated in markets where transactions were more accessible and lower-risk rather than in more difficult projects where private capital would practically be absent. This conviction was observed by multiple practitioners, certain interviewees presented evidence of discrepancies between MDB activity and mobilisation ratios. These had access to proprietary market data, including analysis conducted by their institutional research teams, findings of this material discrepancy between reported private sector mobilisation activity and observable private investment trends during the same markets and periods.

The concentration of MDB activity in transactions was described as being selective about transactions and market presence, interviewees stated that MDB participation appeared more prevalent in transactions that had already demonstrated viability through private sector engagement. This perspective on this distinction dynamic was particularly common from

practitioners working at the intersection of public and private finance. These accounts differed from the aforementioned as it was instead structural difficulty to achieve alignment across parties in contextually complex multi-stakeholder transactions, including; investors, local officials, sponsors and MDBs (operational difficulty). Operationally, the coordination costs required to assemble a large consortia were described as substantial, in terms of time, negotiations with parties with divergent needs and requirements, like risk tolerances, regulatory frameworks was a common impediment to reaching completing deals.

In this context, interviewees said that MDB displacement could be pragmatically defensible, since it was simply a function of larger institutions having a greater capacity to absorb transaction costs and move quickly. They were candid about the trade-offs involved between a preference for expediency between costs of prolongment vs private sector deepening and DSP which may only become apparent over a longer time horizon. One interviewee noted that the choice of the low-hanging fruit, even where it is not the long-term preferred option, can be difficult to avoid when coordination is insufficient.

5.1.6 Formal Outreach and Institutional Response

Several interviewees mentioned that outreach had been made to involved parties formally regarding the aforementioned concerns and experiences, without receiving any type of substantial response. Stating that not receiving a response was a source of frustration and caused professional difficulty, besides the displacement experiences themselves. Resulting in concerns being escalated to government channels and relevant ministries, feeling that this was the only method of raising these issues having reached ministerial levels. One context of multilateral discussions involved senior government officials and senior World Bank Group representatives, including in the context of the Nordic-Baltic constituency. However, these also noted that no substantive changes are yet to be seen despite high-level involvement, describing this outcome as consistent with their broader experience of raising concerns about MDB behaviour and there being a lack of accountability and transparency. Similarly, this is a complicated question as they fear that pursuing to formalize a complaint may affect future collaboration with MDBs.

One former government official with both direct MDB institutional experience confirmed that regulatory complexity, across different contexts and across MDBs' internal structures. Proclaiming that these create conditions where private sector participation is difficult to accommodate regardless of deal terms. Confirming that these tensions are not unusual, and have been raised previously informally and formally, by private sector financiers to MDBs. Whereas the institutional response to such complaints, regarding cases they were aware of, proceeded from the position that MDB entry had been the preferable outcome, defensible or not. He suggested that institutional awareness of the displacement concern is not a recent development, and that the documented response has, at least in some cases, taken the form of internal rationalisation rather than project-level reassessments. Lastly, a senior executive with World Bank Group experience acknowledged directly that it represents a significant problem, in their opinion, if institutions whose mandate centres on private resource mobilisation simultaneously enter transactions in contexts where private sector capacity is demonstrably present and actively engaged in ongoing deals. They also stated that the critique was not unfamiliar nor uncontested institutionally, noting that it has been a contentious topic at the executive level and apologetically recognized that historical practice has not nor will always align with stated objectives.

5.2 Quantitative Results

5.2.1 Descriptive Statistics and Sample Construction

The quantitative analysis is a merged panel dataset constructed from the six sources described in Section 4.2.3: the World Bank Private Participation in Infrastructure database (World Bank, 2026b), the World Development Indicators (World Bank, 2026a), the OECD DAC2A, DAC2B, and DAC3A tables (OECD, 2024a; 2024c), and the Worldwide Governance Indicators (Kaufmann et al., 2010; World Bank, 2026c). The data audit and cleaning process is documented in full in the accompanying do-file and log file, available upon request.

The final analysis panel covers 105 developing countries across six World Bank regions, spanning the period 2000–2024. The three regions corresponding most directly to the

practitioner accounts examined in the qualitative strand Eastern Europe and Central Asia (ECA, 21 countries), the Middle East and North Africa (MENA, 12 countries), and Sub-Saharan Africa (SSA, 40 countries), constitute the primary analytical focus. South Asia (SA, 6 countries), East Asia and Pacific (EAP, 9 countries), and Latin America and the Caribbean (LAC, 15 countries) are included as comparative regional contexts in the heterogeneity analysis. The panel yields 1,800 country-year observations in the primary specifications, with the bivariate baseline reaching 2,451 observations before controls reduce coverage. Two data limitations bear noting. The WDI download excludes the year 2009, creating a one-year gap that affects lag construction for 2010–2011. Private sector GFCF has severe missing data across the target countries902 observations across 59 countries and is therefore used only in robustness analysis. Total gross fixed capital formation as a share of GDP is used as the primary dependent variable, with government final consumption expenditure included as a control to isolate the private investment channel, following Erden and Holcombe (2005) and Cavallo and Daude (2011).

The primary treatment variable is total MDB flows, constructed as the sum of ODA disbursements from DAC2A (OECD, 2024a) and other official flows from DAC2B (2024b), measured in billions of constant 2023 USD. A critical feature of the data is that the IFC is separately identifiable in DAC2B under donor code 5WBG002, enabling IFC-specific analysis distinct from general MDB lending (OECD, 2024a;B). Both DAC2A and DAC3A use only disaggregated donor codes to avoid double-counting between parent and subsidiary entities, as described in Section 4.2.3 (OECD, 2024a;c).

The panel is country-year rather than the country-sector-year structure originally envisioned in the methodology. The PPI database was found during the data audit to have severe missing data on the key financial variables: commercial debt data exists for only approximately 1,000 of 11,640 observations, and multilateral debt for only 667 which prevented reliable sector-level disaggregation. Sector-level insights are therefore drawn from the qualitative results and the PPI descriptive analysis.

Control variables include GDP per capita growth, inflation, trade openness (percent of GDP), domestic credit to the private sector (percent of GDP), the WGI composite governance index, and government final consumption expenditure (percent of GDP). The governance index ranges from –1.84 to 0.99 in the sample, with a mean of –0.45, reflecting the middle-income country composition.

5.2.2 Baseline Regression Results

The Hausman test comparing fixed and random effects yields a chi-squared statistic of 0.46 ($p = 0.50$), which does not reject random effects. The Breusch-Pagan Lagrangian multiplier test strongly rejects pooled OLS ($\chi^2 = 7{,}482$, $p = 0.000$), confirming the need for individual effects. Given the expectation that unobserved country characteristics likely are correlated with MDB lending decisions, fixed effects were adopted as the more conservative and defensible specification, consistent with the approach in the crowding out literature. All specifications use robust standard errors clustered at the country level.

Table 1 presents the baseline results with controls added progressively. The coefficient on total MDB flows is positive and statistically significant across all six specifications. In the bivariate specification (Column 1), the coefficient is 0.521 (SE 0.130, $p < 0.01$). However, it still remains significant at the 1 percent level once macroeconomic controls are introduced (Column 2: 0.537, SE 0.120, $p < 0.01$) and through Columns 3 and 4 as financial depth and governance are added. The coefficient conditions in the full specification without year fixed effects (Column 5: 0.288, SE 0.092, $p < 0.01$) and retains significance at the 1-percent level, year FE are added in Column 6 (0.301, SE 0.112, $p < 0.01$). In substantive terms, an additional 1 billion USDin MDB flows is associated with an increase of approximately 0.3 to 0.5 percentage points in total GFCF as a share of GDP, depending on the specification.

Table 1: MDB Flows and Total GFCF (% GDP)

	(1)	(2)	(3)	(4)	(5)	(6)
MDB total flows (USD bn)	0.521***	0.537***	0.350***	0.288***	0.288***	0.301***

	(0.130)	(0.120)	(0.096)	(0.087)	(0.092)	(0.112)
GDP growth (%)		0.093**	0.054	0.050	0.045	0.052
		(0.041)	(0.040)	(0.040)	(0.040)	(0.047)
Inflation (%)		-0.027**	-0.015*	-0.011	-0.012	-0.006
		(0.012)	(0.009)	(0.010)	(0.010)	(0.010)
Trade (% GDP)		0.056**	0.078***	0.073***	0.073***	0.076***
		(0.024)	(0.021)	(0.022)	(0.021)	(0.023)
Dom. credit (% GDP)			0.059***	0.049**	0.049**	0.046**
			(0.019)	(0.019)	(0.019)	(0.021)
Governance (WGI)				3.854***	3.653**	3.228**
				(1.386)	(1.505)	(1.401)
Gov. expenditure (% GDP)					-0.022	-0.026
					(0.137)	(0.132)
Observations	2451	2231	1881	1821	1800	1800
R-squared (within)	0.013	0.065	0.087	0.091	0.089	0.146

*Standard errors in parentheses. Country fixed effects included. Standard errors clustered at the country level. Year fixed effects included in Column 6. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$*

The coefficient moderates from Columns 1–2 to Columns 5–6, likely reflecting the absorption of common time trends once year fixed effects are introduced. Domestic credit to the private sector is a consistent predictor of investment, significant at the 5 percent level where it is included (Columns 3–6), with a one percentage point increase in domestic credit associated with approximately 0.046 to 0.059 percentage points higher GFCF. The WGI composite governance index is positive and significant when first introduced (Column 4: 3.854, SE 1.386, $p < 0.01$) and retains significance at the 5 percent level through the full specification including year FE (Column 6: 3.228, SE 1.401, $p < 0.05$). Government expenditure is not statistically significant in any specification.

