

Determinants of cofinancing in IFAD-funded projects

A call to rethink development interventions

by
Manda Dite Mariam Sissoko
Natalia Toschi
Lisandro Martin

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Authors:

Manda Dite Mariam Sissoko, Natalia Toschi, Lisandro Martin

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About the authors

Manda Dite Mariam Sissoko is an agricultural economist and currently holds the position of Country Programme Officer at IFAD. Prior to this position she was a data analyst consultant at the Operational Policy and Results Division (OPR) of IFAD. She has previously conducted research works for the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and Michigan State University (MSU). She has an MSc in agriculture, food and resources economics from MSU and a BSc in agricultural economics from Laval University.

Natalia Toschi is currently a senior finance officer in the Financial Management Division of IFAD responsible for the development of new financial instruments for clients. Previously, she was a senior policy officer in OPR, responsible for strategic policies related to operations. Prior to that, she headed the Financial Planning and Analysis Unit of IFAD; she also served as finance and budget network advisor of the United Nations System Chief Executives Board for Coordination before joining IFAD. Her previous tasks ranged from investment officer to asset liability management officer in IFAD's Treasury Division. Ms Toschi worked as finance officer and risk manager as well as being a derivatives trader in Sanpaolo IMI and as a market monitoring officer in EuroMTS, then the largest European electronic bond trading platform. Ms Toschi holds a master's degree in business economics from the Libera Università Internazionale degli Studi Sociali 'Guido Carli' (LUISS University) in Rome, with a focus on financial mathematics.

Lisandro Martin is the Director of the West and Central Africa Division of IFAD. In this capacity, he leads IFAD's engagement with 25 countries, managing a portfolio of US\$3 billion. He oversees three subregional hubs and eight country offices. For IFAD11, he is responsible for delivering IFAD's programme for the largest number of countries, totalling an additional US\$1 billion. Quality and impact of operations are at the centre of his vision. Prior to this job, he was the Director, ad interim, of the Operational Policy and Results Division and of the Sustainable Production, Markets and Institutions Division. He has worked across departments to advance the Fund's transparency agenda and to make results management part of the IFAD culture. In addition, he led the changes to IFAD's Performance-based Allocation System to improve the distribution of IFAD resources to countries with greater need. He holds a master's degree in public affairs from the Woodrow Wilson School of Princeton University, where he was a Fulbright Scholar. He also holds a bachelor's degree with honours from the Universidad del Salvador, Argentina, and a certificate in conflict studies from Uppsala University in Sweden.

Oversight: Paul Winters, Associate Vice-President, Strategy and Knowledge Department.

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Abstract

This document presents the results of an in-depth analysis of the drivers of cofinancing in IFAD-supported programmes/projects. The study covers 20 years of project-financing data from 559 projects in 109 countries. The analysis used rigorous statistical models, such as panel regression and sample selection models, to identify country-, project- and IFAD-specific factors that trigger domestic and international cofinancing. In the first stage of the data analysis, the determinants of cofinancing committed at project approval were analysed to highlight the most significant drivers. In the second stage, cofinancing amounts disbursed at project completion were analysed to identify the underlying factors that explained the variations (positive or negative) between approved cofinancing amounts and the amounts disbursed. The analysis incorporated qualitative information on the challenges and opportunities of cofinancing, sourced from some regional economists, portfolio advisors and country programme managers.