Table 2 decomposes total MDB flows into IFC-specific OOF and non-IFC MDB flows to test whether the IFC has a distinct relationship with private investment. The IFC coefficient is positive but only marginally significant in the first three specifications, falling short of conventional 5 percent thresholds, and becomes statistically indistinguishable from zero once year fixed effects are included. In the bivariate specification (Column 1), the IFC coefficient is 2.628 (SE 1.513, p = 0.085), significant at the 10 percent level. With full controls (Column 2), it is 2.511 (SE 1.286, p = 0.054), just below the 5 percent threshold. When IFC and non-IFC flows are included together (Column 3), the IFC coefficient is 2.283 (SE 1.300, p = 0.082), significant at the 10 percent level, whilst non-IFC MDB flows are positive and significant at the 1 percent level (0.277, SE 0.094, p = 0.004). With year FE (Column 4), the IFC coefficient falls to 0.563 (SE 1.050, p = 0.593) whilst non-IFC flows remain significant at the 5 percent level (0.299, SE 0.115, p = 0.011). The aggregate positive association between MDB flows and investment is driven by general MDB lending principally IDA, IBRD, and the regional development banks rather than by IFC activity, which produces no statistically significant contribution at the country-year level.

Table 2: IFC-Specific vs General MDB Flows and GFCF

	(1)	(2)	(3)	(4)
IFC OOF (USD bn)	2.6282*	2.5111*	2.2827*	0.5626
	(1.5128)	(1.2863)	(1.2997)	(1.0504)
GDP growth (%)		0.0427	0.0442	0.0523
		(0.0391)	(0.0398)	(0.0473)
Inflation (%)		-0.0116	-0.0116	-0.0061
		(0.0097)	(0.0099)	(0.0096)
Trade (% GDP)		0.0709***	0.0728***	0.0755***
		(0.0215)	(0.0214)	(0.0229)
Dom. credit (% GDP)		0.0531***	0.0489**	0.0457**
		(0.0189)	(0.0187)	(0.0211)

Governance (WGI)		3.9629***	3.6978**	3.2336**
		(1.4911)	(1.5047)	(1.4045)
Gov. expenditure (% GDP)		-0.0137	-0.0209	-0.0263
		(0.1371)	(0.1372)	(0.1318)
Non-IFC MDB flows (USD bn)			0.2772***	0.2991**
			(0.0944)	(0.1147)
Observations	2451	1800	1800	1800
R-squared (within)	0.001	0.085	0.090	0.146

Standard errors in parentheses. Country fixed effects included. Standard errors clustered at the country level. Year fixed effects included in Column 4. Sample covers 105 developing countries, 2000-2024.

This null result for the IFC at the aggregate level does not necessarily contradict the qualitative results of project-level displacement documented in Section 5.1. Country-year data captures the net effect of IFC activity across all transactions for every given country and year. If the IFC displaces private capital in some transactions, whilst still catalysing it in others, the aggregate coefficient would reflect the net balance. The qualitative results only identify the displacement channel, whereas the aggregate data suggests it does not dominate at the macro level. The fact that the IFC coefficient is consistently imprecise rather than large and positive is itself a finding: it means that IFC activity produces no statistically distinguishable effect in either direction, which is difficult to reconcile with the catalytic mandate that is embedded in IFC's.

5.2.3 Lagged Effects and Timing

Table 3 tests whether MDB flows affect investment with a lag. Since MDB-commitments and disbursements can take up to one to two years to become visible in private investment through signalling, co-financing arrangements, or institutional reform, *etc*. Both the one-year and two-year lags on total MDB flows are statistically significant at the 5 percent level, the one-year lag yields a coefficient of 0.267 (SE 0.103, p = 0.011) and the two-year lag 0.218 (SE 0.109, p = 0.049). Neither the one-year nor two-year lags on IFC-specific OOF are significant,

with point estimates that are positive, but very imprecisely estimated (L1 IFC: 0.871, SE 1.226, p = 0.479; L2 IFC: 0.807, SE 1.110, p = 0.469).

Table 3: Lagged MDB Flows and GFCF

	L1 MDB	L2 MDB	L1 IFC	L2 IFC
L1 MDB total (USD bn)	0.267**			
	(0.103)			
GDP growth (%)	0.038	0.039	0.041	0.041
	(0.038)	(0.038)	(0.039)	(0.039)
Inflation (%)	-0.015	-0.015	-0.014	-0.014
	(0.013)	(0.013)	(0.013)	(0.013)
Trade (% GDP)	0.072***	0.071***	0.070***	0.070***
	(0.023)	(0.023)	(0.023)	(0.023)
Dom. credit (% GDP)	0.045**	0.046**	0.050**	0.050**
	(0.019)	(0.019)	(0.020)	(0.020)
Governance (WGI)	3.647**	3.691**	3.860**	3.854**
	(1.589)	(1.586)	(1.596)	(1.600)
Gov. expenditure (% GDP)	-0.031	-0.027	-0.022	-0.022
	(0.138)	(0.138)	(0.138)	(0.138)
L2 MDB total (USD bn)		0.218**		
		(0.109)		
L1 IFC OOF (USD bn)			0.871	
			(1.226)	
L2 IFC OOF (USD bn)				0.807

				(1.110)
Observations	1745	1745	1745	1745
R-squared (within)	0.080	0.078	0.075	0.075

Standard errors in parentheses. Country fixed effects included. Standard errors clustered at the country level. Sample covers 105 developing countries, 2000-2024.

The significant lagged effects for general MDB flows suggests that the association with investment is not purely contemporaneous but rather accumulates over time, which is consistent with a signalling or confidence-building channels through which MDB-commitment in a given year, can influence private investment decisions into the following year. The absence of any corresponding lagged effect for the IFC reinforces the decomposition finding from Table 2. If the IFC's contribution was only catalytic instead of substitutive, one would expect positive and significant lagged effects as private co-investors follow IFC's lead. The absence of any such pattern is consistent with substitution rather than catalysis at the aggregate level.

5.2.4 Interaction Effects

Table 4 tests whether the relationship between MDB flows and investment is conditioned by institutional quality (H3) or financial market depth (H4). The interaction between MDB flows and the WGI composite governance index is negative and marginally significant at the 10 percent level (–0.487, SE 0.265, p = 0.069), suggesting that in better-governed environments the association between MDB flows and total investment is slightly weaker. The interaction between IFC OOF and domestic credit is positive, but still small and not statistically significant (0.015, SE 0.040, p = 0.707). The interaction between total MDB flows and domestic credit is negative, but similarly imprecise (–0.004, SE 0.003, p = 0.185). Note: that the interaction term is more of a contextualising test rather than a direct test of H4, where financial market depth is used to measure the conditions of incentive alignments, but H4 is mainly tested qualitatively.

Table 4: Interaction Effects Governance and Financial Depth

	MDB x Gov	IFC x Credit	MDB x Credit
MDB total flows (USD bn)	0.056		0.479**
	(0.099)		(0.196)

Governance (WGI)	3.921**	3.966***	3.599**
	(1.512)	(1.492)	(1.500)
MDB total flows (USD bn) # Governance (WGI)	-0.487*		
	(0.265)		
Dom. credit (% GDP)	0.049***	0.053***	0.053***
	(0.018)	(0.019)	(0.019)
IFC OOF (USD bn)		1.754	
		(2.109)	
IFC OOF x Dom. credit (USD bn)		0.015	
		(0.040)	
MDB flows x Dom. credit (USD bn)			-0.004
			(0.003)
Observations	1800	1800	1800
R-squared (within)	0.092	0.086	0.090

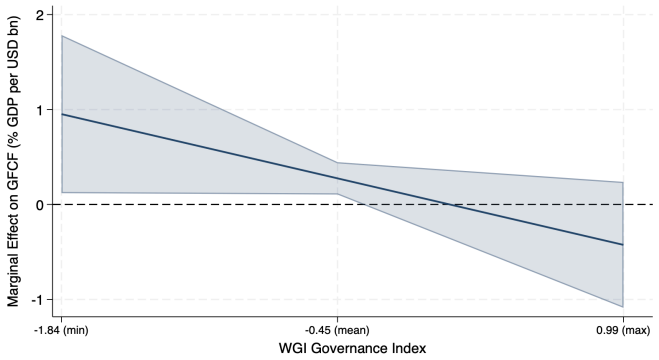
Standard errors in parentheses. Country fixed effects included. Standard errors clustered at the country level. Sample covers 105 developing countries, 2000-2024.

The marginal significance of the governance interaction warrants careful interpretation. Computing the marginal effect of MDB flows on GFCF at representative values of the WGI governance index reveals a pattern that is economically meaningful, even if statistically imprecise at the extremes. At the sample minimum (WGI = –1.84, reflecting the weakest governed countries in the sample), the marginal effect is estimated at 0.952 percentage points of GFCF per USD billion (SE 0.425, p = 0.025), and is statistically significant at the 5 percent level. At the sample mean (WGI = –0.45), the effect moderates to 0.275 (SE 0.087, p = 0.002), remaining significant at the 1 percent level. At the sample maximum (WGI = 0.99), the marginal effect turns negative at –0.426 (SE 0.338, p = 0.208), though it is no longer statistically distinguishable from zero.

This gradient is consistent with a substitution interpretation in low-governance environments: where institutional capacity is limited and private capital markets are thin, MDB financing may

crowd in aggregate investment by filling gaps that the domestic environment cannot otherwise sustain. As governance improves and private capital becomes more capable of mobilising independently, the additive effect of MDB flows on total investment diminishes and at the upper end of the governance distribution, the point estimate turns negative, suggesting a possible displacement effect, though the wide confidence interval precludes any firm conclusion. The pattern is thus directionally consistent with H3, though the evidence should not be overstated given that the underlying interaction term is only marginally significant at the 10 percent level (–0.487, SE 0.265, p = 0.069) and the negative estimate at high governance values carries substantial uncertainty (*see Figure 2*).