The findings corroborated the general decline in IFAD's cofinancing ratios over recent decades, along with high variability during this time. Differences between regions in the distribution and structure of cofinancing were also observed. It appeared that donors' initial commitment to IFAD-supported projects at the time of the design was not always definitive. For 131 projects analysed, 77 per cent reported a disbursed domestic cofinancing amount that was different from the appraisal amount, while 46 per cent had a disbursed international cofinancing amount different from the design figure. Among factors that predict the cofinancing level, country-specific conditions (such as income level, fragility, national budgetary limitations, quality of rural institutions, governance, the size of the country and its vulnerability) are significant determinants. Project characteristics are crucial for resource mobilization; in particular, larger projects attract more cofinancing than others. The quality of implementation is another project-related factor found to be a major driver of donor commitment throughout the project life cycle. Results also show that international financial institutions (IFIs) can have the flexibility to influence cofinancing in their supported projects by focusing on a number of factors under their control that have appeared to have significant effects on cofinancing. In IFAD's case, for example, the in-country experience of country programme managers and the size of the portfolio they managed had significant positive effects on cofinancing. The presence of an IFAD Country Office also had a positive impact on resource mobilization. Furthermore, project partners' perception of IFAD's performance as a development partner of choice was a strong driver of cofinancing. It appears that the higher the IFAD performance rating is, the higher is the probability of an increase in the amount of cofinancing disbursed at completion.

The results provide IFIs such as IFAD with valuable insights to guide their efforts towards assembling development finance, delivering impacts at scale and making significant contributions to the Sustainable Development Goals. Going forward, the study will support IFAD in the elaboration of a resource mobilization strategy to achieve the new corporate cofinancing target and ensure that the financing needs associated with the IFAD11 development objectives are met.

Table of contents

Acknowledgements	2
Abstract	4
Introduction	8
1 Conceptual framework	9
1.1 Types of cofinancing	9
1.2 Framework for analysing donors' commitments to development projects.....	10
2 Methodology	13
2.1 Data types.....	13
2.2 Selection of key explanatory variables	14
2.3 Analytical models.....	20
3 Trends in cofinancing ratios between 1995 and 2017	24
3.1 Descriptive statistics of domestic and international cofinancing committed at design	24
3.2 Descriptive statistics of cofinancing disbursed at completion	34
4 Drivers of cofinancing in IFAD investment projects – results of the econometric analysis	36
4.1 Result 1: Drivers of cofinancing committed at appraisal	36
4.2 Result 2: Drivers of cofinancing disbursed at completion	43
5 Concluding remarks	47
References	50
Annex 1: Average cofinancing ratios per country (1995-2017)	52
Annex 2: Panel regression results	57
Annex 3: Heckman two-step regression results	63
Annex 4: Report of internal consultations	67

Introduction

The ambitious 2030 Agenda for Sustainable Development calls for the mobilization of financial resources at a level far beyond what has previously been achieved. Trillions of dollars must be mobilized every year to achieve the Sustainable Development Goals (SDGs) in developing countries. Paradoxically, a growing scepticism of development spending is placing new challenges on resource mobilization (Schroyer, 2017). Within this new global development landscape, the overarching role of the international financial institutions (IFIs) is to leverage resources to deliver impact at scale and maximize development results in a sustainable manner. With the increasing demand for resources to finance global development goals, IFIs need to assemble various forms of development finance from multiple national and international sources, from both the public and private sectors.

Cofinancing of development programmes and projects with multiple partners is a means of reinforcing the capacity to mobilize both financial and non-financial resources for common solutions to development challenges. The Asian Development Bank (AsDB) recognizes that cofinancing leverages the resources – including funding, knowledge and expertise – of all partners to benefit poor people (AsDB, 2014).

IFAD's enhanced business model also recognizes the need to foster resource mobilization to fulfil investment needs related to the specific mandate of ending rural poverty and food insecurity. For its 2019-2021 replenishment period (IFAD11), IFAD has set an ambitious cofinancing target of US\$4.65 billion, consisting of US\$2.66 billion of domestic cofinancing and US\$1.99 billion of international cofinancing. Cofinancing is considered an important vehicle to increase the programme of work (PoW) by over US\$1 billion during the IFAD11 period. However, these targets are challenged by the downward trend observed in the cofinancing ratios of IFAD-supported programmes/projects during the last two decades, along with high volatility over these years. IFAD10 (2016-2018) appears to have been the most challenging replenishment cycle, as it had a lower level of cofinancing ratios than the three previous cycles.