Figure 2: Marginal Effect on MDB Flows on GFCF by Governance Quality



The credit market interactions provide no corresponding support for H4. Both the IFC x domestic credit and MDB x domestic credit terms are economically negligible and statistically indistinguishable from zero across all specifications. Taken together, the interaction results suggests that governance quality, rather than financial market depth, is the more plausible conditioning variable for the MDB-investment relationship, but that this moderating role operates primarily at the lower end of the institutional quality distribution and cannot be claimed as a robust finding at the country-year level of aggregation.

5.2.5 Regional Heterogeneity

Table 5 estimates the baseline specification separately for each regional subsample. The results reveal substantial differences across regions.

Table 5: Regional Heterogeneity

	ECA	MENA	SSA	SA	EAP	LAC
MDB total flows (USD bn)	0.567	1.017	0.423*	0.465**	0.186	0.098
	(0.365)	(0.577)	(0.243)	(0.180)	(0.166)	(0.111)
IFC OOF (USD bn)	6.317	3.179	-3.348	3.176***	-1.053	0.522
	(5.754)	(4.261)	(3.766)	(0.724)	(1.469)	(1.422)
GDP growth (%)	0.042	-0.028	0.045	0.390***	0.539*	0.140**
	(0.123)	(0.023)	(0.080)	(0.053)	(0.242)	(0.063)
Inflation (%)	0.040	0.062	-0.009	-0.047	0.015	0.014**
	(0.047)	(0.049)	(0.010)	(0.069)	(0.177)	(0.006)
Trade (% GDP)	-0.002	0.032	0.184**	-0.078	-0.023	0.099**
	(0.037)	(0.026)	(0.048)	(0.051)	(0.014)	(0.039)
Dom. credit (% GDP)	0.086	0.027	0.136	0.112	0.100***	0.046*
	(0.064)	(0.060)	(0.082)	(0.065)	(0.020)	(0.024)
Governance (WGI)	4.436*	11.900**	4.253**	-13.281	-6.776*	5.337**
	(2.423)	(4.278)	(1.986)	(8.148)	(3.390)	(2.264)
Gov. expenditure (% GDP)	0.018	0.147	-0.226	-0.611	-0.215	0.196
	(0.195)	(0.113)	(0.279)	(0.323)	(0.306)	(0.218)
Observations	332	226	638	133	186	285
R-squared (within)	0.095	0.160	0.183	0.190	0.307	0.254

Standard errors in parentheses. Country fixed effects included. Standard errors clustered at the country level. Samples restricted to region as indicated. Sample covers 105 developing countries, 2000-2024. SA and EAP subsamples contain 6 and 9 countries respectively; results should be interpreted with caution.

In ECA, total MDB flows are positive (0.567, SE 0.365), but do not achieve conventional significance (p = 0.137), whilst the IFC coefficient is positive and also insignificant (6.317, SE 5.754, p = 0.286). The dominant predictor in ECA is governance quality (4.436, SE 2.423, p =

0.083), consistent with the region's institutional development trajectory during and after EU accession. In MENA, total MDB flows are positive but insignificant (1.017, SE 0.577, p = 0.106). The governance coefficient in MENA is notably large (11.900, SE 4.278, p = 0.018), suggesting that institutional quality is the predominant determinant of investment outcomes in the regional finding consistent with the post-Arab Spring context, in which governance uncertainty has persistently weighed on private capital deployment. The small sample (226 observations across 12 countries) limits the precision of all other estimates.

The SSA subsample produces a well-fitting model (R^2 within = 0.183), with total MDB flows being marginally significant (0.423, SE 0.243, p = 0.090) and the structural determinants of investment - trade openness (0.184, SE 0.048, p < 0.01) and governance (4.253, SE 1.986, p = 0.039) clearly significant. The IFC coefficient in SSA is negative (–3.348, SE 3.766, p = 0.380), not statistically significant at conventional levels but directionally consistent with the displacement hypothesis. The contrast with South Asia, where IFC activity is positive and highly significant (3.176, SE 0.724, p = 0.007) and total MDB flows also significant (0.465, SE 0.180, p = 0.049) is analytically informative. South Asia's combination of large infrastructure gaps, lower private capital market depth, and limited regional competition is precisely the context in which MDB additionality should be most robust, and the results are consistent with this expectation.

In EAP, domestic credit is the strongest predictor (0.100, SE 0.020, p = 0.001), whilst the governance coefficient is negative and marginally significant (–6.776, SE 3.390, p = 0.081) a result that likely reflects the region's heterogeneous institutional composition across a small sample of 9 countries. In LAC, governance (5.337, SE 2.264, p = 0.035), GDP growth (0.140, SE 0.063, p = 0.046), and trade openness (0.099, SE 0.039, p = 0.026) are all significant, whilst MDB flows are positive but not significant (0.098, SE 0.111, p = 0.391). The consistent insignificance of IFC across ECA, MENA, and SSA, the three regions most prominent in the qualitative accounts of displacement, stands in contrast to the significant and positive IFC estimate in South Asia and is itself informative for the thesis argument.

5.2.6 Robustness Checks

Several robustness checks assess the sensitivity of the baseline results to alternative variable definitions, measurement choices, and potential structural breaks.

Alternative dependent variable: Replacing total GFCF with private sector GFCF yields a sample of 902 observations across 59 countries. The MDB total flows coefficient is positive but not statistically significant (0.168, SE 0.123, p = 0.178), and the IFC coefficient is similarly insignificant (0.584, SE 1.831, p = 0.751). GDP growth (0.157, p = 0.044), inflation (0.024, p = 0.027), trade openness (0.086, p = 0.043), and domestic credit (0.051, p = 0.048) are all significant in this specification; governance is positive (2.280) but imprecise. These results are broadly consistent with the baseline; the loss of significance on MDB flows most likely reflects the noisier private sector GFCF measure rather than a substantive change in the underlying relationship. Results should be interpreted with caution given the data limitations, as MDB-capital has a direct influence on direct investment, this could cause that the baseline result is impacted by accounting, as such the null is more of a conservative test.

Robustness 1: Private GFCF as Dependent Variable

	Total MDB	IFC vs Non-IFC
MDB total flows (USD bn)	0.168	
	(0.123)	
GDP growth (%)	0.157**	0.157**
	(0.076)	(0.076)
Inflation (%)	0.024**	0.024**
	(0.010)	(0.010)
Trade (% GDP)	0.086**	0.086**
	(0.042)	(0.042)
Dom. credit (% GDP)	0.051**	0.051**
	(0.025)	(0.025)

Governance (WGI)	2.280	2.297
	(2.637)	(2.653)
Gov. expenditure (% GDP)	-0.063	-0.063
	(0.202)	(0.202)
IFC OOF (USD bn)		0.584
		(1.831)
Non-IFC MDB flows (USD bn)		0.165
		(0.127)
Observations	902	902
R-squared (within)	0.086	0.086

Standard errors in parentheses. Country fixed effects included. Standard errors clustered at the country level. Private GFCF has substantially fewer observations than total GFCF due to limited WDI coverage. Sample covers 105 developing countries, 2000-2024.

Alternative treatment measure: When ODA commitments from DAC3A are substituted for disbursements, the coefficient is positive and statistically significant at the 5 percent level (0.469, SE 0.211, p = 0.029). This result is comparable relative to the disbursement-based estimate and suggests that the decision to commit funding carries an independent confidence effect on investment over and above the actual arrival of capital. One possible interpretation is that MDB commitment announcements function as a credible signal to private investors, reducing perceived country and project risk with the subsequent disbursement confirming what the market had already partially priced in. This is consistent with the previously mentioned signalling literature.

Robustness 2: Commitments vs Disbursements

	(1) Disbursements	(2) Commitments
MDB total flows (USD bn)	0.288***	
	(0.092)	
GDP growth (%)	0.045	0.041
	(0.040)	(0.039)

Inflation (%)	-0.012	-0.012
	(0.010)	(0.010)
Trade (% GDP)	0.073***	0.072***
	(0.021)	(0.021)
Dom. credit (% GDP)	0.049**	0.050***
	(0.019)	(0.019)
Governance (WGI)	3.653**	3.813**
	(1.505)	(1.477)
Gov. expenditure (% GDP)	-0.022	-0.017
	(0.137)	(0.137)
MDB ODA commitments (USD bn)		0.469**
		(0.211)
Observations	1800	1800
R-squared (within)	0.089	0.087

Standard errors in parentheses. Country fixed effects included. Standard errors clustered at the country level. Disbursements from DAC2A; commitments from DAC3A. Sample covers 105 developing countries, 2000-2024.

Post-Addis Ababa structural break: Table R3 tests whether the Addis Ababa Action Agenda of 2015 altered the MDB-investment relationship. The pre-2015 MDB coefficient is 0.167 (SE 0.120, p = 0.167) and the post-2015 interaction adds 0.250 (SE 0.215, p = 0.249). Neither achieves conventional significance, suggesting no statistically detectable structural break. The post-2015 dummy itself is negative and marginally significant (-1.139, SE 0.578, p = 0.051), which may reflect a secular decline in investment rates across the sample from 2015 onwards rather than a policy effect attributable to the Addis agenda. The IFC post-2015 interaction was again dropped due to collinearity, indicating insufficient within-period variation in IFC activity to identify a separate pre- and post-2015 effect.