In recognition of the importance of this channel of development financing, and in reaction to falling levels of cofinancing in recent years, IFAD commissioned an in-depth study into the drivers and constraints of domestic and international cofinancing for its projects. This study aims to generate practical lessons to drive improvement in leveraging cofinancing. Financial contributions from IFAD's Member States' reflows from non-concessional loans and investment incomes remain the bedrock of IFAD's capital and financial commitments. However the increased demand for resources emerging from the global development landscape calls for an expansion of IFAD's financing capacity. A deeper understanding of the underlying factors that characterize the challenges to resource mobilization efforts is the first building block in achieving that aim.

This paper presents the results of a quantitative analysis aimed at identifying the country, institutional and project-related factors that trigger domestic and international cofinancing contributions at approval along with those contributions actually disbursed at completion. The study addresses the following questions:

- What are the country and institutional factors that trigger domestic and international cofinancing in IFAD projects?
- Were all financial commitments made at approval by the project partners disbursed at the end of the implementation cycle?
- What factors explain the variations between the amount of contributions committed at approval and the actual amount disbursed at completion?

In order to measure cofinancing levels, the contributions from project partners were converted into ratios representing the counterpart investment leveraged for each dollar of IFAD financing. These ratios were calculated using a three-year moving average. Panel regression and sample selection (using the Heckman two-step model) were applied for the econometric analyses. The analyses built upon historical project-financing data and cover the period between 1995 and 2014; descriptive statistics cover the extended period between 1995 and 2017.

The study uses McKinlay and Little's (1977) framework of aid relationships to explain the level of the cofinancing ratios in IFAD projects, considering country needs, donor interests and good governance as the main predictors of aid allocation. It further adapts that framework to accommodate factors that explain the change in donors' commitment between appraisal and completion. Building upon this established framework, the rigorous nature of this study serves as an evidence-based decision-making tool by providing actionable insights into IFAD's cofinancing strategy and, at a more general level, by informing the resource mobilization efforts of other IFIs. The study provides a unique and innovative addition to the literature on aid allocation in several ways. First, it includes project characteristics and organizational factors as predictors of cofinancing, allowing actionable recommendations to be drawn from the results. Second, it offers a holistic approach by presenting a post-completion analysis of factors that strengthen or weaken development partners' commitment to IFAD-supported projects. Finally, it provides a unique experience-based perspective on the constraints and drivers of resource mobilization by incorporating qualitative data gathered from consultations with staff involved in resource mobilization activities.

The remainder of the document is organized as follows. Chapter 1 describes the analytical framework that informed this study and includes definitions of the different types of cofinancing for projects financed by IFIs and multilateral development banks (MDBs). The methodological approach is presented in chapter 2 along with the structure of the data sample supporting the analysis. Chapter 3 provides descriptive trends in the cofinancing of IFAD projects over the last two decades. In chapter 4 the main findings of the study are discussed. Conclusions are drawn in chapter 5.

1 Conceptual framework

1.1 Types of cofinancing

Following similar definitions by other institutions, IFAD defined cofinancing as any type of partnership in which either investments are made by others in IFAD-initiated projects or investments are made by IFAD in projects initiated by others (IFAD, 2017).

Depending on the way it is channelled, cofinancing can be categorized into joint or parallel financing. For each of these channels, there are associated modalities for procuring cofinanced goods and services (World Bank, 1995). In joint cofinancing, all expenditures are mutually financed by the cofinanciers and the funds are disbursed in agreed proportions. In joint cofinancing, the financing partners share the costs of each project component or each good or service acquired (World Bank, 1995). Joint cofinancing in IFAD projects is generally determined at the project design stage. In parallel cofinancing, the cofinanciers fund different goods or services or different components of projects. For example, parallel-cofinanced Asian Development Bank (AsDB) projects are divided into specific identifiable components, or contract packages, each of which is separately financed by AsDB and its financing partners (AsDB, 2014). The financing of the components assigned to the financing partners can be administered either by following the host institution's policies and procurement guidelines (when under untied terms) or by following the contributing partner's policies and procedures (when under tied terms). Since parallel cofinancing does not always necessitate the pooling of resources in project management units, it is not systemically recorded in IFAD's financing databases. Therefore, it is not always accounted for in the aggregation of cofinancing that is mobilized.