Robustness 3: Post-Addis Ababa 2015 Structural Break

	MDB x Post-2015	IFC x Post-2015
MDB total flows (USD bn)	0.167	
	(0.120)	
Post-2015 (Addis Ababa)	-1.139*	-0.785
	(0.578)	(0.533)
MDB flows x Post-2015 (USD bn)	0.250	
	(0.215)	
GDP growth (%)	0.044	0.042
	(0.039)	(0.038)
Inflation (%)	-0.011	-0.011
	(0.010)	(0.009)
Trade (% GDP)	0.070***	0.068***
	(0.021)	(0.021)
Dom. credit (% GDP)	0.063***	0.065***
	(0.018)	(0.018)
Governance (WGI)	3.935***	4.197***
	(1.486)	(1.481)
Gov. expenditure (% GDP)	0.001	0.002
	(0.133)	(0.135)
IFC OOF (USD bn)		1.912
		(1.170)
IFC OOF x Post-2015 (USD bn)		0.000
		(.)
Observations	1800	1800
R-squared (within)	0.097	0.090

Standard errors in parentheses. Country fixed effects included. Standard errors clustered at the country level. Post-2015 dummy equals 1 from 2015 onwards following the Addis Ababa Action Agenda. Sample covers 105 developing countries, 2000-2024.

PPI-based treatment measures: When PPI variables are used as alternative treatment measures, results are mixed. The MDB share coefficient is negative but insignificant (–0.592, SE 0.387, p = 0.130), and total PPI investment is also not significant (0.031, SE 0.048, p = 0.514). The PPI project count, however, is positive and significant at the 5 percent level (0.021, SE 0.009, p = 0.019), suggesting that a higher volume of infrastructure transactions is independently associated with higher total investment, consistent with demonstration effects or supply chain development at the sector level. The broader disconnect between PPI-based treatment measures and country-level GFCF is expected: PPI captures a narrow subset of infrastructure investment, whilst GFCF encompasses all fixed capital formation across the economy, and the two variables operate at fundamentally different levels of aggregation.

Robustness 4: PPI-Based Treatment Measures

	MDB Share	Project Count	Total Investment
PPI MDB share	-0.592		
	(0.387)		
GDP growth (%)	0.044	0.043	0.043
	(0.039)	(0.039)	(0.039)
Inflation (%)	-0.011	-0.012	-0.012
	(0.010)	(0.010)	(0.010)
Trade (% GDP)	0.072***	0.071***	0.071***
	(0.021)	(0.021)	(0.021)
Dom. credit (% GDP)	0.053***	0.052***	0.052**
	(0.019)	(0.019)	(0.020)
Governance (WGI)	3.940***	3.910**	3.896**
	(1.489)	(1.493)	(1.501)
Gov. expenditure (% GDP)	-0.014	-0.014	-0.015

	(0.137)	(0.137)	(0.137)
PPI project count		0.021**	
		(0.009)	
Total PPI investment (USD bn)			0.031
			(0.048)
Observations	1800	1800	1800
R-squared (within)	0.085	0.085	0.085

Standard errors in parentheses. Country fixed effects included. Standard errors clustered at the country level. PPI variables from World Bank PPI database. Sample covers 105 developing countries, 2000-2024

Outlier sensitivity: Winsorising the dependent variable at the 1st and 99th percentiles yields a coefficient estimate virtually identical to the baseline (0.287, SE 0.089, p = 0.002, versus baseline 0.288, SE 0.092, p = 0.002), confirming that results are not driven by extreme observations.

Robustness 5: Winsorised Dependent Variable

	Baseline	Winsorised 1/99
MDB total flows (USD bn)	0.288***	0.287***
	(0.092)	(0.089)
GDP growth (%)	0.045	0.051
	(0.040)	(0.040)
Inflation (%)	-0.012	-0.011
	(0.010)	(0.009)
Trade (% GDP)	0.073***	0.068***
	(0.021)	(0.020)
Dom. credit (% GDP)	0.049**	0.053***
	(0.019)	(0.017)
Governance (WGI)	3.653**	3.910***
	(1.505)	(1.288)

Gov. expenditure (% GDP)	-0.022	-0.043
	(0.137)	(0.131)
Observations	1800	1800
R-squared (within)	0.089	0.104

Standard errors in parentheses. Country fixed effects included. Standard errors clustered at the country level. Dependent variable winsorised at the 1st and 99th percentiles. Sample covers 105 developing countries, 2000-2024.

Diagnostic tests: Country fixed effects are jointly significant ($F = 23.81$, $p \approx 0.000$), as are year fixed effects ($F = 4.77$, $p = 0.000$), confirming the appropriateness of the two-way fixed effects specification in Column 6 of Table 1. The Breusch-Pagan test rejects pooled OLS ($\chi^2 = 7{,}482$, $p = 0.000$). A heuristic first-order autocorrelation test on the fixed effects residuals reveals strong serial correlation (AR(1) coefficient = 0.681, $p = 0.000$). This test regresses the within-estimator residuals on their first lag and is descriptive rather than a formal Wooldridge panel serial correlation test, which was unavailable via SSC. The presence of serial correlation means that standard errors, even when clustered at the country level, may underestimate true sampling variability.

Robustness 6: Driscoll-Kraay Standard Errors (with lag=2)

	MDB Total	IFC vs Non-IFC	MDB + Time FE
MDB total flows (USD bn)	0.288***		0.301***
	(0.068)		(0.059)
GDP growth (%)	0.045	0.044	0.052*
	(0.033)	(0.033)	(0.029)
Inflation (%)	-0.012	-0.012	-0.006
	(0.007)	(0.007)	(0.006)
Trade (% GDP)	0.073***	0.073***	0.076***
	(0.010)	(0.010)	(0.008)
Dom. credit (% GDP)	0.049***	0.049***	0.046**
	(0.013)	(0.013)	(0.017)

Governance (WGI)	3.653***	3.698***	3.228***
	(0.948)	(0.941)	(0.996)
Gov. expenditure (% GDP)	-0.022	-0.021	-0.026
	(0.136)	(0.136)	(0.122)
IFC OOF (USD bn)		2.283***	
		(0.762)	
Non-IFC MDB flows (USD bn)		0.277***	
		(0.069)	
Observations	1800	1800	1800

Driscoll-Kraay standard errors in parentheses (lag=2), robust to serial correlation and cross-sectional dependence. Country fixed effects included. Sample covers 105 developing countries, 2000-2024.

Driscoll-Kraay standard errors: To address this concern directly, the baseline specifications are re-estimated using Driscoll-Kraay standard errors with a lag of two periods, which are robust to heteroskedasticity, serial correlation, and cross-sectional dependence (Driscoll & Kraay, 1998). The main findings are substantively unchanged, the MDB-total flows coefficient is stable at 0.288–0.301 across all three specifications and retains significance at the 1 percent level throughout. Under Driscoll-Kraay standard errors, both IFC OOF (2.283, SE 0.762, p = 0.006) and non-IFC MDB flows (0.277, SE 0.069, p = 0.001) are clearly significant in Column 2, a strengthening of the IFC estimate relative to the clustered standard error results. Note that column 2 excludes year-FE, thus, the IFC estimate under DK is not directly comparable to the main preferred specification. Governance quality and domestic credit remain robustly significant throughout, hence confirming that serial correlation is not materially distorting inference in the baseline analysis, and provides additional confidence in the aggregate positive MDB-investment association.

Robustness 7: Log-Transformed MDB Flow Variables

	MDB Total	IFC vs Non-IFC	MDB + Time FE
ln(1 + MDB total flows)	0.201**		0.187

	(0.080)		(0.132)
GDP growth (%)	0.060	0.072	0.060
	(0.045)	(0.052)	(0.051)
Inflation (%)	-0.010	-0.010	-0.007
	(0.013)	(0.013)	(0.012)
Trade (% GDP)	0.079***	0.069***	0.077***
	(0.022)	(0.025)	(0.025)
Dom. credit (% GDP)	0.055***	0.057**	0.049**
	(0.020)	(0.023)	(0.023)
Governance (WGI)	3.380**	3.604*	2.937*
	(1.647)	(1.903)	(1.558)
Gov. expenditure (% GDP)	0.102	0.127	0.087
	(0.079)	(0.089)	(0.078)
ln(1 + IFC OOF)		0.167	
		(0.135)	
ln(1 + Non-IFC MDB flows)		0.140*	
		(0.084)	
Observations	1503	1226	1503
R-squared (within)	0.097	0.090	0.140

Standard errors in parentheses. Country fixed effects included. Standard errors clustered at the country level. MDB flow variables transformed as ln(1+x) to address right-skew and zero values. Sample covers 105 developing countries, 2000-2024.

Log transformation: Re-estimating the baseline using ln(1 + MDB flows) to address a potential right-skew in the treatment variable yielded a positive and significant coefficient on log-transformed total MDB-flows across all specifications. (Note: the reduction in the sample to 1,503 observations [1,226 for IFC-decomposition] is due to this log-transformation not working on missing values). The IFC log coefficient is positive and remains statistically insignificant under clustered standard errors. The directional pattern of the baseline results is

preserved under this functional form, consistent with the main findings not being an artefact of the level-specification.

Robustness 8: Random Effects Estimates

	RE Baseline	RE IFC vs Non-IFC
MDB total flows (USD bn)	0.332***	
	(0.097)	
GDP growth (%)	0.049	0.048
	(0.042)	(0.041)
Inflation (%)	-0.013	-0.013
	(0.009)	(0.009)
Trade (% GDP)	0.064***	0.064***
	(0.019)	(0.019)
Dom. credit (% GDP)	0.041**	0.041**
	(0.017)	(0.017)
Governance (WGI)	2.568***	2.602***
	(0.965)	(0.967)
Gov. expenditure (% GDP)	-0.052	-0.051
	(0.121)	(0.121)
IFC OOF (USD bn)		2.239
		(1.380)
Non-IFC MDB flows (USD bn)		0.321***
		(0.100)
Observations	1800	1800

Random effects GLS estimates. Clustered standard errors in parentheses. The Hausman test (p = 0.50) fails to reject the null of RE efficiency; FE is preferred on theoretical grounds but RE estimates are reported for transparency. Sample covers 105 developing countries, 2000-2024.

Random effects: Although the Hausman test does not reject random effects ($\chi^2 = 0.46$, p = 0.50), fixed effects are adopted on theoretical grounds as the preferred specification. Random

effects estimates are simply reported for transparency, whilst the MDB-total flows coefficient under RE is positive and significant, broadly consistent with the fixed effects baseline. The IFC coefficient remains statistically indistinguishable from zero.

Robustness 9: MDB Flows Normalised by Country Mean GFCF

	MDB Scaled	IFC vs Non-IFC Scaled
MDB flows / mean GFCF (normalised)	5.683**	
	(2.225)	
GDP growth (%)	0.044	0.044
	(0.040)	(0.040)
Inflation (%)	-0.012	-0.012
	(0.010)	(0.010)
Trade (% GDP)	0.073***	0.073***
	(0.021)	(0.021)
Dom. credit (% GDP)	0.050***	0.050***
	(0.019)	(0.019)
Governance (WGI)	3.675**	3.704**
	(1.505)	(1.505)
Gov. expenditure (% GDP)	-0.021	-0.020
	(0.137)	(0.137)
IFC OOF / mean GFCF (normalised)		43.411
		(26.245)
Non-IFC flows / mean GFCF (normalised)		5.485**
		(2.242)
Observations	1800	1800
R-squared (within)	0.089	0.089

Standard errors in parentheses. Country fixed effects included. Standard errors clustered at the country level. MDB flow variables normalised by country mean GFCF to account for country size. Sample covers 105 developing countries, 2000-2024.

Scaled flows: Normalising MDB flow variables by country mean for GFCF to account for country size differences yields qualitatively consistent results. The scaled MDB coefficient is both positive and significant, the scaled IFC coefficient is again insignificant. This suggests the baseline results are not driven by scale differences across the 105-country sample.

5.2.7 Summary of Quantitative Findings

The quantitative analysis yields four principal findings. First, total MDB flows are positively associated with gross fixed capital formation across the 105-country global sample, statistically significant at the 1 percent level across the baseline specifications and stable under Driscoll-Kraay standard errors robust to serial correlation and cross-sectional dependence. A coefficient range of 0.288 to 0.537 across specifications implies that each additional billion USD in MDB flows is associated with an increase of roughly 0.3 to 0.5 percentage points in GFCF as a share of GDP; not a trivial effect size in low-income contexts where capital formation already is structurally constrained. The result is consistent with aggregate crowding in at the country-year level, though the coefficient moderates under the most demanding specifications and should not be interpreted as causal. Second, and more consequential for the thesis argument, this positive association is driven by general MDB lending (IDA, IBRD, and the regional development banks) rather than IFC-specific activity. The IFC coefficient is statistically indistinguishable from zero in all baseline specifications, a finding that holds across the log-transformed, random effects, and scaled flow specifications. This decomposition matters: it suggests that the aggregate crowding-in result conceals meaningful heterogeneity by instrument type, with concessional flows doing the work that non-concessional activity does not. Third, the relationship is largely contemporaneous, with lagged MDB flows showing only marginal evidence of a one-year effect and no evidence of persistence for IFC, which is consistent with MDB financing responding to, rather than independently driving, investment cycles. Fourth, governance quality moderates the MDB-investment relationship, though the effect is concentrated at the lower end of the institutional distribution, where the marginal effect

of MDB flows is largest and statistically significant, and becomes imprecise as governance quality rises. Financial market depth does not produce a comparable moderating pattern.

On the central question of crowding-out, the quantitative results do not support the hypothesis at the aggregate level. Total MDB flows are positively rather than negatively associated with gross fixed capital formation, and this finding survives a battery of robustness checks. The result is, however, more equivocal for IFC specifically: the IFC coefficient is consistently close to zero and statistically insignificant across all specifications, offering neither confirmation of crowding in nor evidence of crowding out at the country-year level. This null result is itself informative, it suggests that the late-stage displacement mechanism, if operative, does not produce a detectable net aggregate investment effect at the country-year level, which is precisely what the transaction-level evidence would predict: if IFC displaces private capital in some transactions whilst catalysing it in others, the two effects wash out in the aggregate coefficient. The regional analysis provides the most suggestive pattern in this regard as the SSA subsample yields the largest negative IFC point estimate across all regional specifications, though it falls short of conventional significance thresholds and is treated as directionally indicative rather than confirmatory. Taken together, these results establish what the quantitative strand can and cannot speak to: aggregate MDB activity is associated with higher investment, but this association masks instrument-level and regional heterogeneity that aggregate data, by construction, cannot fully resolve. That limitation is not incidental; it is the reason the qualitative result, which operates at the level where the late-stage displacement mechanism is actually observable, carries the primary evidentiary weight in what follows.

6. Discussion

6.1 Applications on economic theory

As mentioned previously, the activity and roles of MDBs is inherently based on welfare economics, improving utility for those they serve, increasing investments, and playing a central role in helping in developing economies and correcting market failures so that nationstates can reach socially optimal levels. Within the applied framework, investment in particular was highlighted and interpreted as a method to achieve welfare-improvements, by contrast,

evaluating whether substitution stemming from that private capital was being crowded-out despite MDBs' various mandates. Subsequently, if that crowding-out took place without any complementary rise in welfare levels, this would be problematic as it could both go against the mandate of which member-states participate because of as well as regarding institutional efficiency. The empirical results therefore do not reflect any measurement of welfare, but examined whether MDB inflows of capital lead to increases in private sector investments or displaced total capital invested. One assumption was that GFCF is a valid proxy for overall capital accumulation in an economy.

Using a mixed-methods approach both qualitative and quantitative strands produce the findings of this paper, whereas they find themselves at tension with one another. The qualitative strand led the paper in a direction to explore so-called late-stage displacement through separately conducted interviews with industry professionals who have had direct transactional experience with MDBs at the project level. Furthermore, MDB-entry and IFC-entry in particular into transaction-level projects where private sector appetite was already existing in terms of commitment, structuring of deals and pricing. The overarching results from the semi-structured interviews was that this was a recurring topic, the quantitative aspects sought to investigate those claims. The quantitative analysis found no aggregate evidence of consistent displacement, instead aggregate MDB flows were robustly positively associated with GFCF at the country-year level This effect overall came from MDB lending from the several banks belonging to the WBG and other regional development banks, rather than by IFC-specific activity. Reconciling these findings requires an interpretive approach to the merged analysis.

Starting off, the country-year panel data captures the net effect of all MDB activity in a given country and year. Distinctively, on a country-level plane, MDB presence consistently provides support that the overall net effect of MDB activity generates positive signaling effects to the private sector, reduces perceptions in terms of risk and helps with attracting co-financing to development projects in most cases, it also displaces it in some, this can be observed by the aggregate coefficient which effectively reflects the net balance. The qualitative analysis identifies the potential displacement channel, however, the quantitative data reveals that this is not something that is visible at the macro-level using these datasets. Nevertheless, it is

noteworthy to say that both can still be true, but the exclusion of detectable causation or correlation at the aggregate level does not mean that the mechanism is not relevant or active, given the appropriate level of data on a transactional level rather than only the country-year level could reveal whether or not if this hold on a larger trend.

Reflecting on the positive aggregate MDB-investment coefficients, this does not mean *per se* that the MDBs are flawless, efficient institutional organizations. If project-level data was available per sector it could be that the results turned out different. Additionally, it could still be that displacement mechanisms occur. The quantitative results show that non-IFC MDB flows were robustly associated with higher gross fixed capital formation, whereas IFC-specific activity was not. Therefore, if concessional lending is split between those MDBs working in lower income contexts where the crowding-out effect is less significant and IFC's non-concessional investments happen in higher income settings that displacement could occur. Depending on the results, the coefficient could still be positive on aggregate. When looking at regional heterogeneity, especially at the SSA, the IFC coefficient is in fact negative which is directionally consistent with the displacement hypothesis put forth in this thesis. However, when increasing the demands of the specifications these results are not statistically significant, despite the coefficients (-3.348, SE 3.766, p = 0.380). This could reflect the fact that factors such as, trade, credit markets, governance and safety still have an inherent risk as such one could view this as a binding constraint for low-income countries. By comparison, in South Asia IFC activity is positive and highly significant, which could imply the fact that the mechanism is context-dependent.

6.2 Addressing the Hypotheses

The evaluation of the hypotheses was done through the utilization of the welfare- and additionality frameworks presented in the literature review.

H1: Late-stage displacement operates as a mechanism distinct from general crowding out.
Result: supported by qualitative evidence.

To begin with the qualitative results strongly supported this hypothesis, almost all interviews had at least experienced some type of transactional displacement from MDBs during either early or late stages of it. The perceived effect was particularly strong amongst pure financial/private sector professionals who argued that it had occurred after comprehensive due diligence, credit approval and after having closed the first financing round. This would mean that the typical crowding-out mechanisms such as interest rates, currency risks, political turmoil would not be at fault. Instead substitution at a point of the transaction where undertaking the project would mean avoiding transaction costs and the risk involved. However, the quantitative analysis cannot test this directly as the data only encompasses country-year data, in short, not at the required level of granularity needed. Given that the IFC coefficient hovers around 0 (see table 2 and 3) and is statistically insignificant with standard errors far from acceptable for any type of diagnosis, the thesis cannot completely disregard the hypothesis. After implementing Driscoll-Kraay standard errors the analysis result is the same, even with a more consistent direction of the coefficient.