Cofinancing is mainly sourced from official and private development assistance. Official cofinancing comprises funding for grants, loans and technical assistance, from governments and state-funded bilateral and multilateral agencies. Official cofinanced loans, often offered on concessional terms, are conditional on the adoption of transparent reporting mechanisms that illustrate the development impact of each financier's contribution (AsDB, 2014).

Private cofinancing involves financing from private sources offered on commercial terms when sourced from commercial banks, insurance companies or other private lenders. It may also be offered on concessional terms by involving foundations or philanthropic institutions. The private sector is defined broadly as any legal entity established for business purposes that is financially and managerially autonomous.¹ Private cofinanciers include financial institutions and intermediaries, multinational companies, microenterprises, small and medium-sized enterprises, cooperatives and farmer organizations, individual entrepreneurs, and farmers who operate in the formal and informal sectors.² The private sector excludes actors with a

1. See the joint report of the multilateral development banks *Mobilization of Private Finance by Multilateral Development Banks* (2016).

2. IFAD, *Private-Sector Strategy: Deepening IFAD's Engagement with the Private Sector* (2012).

non-profit focus, such as private foundations and civil society organizations.³ While most official cofinancing comes from international entities (except for the counterpart funding offered by recipient countries), private cofinancing may be sourced from both international and domestic entities.

Domestic cofinancing of IFAD-supported projects is received from institutions situated in the recipient country, whose jurisdiction and activities are limited to the national level. It is obtained through partnerships with governments, non-profit organizations, project beneficiaries, financial institutions, implementing partners and private-sector actors, and can be both monetary and in kind. Monetary contributions constitute the majority of cofinancing and are generally expressed as ratios representing the amount of money leveraged from external partners for each dollar of financing provided by the host institution. However, beneficiaries and implementing partners (including governments and the private sector) often finance projects by offering labour, expertise, land, materials, utilities and tax exemptions that are difficult to monetize accurately (although these goods and services have market value). As a result of the complexity of pricing these in-kind contributions, they are usually underestimated in the calculation of total financing.

International cofinancing typically occurs through partnerships with IFIs, multilateral entities (such as the European Union), bilateral organizations and pooled financing sources, such as climate funds (e.g. the Global Environment Facility [GEF]) and trust funds (e.g. the Spanish Trust Fund). International cofinancing in IFAD projects is usually monetary.

1.2 Framework for analysing donors' commitments to development projects

This study's estimation models are guided by the theoretical framework of foreign aid allocation pioneered by McKinlay and Little (1977) and McKinlay (1979). This framework is the one most commonly used in empirical studies that explain determinants of bilateral and multilateral aid contributions, and it fits better the structure of our data. While the framework has undergone several adaptations and extensions depending on the objectives of the analyses, its basic assumptions and structure remain the same across studies. For instance, in a study commissioned by the World Bank, the framework was adapted to analyse the drivers of domestic cofinancing motives using the same structure as the model used to explain international cofinancing. The framework assumes that donors' commitments to a given recipient country are essentially driven by humanitarian and self-interest motives.

Under the humanitarian assumption, recipient country needs for social and economic development are the main concern underlying donors' motives to provide development funds. The transfer of concessional development financing between countries (most commonly from high-income to low-income countries) is explained in humanitarian terms whereby the amount of aid allocated is related to recipient countries' needs and "merits" for social and economic development (Berthélemy, 2006).

In this analysis, needs were evaluated using indicators such as the per capita income level, population size and other variables related to the Human Development Index. These indicators were selected on the assumption that the need for greater aid flow towards a country grows as its population increases and its per capita income decreases. Most recent studies considered good governance as the second group of variables explaining aid allocation

3. See Organisation for Economic Co-operation and Development (OECD) *Glossary of Statistical Terms*; and IFAD, *Deepening IFAD's Engagement with the Private Sector* (2012).