H2: Late-stage displacement generates ex ante underinvestment in private sector transaction development capacity. Result: not directly tested - cause for future ex ante studies

After reviewing the qualitative analysis one can see that there is suggestive evidence of this, individuals who had been directly impacted negatively tended to describe that they did experience behavioral changes and attitudes towards MDBs, and continued to describe reduced willingness to invest in time, money and do proper due diligence. However, this is based on self-reported behavior and was not supported in the macro evidence from the quantitative analysis. Whilst, the quantitative strand does not directly test this as it requires firm-level panel data as well as transaction-level data not publicly available. As such, one cannot imply that this mechanism has an overarching impact on private sector participants' willingness to partake in future transactions using this model. It could still be the case that this loss in welfare amongst individuals affected is not sufficiently captured in aggregate investment measures, which is to be expected.

H3: MDB activity and investment patterns are at times inconsistent with additionality, potentially crowding-out private capital in markets where private appetite exists, prioritizing on lower-risk transactions rather than the higher-risk projects where MDB intervention would be unambiguously additional. Result: partially supported - governance interaction directionally consistent, only marginally significant (p=0.069).

The interaction between MDB flows and the WGI governance index as seen above is negative and marginally significant at the 10% level (-0.487, SE 0.265, p = 0.069), whereas the interaction between MDB-flows and the domestic credit control variable is negative, but does not capture anything of significance. One reason for this could also be that the results are contextually based, it follows naturally that MDB activity should be less positively associated with higher income countries, that typically tend to have higher levels of governance, security, rule of law, and a more advanced financial sector. Unsurprisingly since that is the mandate that they have been given. However, the results are not overwhelmingly noticeable and should also be reviewed with caution. This could be due to limited aggregate data using these datasets, however, on the aggregate-level the quantitative data seems to suggest that the MDBs do not demonstrate a meaningfully lower risk appetite rather than their private sector counterparts, contrary to crowding-in narrative. However, from a welfare perspective, the directional pattern does raise certain concerns that MDB activity may fail to satisfy the conditions for additionality required for truly welfare-improving intervention, even if the case is that the aggregate investment effects appear positive.

H4: The persistence of late-stage displacement across regions reflects structural incentives within MDB institutional design. Result: supported by qualitative evidence, not by quantitative evidence

The qualitative data may have put forth evidence that this was the case, especially for certain recurringly named MDBs, where factors such as the preferred creditor status and cost of capital advantages was mentioned. Ultimately, the quantitative findings support that in the aggregate crowding-in is the norm and driven by general MDB lending, whereas IFC activity does not have an equally strong case for that being the case. One argument is that this is due to the role

of the IFC, working in/near the private sector boundary and has the most incentives out of the MDBs to become afflicted or impose structural incentives such as volume deployment. However, some intermediaries with experience from both private sector banks and MDBs did mention that at times it per the will of local officials to act quickly, equally that in a complex multi-stakeholder transaction with numerous interests to have at hand, with differing internal regulations and/or national regulations that these deals can become unmanageable. Thus, after an extended period of time the decision-makers choose the simplest and most advantageous choice, which in these contexts tends to be the MDBs, even if it is a short-term choice.

6.3 Implications for the Crowding Out Literature

The main findings of the thesis that contributes to the empirical crowding-out literature within the development context and in-relation to MDB are; firstly, that the decomposition of MDB-active has an impact on the MDB-investment coefficient. Therefore, studies that continue similar research that pool MDB-flows could produce less accurate results than those that use decomposition between concessional and non-concessional flows, as seen above concessional lending made up for the majority of the positive inflow of investment and was dominant in the aggregate MDB coefficient. Whereas using decomposition to measure IFC-specific and NON-IFC flows did help with getting to review and analyze more granular data, this was certainly helpful for the analysis in its entirety and transferable into other types of country-year panel data studies in a methodological sense. Additionally, given the increase of financially innovative instruments being introduced into the development space it could be useful to use a similar approach for evaluating the impact of these either for individual MDBs or on a national-level.

Secondly, given that the IFC coefficient was not statistically significant, the undertakings made within recent decades and years within the G20 Capital Adequacy Framework and the general MDB reform agenda more focus should be laid upon non-concessional lending. The expectation should not be that expanding non-concessional lending automatically will lead to results and increase private capital mobilisation, as understanding these mechanisms will be crucial if the multilateral development system is to meet the goals that have been set-up. Nor

does the aggregate data presented in this thesis support that under clustered standard errors that IFC OOF are associated with higher investment, at least on the country level, as the coefficient in this dataset the coefficient was imprecise throughout multiple specifications, models despite numerous robustness checks to increase the reliability and validity of these results. One should interpret this with caution, however, as in the South Asia sample it was clear that additionality to a certain degree had occurred, likely, due to structural or investment conditions that warranted investment activity. However, this could further be improved upon by the release of what the required investment conditions are for the IFC and other MDBs.

In sum, interaction effects were marginally significant and were meaningful directionally, however they were not robust to imply any strong finding at the country-year level of aggregation, this was true even for conventional thresholds. This could be because of the limited sample size available and the approach of the thesis itself, i.e., a country-year panel. This follows from the fact that the mechanism that was evaluated and researched upon has to do with project or transaction-level data, as such to investigate similar mechanisms or dynamics the publicly available datasets would have to be expanded. Likely, this is one the reasons why crowding-out literature largely relies on aggregate data in general, but especially in the development financial sector as MDBs and private capital participation is not publicly available. One reminder of this is the fact that PFCF would likely have been a significantly stronger contender to measure the actual crowding-out effect, no matter the MDB in question. In this thesis, the argument is that combining aggregate results and project-level qualitative results can work if with sufficient data points, and that project-level data can identify the prevalence of underlying mechanisms not picked up in standard analyses under the right circumstances. In the case of displacement future research could choose to focus on different market segments, the marginal difference between certain governance indicators (given the abovementioned results) and that the issue is further developed.

6.4 Implications for MDB Reform

In terms of MDB reforms, the undertakings of multilateral processes such as the Addis Ababa Action Agenda, the G20 Capital Adequacy Framework and the Agenda 2030, amongst other

reports and ongoing reviews and international working groups that emphasise private capital mobilisation as central MDB objectives, should consider these findings. Qualitative results suggest that there is an institutional misalignment which could potentially mean losing additionality, especially in MICs that have private capital investors and a developing financial sector. Volume and additionality are essential theoretical aspects of this; additionality and volume should not act as complements.

The suggestions based on this thesis are as follows; firstly, the implementation of additionality assessments that are done by independent auditors to verify the project and its development(s), even after concluding it. As allowing MDBs to have full control of this process increases the risk of counter-productivity as current frameworks allow MDBs to perform additionality assessments at appraisal stages, therefore, for full transparency it should occur in three steps: 1) Before 2) During 3) After. Next, mobilisation ratios should be reported alongside counterfactual benchmarks to help outside verification by researchers and academia to further studies such as this, for example IFC's reported mobilisation figures were not independently verifiable against the PPI data examined in this thesis, whereas the qualitative data presented here suggested that additionality may get confused with participation and volume deployment. Lastly, especially for MDB activity in upper-middle-income countries that already have well-developed capital market to face higher requirements in terms of additionality and to shift that the burden of proof to MDBs putting forth evidence that there were no other methods of attaining private capital on similar terms, to allow local banks and FSPs to develop their domestic and regional markets.

6.5 Limitations and Directions for Further Research

There were numerous limitations within this study that should be taken into consideration when interpreting these findings. Regarding the quantitative analysis, this method only captures correlation and cannot state causation given the endogeneity risk of MDB activity and the control variables used, any positive coefficient may also reflect certain reverse causality and vice versa rather than a substantial catalytic effect. Driscoll-Kraay standard errors aided in addressing sampling variability, but were not as efficient in identification. On the other hand,

the qualitative results and discussion was rich in terms of content and consistent, but should be approached with utmost caution given that these are personal perceptions, ideas, contexts, employments, workplaces, *etc*. It would be irresponsible not to mention that people can be selective about details, even unwillingly, such that interviewees that had particularly poor experiences would be less truthful than the method intended.

For future research; expanded access to IFC project-level data including additionality assessments could prove useful in understanding inside processes, especially when combining microeconomic research in conjunction with macroeconomic research. Firm-level panel data is one such example that could help further a thesis such as this. Publishing transaction development expenditure in markets where there are clear varying levels of MDB presence would allow for H2 to be tested directly. Lastly, varying the methodology and using other approaches such as instrumental variable methods, quasi-experimental variation in MDB lending could help address endogeneity limitations that standard errors cannot resolve by themselves.

7. Conclusion

This thesis was a mixed-methods approach that examined a late-stage displacement mechanism within the development finance sector, specifically focusing on the transactional relationship between private sector stakeholders and MDBs. The idea came from the fact that the authors had independently encountered during their time to work for the MFA, accounts of displeasure towards MDBs from different types of financiers, including banks, fund managers and transactional intermediaries. This led to the research question that sought to examine whether MDBs actually do displace private capital, even in markets where mandates may be to promote private sector development. Similarly, this was written in the background of the many multilateral undertakings to increase private sector resource mobilisation as a response to ongoing crises and decreases in ODA in these past few years. Given the certain tensions in the stated objectives of MDBs, private sector stakeholders and multilateral signed agreements. The decision was made to examine the topic to understand if the mechanism, partly, was verifiable

qualitatively on a project-level basis and subsequently evaluated if this was a visible pattern that emerged on an aggregate-level.

In the qualitative results, multiple MDBs received criticism for coming in at later stages of the transaction process even if it had been ongoing in terms of due diligence, investments or time simply being able to offer better deal-structuring, financing terms and the ability to finalize deals in a swift manner. The suggestive evidence points to a core question of contemporary development finance, namely, the function of general MDB lending, including; concessional flows from IDA regional MDBs, and non-concessional flows from the IBRD, which was found to be positively and robustly associated with increases of GFCF using this sample. IFC's non-concessional activity remained consistently imprecise and had no statistically significant coefficient through any of the baseline models. The quantitative results revealed a robust positive association between general MDB-lending and investment, which supports the crowding-in thesis and was driven by concessional flows.Whilst it showed a null result for IFC-specific activity, these are regarded as complementary, rather than contradictory. However, this was not substantiated in LICs/MICs - an income-group focused regression could for future studies solve this. Similarly, investments from MDBs signals trustworthiness, upside and provides less risk to investors that are looking to execute transactions in similar markets. However, this was not substantiated in LICs/LMICs, likely, for contrasting reasons. There was a clear substantive factor of the aforementioned trend as investments were more prevalent in countries with higher levels of governance.