under the humanitarian motive. Good governance in recipient countries is often considered a “merit” in the provision of foreign aid (Berthélemy, 2006; Neumayer, 2003b,c). Using a dataset covering the period between 2004 and 2010, Winters and Martinez (2015) found evidence that overall aid flows are responsive to the perceived quality of governance in recipient countries. They revealed that both bilateral and multilateral aid flows are significantly higher towards countries that are perceived as better governed than to those that are perceived as poorly governed. In addition the authors found evidence that better governed countries receive aid through a greater number of modalities and in a greater number of project sectors. It might be that countries with effective governance systems are viewed as high performers in managing public resources and as having better absorptive capacities. Using the Respect for Political and Civil Rights Index, the Respect for Human Rights, Democracy, Corruption Index or the Law Regulatory Burden Index as a proxy for the promotion of good governance in a country, Alesina and Dollar (2000) and Neumayer (2003a,b,c, 2005) found evidence of the influence of this second category of variables on aid allocation. While the effect of corruption index on aid flows was not conclusive (Alesina and Dollar, 2000), Neumayer (2003a,b,c, 2005) found evidence of a positive impact of political/civil rights and legal regulatory burden on both bilateral and multilateral aid allocation at the aggregate level. Respect for human rights is a significant determinant of aid allocation for a few countries, such as Canada, Australia, Denmark, Japan, France and the United Kingdom (Neumayer, 2003a).

Although still advocated by many donor countries, the humanitarian view is now contested. The foreign policy view of aid relationships (McKinlay and Little, 1977) challenges the humanitarian view, explaining the level of a donor’s commitment (measured as the gross value of its aid allocated in that country) as a positive function of its trading, security and political development and performance, as well as its political stability and democracy interests. From a foreign policy viewpoint, the allocation of aid is often tied to donors’ self-interested motives to promote their own interests in recipient countries (McKinlay, 1979; Maizels and Nissanke, 1984; Neumayer, 2003a, 2005; Berthélemy, 2006). These interests may be commercial, political, security based or tied to the country’s governance and political stability. McKinlay’s (1979) analysis highlighted the rationale behind these self-interested motives: donors are more willing to invest in countries with a greater capacity to manage aid effectively, thus minimizing risks while maximizing the returns on their investments. Bermeo (2016) explained the self-interested motive as being the result of donors’ concerns about the spillover effects of underdevelopment abroad. Following this line of thought, rich countries provide development assistance to poor countries as a policy response to their decreasing ability to insulate themselves against problems linked to underdevelopment in poor countries. Variables used in previous studies to assess donors’ self-interest include countries’ geostrategic importance, colonial ties and import share of donor’s exports, as well as political stability and governance effectiveness.

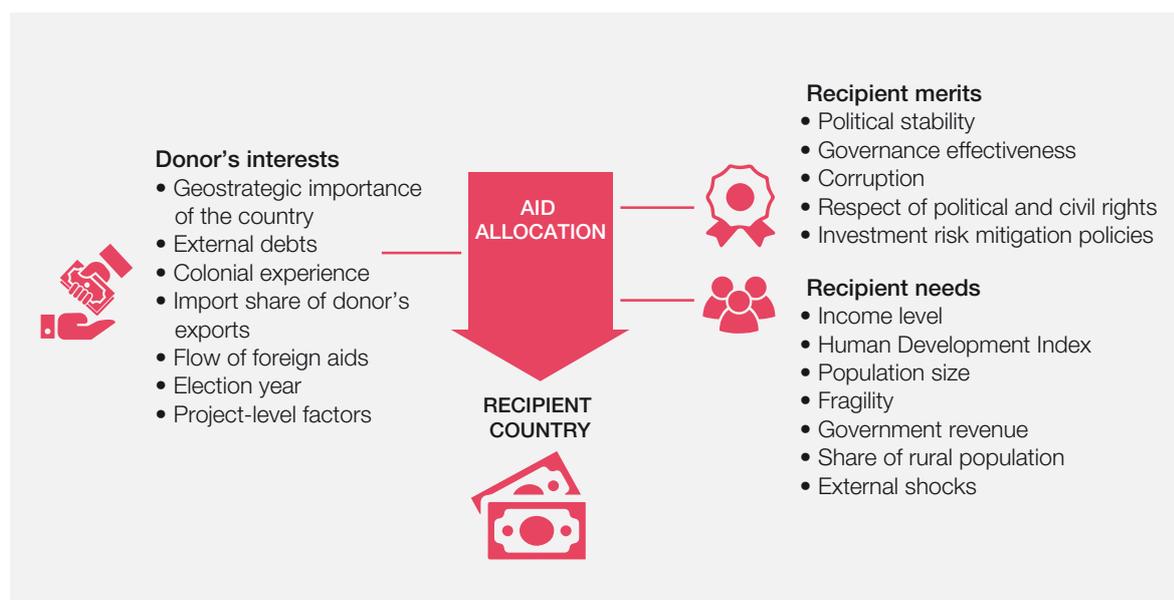
Since the pioneering work of McKinlay and Little (1977) and McKinlay (1979), most studies explaining aid relationships between countries have used variables that control for donor interests, recipient needs and merit (see Maizels and Nissanke, 1984; Neumayer, 2003a,b,c, 2005; Younas, 2008; Berthélemy, 2006; Berthélemy and Tichit, 2004; Alesina and Dollar, 2000; Alesina and Weder, 2002). Figure 1 summarizes the framework of aid allocation and gives examples of variables under each of the three donor motives (i.e. need, merit and self-interest).