In terms of the qualitative analysis, critique was substantial and the authors of this paper can neither prove nor deny any statements made, however, the overall result is that these qualitative accounts were not reflected in the country-year panel analysis and as such cannot be proven. This was where the mechanism stemmed from, practitioners across independently sourced accounts consistently described such a pattern, yet without publicly available project-level data the methodology of this paper cannot put forth causation, simply state the correlation of the chosen models. Practitioners did state that they had experienced behavioral adjustments, but there is no evidence for any systemic or structural misalignment within these organisations presented here.

There are multiple important limitations to consider, as mentioned the quantitative analysis does not propose that it can nor has established any causation, given the endogeneity issues revolving a study that involves MDB activity and the chosen variables, even through various robustness checks and specifications regarding fixed effects this remains an issue. GFCF is an imperfect proxy for private investment as it is composed of both public and private data. Attempts to address this were made via robustness checks, but data coverage is limited. Furthermore, the sample size of the practitioners is not representative of the entire development finance and MDB sector as a whole and may be prone to bias. Exemplified by the regions SA and EAP, who had a particularly small and skewed subsample. Lastly, a large statistically significant positive estimate for IFC-flows for regional subsamples would have recurrent late-stage/general displacement (crowding-out), and would have acted as contradictory evidence to the central hypothesis of the thesis.

In terms of contribution the thesis does this in four different ways: Firstly, we introduce late-stage displacement as a transactional mechanism within the development finance literature, situating it in relation to the broader crowding-out debate. Secondly, we provide the first recurrent practitioner-based documentation of the late-stage displacement mechanism, drawing on thirteen semi-structured interviews across eight regions. Thirdly, by decomposing MDB flows by instrument type in a global panel using the latest data, we show that the positive aggregate linkage between MDB activity and investment is driven by non-IFC MDB lending rather than by IFC-specific activity. This is informative both for further empirical analyses and for ongoing policy processes such as the Addis Ababa Action Agenda and the G20 Capital Adequacy Framework. Lastly, by using a mixed-methods approach it attempts to bridge qualitative practitioner evidence with panel data analysis, showing that aggregate crowding-in and transactional displacement do not have to be contradictory, but rather requires different granularity and access to data to further the analysis, yet both could still hold.

For the future, it is the opinion of the authors that improved access to IFC project-level data and to additionality assessments both during or after projects have initiated or been concluded would help in this type of research (country-year panel and mixed-methods), however, this recommendation is equally relevant to all MDBs. This would be especially helpful for further

studies on the topic of late-stage displacement at the transaction level. Additionally, the employment of other quantitative approaches could produce more significant results that this model was unable to. Despite using numerous specifications and using rigorous robustness checks, issues remained with standard errors, using IV-approaches like quasi-experimental variation in capital lending volumes such as capital replenishment cycles or doing comparative institutional analyses on MDBs different mandates.

Finally, it is not only worthwhile to consider upon certain of these findings, the coexistence of aggregate investment expansion and potential allocative inefficiency,whether on the transactional or country-level, is not something to be ignored. Given the challenges and empirical reality we are faced with, this is something that the multilateral development finance system must confront. Whilst general MDB lending is positive in the aggregate; IFC's non-concessional activity is not, at least using this sample for MIC markets. Addressing this, whether it be through increased stakeholder collaboration, higher requirements on assessments and *ex post* verification, expanding the investment pool is not only desirable, but crucial to implement the developmental reform agenda. From a welfare and additionality perspective, this is a central challenge the multilateral development finance system must address if private capital mobilisation is to remain credible beyond the short term.

Reference List

Andonov, A., Li, A. & Smeets, P. (2025). *Do Development Financial Institutions Create Impact through Venture Capital Investments?* SSRN Electronic Journal. Available at: http://dx.doi.org/10.2139/ssrn.5101408, [Accessed 2026-03-16]

Angrist, J.D. and Pischke, J.S. (2009). *Mostly Harmless Econometrics: An Empiricist's Companion.* Princeton University Press, Princeton.

Arellano, M. and Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies*, vol. 58, no. 2, pp. 277–297.

Arellano, M. and Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics*, vol. 68, no. 1, pp. 29–51.

Arrow, K.J. and Lind, R.C. (1970). Uncertainty and the evaluation of public investment decisions. *American Economic Review,* vol. 60, 3, pp. 364–378.

Attridge, S. and Engen, L. (2019). Blended finance in the poorest countries: the need for a better approach. *ODI Report,* Overseas Development Institute, London.

Basílio, M. (2017). The Degree of Private Participation in PPPs: Evidence from Developing and Emerging Economies, in Leitão, J., Sarmento, E. de M. and Aleluia, J. (eds.) *The Emerald Handbook of Public–Private Partnerships in Developing and Emerging Economies: Perspectives on Public Policy, Entrepreneurship and Poverty*. Bingley: Emerald Publishing

Bernheim, B.D. (1989). A neoclassical perspective on budget deficits. *Journal of Economic Perspectives,* vol. 3, no. 2, pp. 55–72.

Berthélemy, J.C. and Tichit, A. (2004). Bilateral donors' aid allocation decisions a three-dimensional panel analysis. *International Review of Economics and Finance,* vol. 13. no.3, pp. 253–274.

Bhattacharya, A., Romani, M. and Stern, N. (2012)**.** Infrastructure for development: meeting the challenge. *Policy Paper, Centre for Climate Change Economics and Policy and Grantham Research Institute on Climate Change and the Environment,* London.

Blundell, R. and Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, vol. 87, no. 1, pp. 115–143.

Braun, V. and Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, vol. 3, no. 2, pp. 77–101

Breusch, T.S. and Pagan, A.R. (1980). The Lagrange multiplier test and its applications to model specification in econometrics. *Review of Economic Studies*, vol. 47, no. 1, pp. 239–253.

Broccolini, C., Lotti, G., Maffioli, A., Presbitero, A.F. and Stucchi, R. (2018) Mobilization Effects of Multilateral Development Banks, *IDB Discussion Paper* No. IDB-DP-00621. Washington, DC: Inter-American Development Bank.

Carlson, K.M. and Spencer, R.W. (1975). Crowding out and its critics. *Federal Reserve Bank of St. Louis Review*, vol. 57, no. 12, pp. 2–17

Carter, P., Van de Sijpe, N. and Calel, R. (2018) The Elusive Quest for Additionality. Center for Global Development Working Paper No. 495. Washington, DC: Center for Global Development.

Cavallo, E. and Daude, C. (2011). Public investment in developing countries: A blessing or a curse? Journal of Comparative Economics, vol. 39, no. 1, pp. 65–81.

Chelsky, J., Morel, C. and Kabir, M. (2013). Investment financing in the wake of the crisis: the role of multilateral development banks. *World Bank Economic Premise,* no. 121.

Convergence, (2020). The State of Blended Finance 2020, *Annual Report*. Available Online: https://www.convergence.finance/reports/sobf2020/assets/The_State_of_Blended_Finance_2020.pdf, [Accessed 2026-03-29]

Creswell, J.W. and Creswell, J.D. (2018). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches.* 5th edn, Sage, Thousand Oaks, CA.

Dearnley, C. (2005). A reflection on the use of semi-structured interviews. *Nurse Res*. Vol. 13, no. 1, pp. 19-28.

Dreher, A., Sturm, J-E. and Vreeland, J.R. (2009). 'Development aid and international politics: Does membership on the UN Security Council influence World Bank decisions?' *Journal of Development Economics,* vol. 88, no. 1, pp. 1–18.

Driscoll, J.C. and Kraay, A.C. (1998). Consistent covariance matrix estimation with spatially dependent panel data. *Review of Economics and Statistics*, vol. 80, no. 4, pp. 549–560.

Engel, E., Fischer, R. and Galetovic, A. (2014). The Economics of Public-Private Partnerships: A Basic Guide. *Cambridge University,* Cambridge University Press, Cambridge.

Easterly, W. (2001). *The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics.* MIT Press, Cambridge, MA.

Eichengreen, B. and Mody, A. (2000). What explains changing spreads on emerging-market debt? In Edwards, S. (ed.) *Capital Flows and the Emerging Economies.* University of Chicago Press, Chicago, pp. 107–134.

Erden, L. and Holcombe, R.G. (2005). The effects of public investment on private investment in developing economies. *Public Finance Review,* vol. 33, no. 5, pp. 575–602.

Friedman, B.M. (1978). Crowding out or crowding in? Economic consequences of financing government deficits. *Brookings Papers on Economic Activity*, vol. 1978, no. 3, pp. 593–641.

Gatti, S. (2012). *Project Finance in Theory and Practice.* Academic Press, London.

Gibbs, G. (2018). Data preparation. In *Analyzing Qualitative Data* (2nd ed., pp. 17–36). SAGE Publications

Gichuki, L. (2026). One year on: What the collapse of USAID has cost the world, *Development Aid,* Available Online: https://www.developmentaid.org/news-stream/post/206934/what-the-collapse-of-usaid-has-cost-the-world, [Accessed 2026-02-10]

Griffith-Jones, S. and Tyson, J. (2013) 'The European Investment Bank: Lessons for developing countries', *WIDER Working Paper* No. 2013/019. Helsinki: United Nations University World Institute for Development Economics Research (UNU-WIDER).

Grossman, S., and Hart, O. (1986). The costs and benefits of ownership: A theory of vertical and lateral integration. *Journal of Political Economy,* vol. 94, no. 4, pp. 691-719.

G20 Independent Expert Group, (2023). *Strengthening Multilateral Development Banks: The Triple Agenda.* Report to the G20. Available Online: https://www.cgdev.org/sites/default/files/The_Triple_Agenda_G20-IEG_Report_Volume1_2023.pdf [Accessed 2026-02-18]

Hainz, C. and Kleimeier, S. (2012). Political risk, project finance, and the participation of development banks in syndicated lending. *Journal of Financial Intermediation,* vol. 21, no. 2, pp. 287–314.

Hart, O. and Moore, J. (1988).'Incomplete contracts and renegotiation. *Econometrica,* vol. 56, no. 4, pp. 755–785.

Hausman, J.A. (1978). Specification tests in econometrics. *Econometrica*, vol. 46, no. 6, pp. 1251–1271.

Hirschman, A.O. (1958). *The Strategy of Economic Development.* Yale University Press, New Haven.

Human Rights Watch. (2025). US: Trump administration guts foreign aid: Terminating USAID, State Department programs devastating for rights, lives. *Human Rights Watch,* Available Online:https://www.hrw.org/news/2025/02/28/us-trump-administration-guts-foreign-aid, [Accesssed 2026-02-06]

Humphrey, C. (2014). The Politics of Loan Pricing in Multilateral Development Banks, *Review of International Political Economy,* vol. 21, no. 3, pp. 611-639

Hur, S., Mallick, S., and Park, D. (2010). Fiscal Policy and Crowding Out in Developing Asia, *ADB Economics Working Paper Series* No. 222. Manila: Asian Development Bank

International Finance Corporation (IFC) (2026) *B Loan*. Available at: https://www.ifc.org/en/what-we-do/sector-expertise/syndicated-loans-and-mobilization/b-loans (Accessed: 12 April 2026).

Kaufmann, D., Kraay, A. and Mastruzzi, M. (2010). 'The Worldwide Governance Indicators: Methodology and Analytical Issues.' *World Bank Policy Research Working Paper,* No. 5430. World Bank Group, Washington DC.

Klein, B., Crawford, R.G. and Alchian, A.A. (1978). Vertical integration, appropriable rents, and the competitive contracting process. *Journal of Law and Economics,* vol. 21, no.2, pp. 297–326.

Mazzucato, M. and Vieira de Sá, R. (2025) *Mind the Mission, Not the Gap: Rethinking Blended Finance for Public Purpose.* IIPP Policy Brief No. 34. London: UCL Institute for Innovation and Public Purpose. Available at: https://www.ucl.ac.uk/bartlett/publications/2025/jun/mind-mission-not-gap-rethinking-blended-finance-public-purpose, (Accessed: 17 April 2026).

MDB Task Force on Additionality, 2018. Multilateral Development Banks: Harmonised Framework for Additionality in Private Sector Operations. *MDB Working Group on Additionality*

Nakhooda, S. (2008). Correcting the World's Greatest Market Failure: Climate Change and the Multilateral Development Banks, *Issue Brief, Washington D.C: World Resources Institute*

Norton, E.C. (2022). *The Inverse Hyperbolic Sine Transformation and Retransformed Marginal Effects*. NBER Working Paper No. 29998. National Bureau of Economic Research, Cambridge, MA. Available at: http://www.nber.org/papers/w29998.

Newey, W.K. and West, K.D. (1994). Automatic lag selection in covariance matrix estimation. *Review of Economic Studies*, vol. 61, no. 4, pp. 631–653

Nickell, S. (1981). Biases in dynamic models with fixed effects. *Econometrica*, vol. 49, no. 6, pp. 1417–1426.

OECD, (2018). Blended Finance Principles for Unlocking Commercial Finance for the Sustainable Development Goals. *OECD*, Available Online: https://www.oecd.org/content/dam/oecd/en/publications/reports/2018/12/oecd-dac-blended-finance-principles_898d3549/dc66bd9c-en.pdf, [Accessed 2026-03-02]

OECD (2024a). DAC2A: Aid (ODA) disbursements to countries and regions. *OECD Data Explorer*, OECD Publishing, Paris. Available at: https://data-explorer.oecd.org/s/ob [Accessed: 2026-03-17]

OECD (2024b). DAC2B: Other official flows (OOF) disbursements to countries and regions. *OECD Data Explorer*, OECD Publishing, Paris. Available at: https://data-explorer.oecd.org [Accessed 2026-03-17].

OECD (2024c). DAC3A: Aid (ODA) disbursements by donor. *OECD Data Explorer*, OECD Publishing, Paris. Available at: https://data-explorer.oecd.org, [Accessed: 2026-03-17].

OECD (2025A), "Tracking private finance mobilisation: Latest trends and ways forward", *OECD Policy Briefs*, No. 25, OECD Publishing, Paris.

OECD, (2025B), Cuts in official development assistance: OECD projections for 2025 and the near term, *OECD Policy Briefs*, no. 26.

Raciborski, R. (2008). kountry: A Stata utility for merging cross-country data from multiple sources. *The Stata Journal*, vol. 8, no. 3, pp. 390–400.

Rodrik, D. (2008a). Second-Best Institutions, *American Economic Review,* vol. 98, no. 2, pp. 100-104

Rodrik, D. (2008b). Normalizing Industrial Policy. Commission on Growth and Development Working Paper No. 3, World Bank, Washington D.C.

Servén, L. and Solimano, A. (1993). Debt crisis, adjustment policies and capital formation in developing countries: Where do we stand? *World Development*, vol. 21, no. 1, pp. 127–140.

Stiglitz, J.E. and Weiss, A. (1981). Credit rationing in markets with imperfect information. *American Economic Review,* vol. 71, no. 3, pp. 393–410.

Stiglitz, J.E. (1989). Markets, market failures, and development. *American Economic Review,* vol.79, no. 2, pp. 197–203.

Stuckey, H.L. (2015). The second step in data analysis: coding qualitative research data. *Journal of Social Health and Diabetes,* vol. 3, no. 1, pp. 7–10.

Taguchi, H. and Yasumura, K. (2021) 'Financial Additionality of Multilateral Development Banks in Private Participation in Infrastructure Projects', *Sustainability*, vol. 13. no. 15, pp. 8412.

Patton, M.Q. (2002). Qualitative Research and Evaluation Methods. 3rd edn, Sage, Thousand Oaks, CA.

United Nations, (2015). Addis Ababa Action Agenda of the Third International Conference on Financing for Development. United Nations, New York. Available online: https://www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA_Outcome.pdf, [Accessed 2026-01-17]

United Nations, Inter-agency Task Force on Financing for Development. (2024). *Financing for sustainable development report 2024: Financing for development at a crossroads*. United Nations. Available Online: https://doi.org/10.18356/9789213588635, [Accessed 2026-02-04]

United Nations. (2026). *Financing for sustainable development report 2026: Implementing the Sevilla commitment*. Inter-agency Task Force on Financing for Development, Available Online: https://desapublications.un.org/sites/default/files/publications/2026-04/FSDR2026.pdf, [Accessed 2026-02-10]

Williamson, O.E. (1985). *The Economic Institutions of Capitalism.* Free Press, New York.

Woods, N. (2001). Making the IMF and the World Bank more accountable. *International Affairs,* vol. 77, no. 1, pp. 83–100.

World Bank, (2017). *Public-Private Partnerships Reference Guide Version 3.* World Bank Group, Washington DC.

World Bank, (2026a). *World Development Indicators.* World Bank Group, Washington DC.

World Bank, (2026b). *Private Participation in Infrastructure Database.* World Bank Group, Washington DC.

World Bank, (2026c). *Worldwide Governance Indicators.* World Bank Group, Washington DC.

Appendix:

Table 1: Multi- & Bilateral Development Banks

Institution	Abbreviation	Founded	Type	Geographic Focus	Primary Thematic Focus
International Bank for Reconstruction and Development	IBRD	1944	Multilateral	Global (MICs)	Infrastructure, governance, development policy
International Development Association	IDA	1960	Multilateral	Global (LICs)	Poverty reduction, social investment
International Finance Corporation	IFC	1956	Multilateral	Global (private sector)	Private sector development, infrastructure
Multilateral Investment Guarantee Agency	MIGA	1988	Multilateral	Global	Political risk insurance
Inter-American Development Bank	IDB	1959	Regional	Latin America & Caribbean	Infrastructure, social development
African Development Bank	AfDB	1964	Regional	Africa	Infrastructure, agriculture, energy
Asian Development Bank	ADB	1966	Regional	Asia & Pacific	Infrastructure, climate, regional integration
European Investment Bank	EIB	1958	Regional	Europe & partner countries	Infrastructure, climate, innovation
European Bank for Reconstruction and Development	EBRD	1991	Regional	Europe, Central Asia, MENA	Private sector transition, infrastructure
Asian Infrastructure Investment Bank	AIIB	2016	Multilateral	Asia & beyond	Infrastructure, connectivity
New Development Bank	NDB	2015	Multilateral	BRICS & emerging economies	Infrastructure, sustainable development
Nordic Investment Bank	NIB	1975	Regional	Nordic & Baltic states	Sustainable infrastructure, environment
Swedfund		1979	Bilateral	Sub-Saharan Africa, Asia	Private sector, sustainability
British International Investment	BII	1948	Bilateral	Africa, Asia	Private sector, climate
DEG		1962	Bilateral	Global (developing countries)	Private sector, SMEs

Institution	Abbreviation	Founded	Type	Geographic Focus	Primary Thematic Focus
FMO		1970	Bilateral	Global (developing countries)	Private sector, energy, agribusiness