To explain changes in donors' commitment to development projects between project approval and completion phases, the analysis follows the strand of thought explaining aid unpredictability/volatility, when disbursements fall short of initial commitments (Desai and Kharas, 2010; Ndaruhutse and Brannelly, 2006). Here, unpredictability/volatility is characterized by a difference ratio between cofinancing committed to IFAD projects by partners at appraisal and the amount actually disbursed at completion. Reasons for aid volatility and unpredictability include technical and administrative delays from both the donor and the recipient sides, aid conditionalities set by donors, and external shocks experienced by the recipient country (Ndaruhutse and Brannelly, 2006).

Technical and administrative delays are examples of procedural bottlenecks in donors' budgetary allocation with related high transaction costs. On the recipient side, weak procurement systems and the mismatch between the project design cycle and donors' approval processes can impede disbursements. To operationalize the procedural bottleneck in the model, variables such as the overall project achievement rating and the performance rating of the project partners are used. The performance rating of project partners measures the extent to which each partner is perceived as reliable vis-à-vis its facilitating role during the project implementation cycle.

Aid allocation is often tied to the requirements and conditions set by the donors that are to be fulfilled by the recipient countries. The conditions may include political concerns (respect for human rights), corruption and good governance concerns, stability, peace and absence of conflicts. Failure to comply with the conditions at any time by the recipient countries can hinder donors' initial commitments. External shocks, such as natural disasters and food crises, are another reason that may explain variations between commitments and disbursements. Variables operationalizing the effect of aid conditionalities (such as governance effectiveness and political stability) and of external shocks on aid unpredictability are captured under the recipient merit and need factors as illustrated in figure 1.

Figure 1 Framework of aid provision



2 Methodology

2.1 Data types

The data used for this study included financing data from IFAD-supported investment projects taken from internal systems.

For the econometric analysis, the investment projects approved between 1995 and 2014 were considered, restricting the time frame of the analysis to a 20-year period. Investment projects approved before 1995 were excluded because of data quality issues stemming from IFAD's lack of databases. Projects approved after 2014 were excluded because their financing data were not complete at the time of the analysis, with ongoing system updates making it risky to consider them in the econometric models. The choice of the sample period was also based on the desire to ensure comparability with a similar study of IFAD's disbursement performance, while building on existing datasets for variables relevant to the cofinancing analysis (Balint et al., 2017).

Other external databases were used to complement the project-level data with country-level socio-economic information. These include the World Bank's development and governance indicators databases, the International Institute for Democracy and Electoral Assistance (IDEA), the Global State of Democracy indices and the International Disaster Database. The data from these different sources were combined into one large dataset in a panel data structure. With the country as the unit of analysis, project-related variables were defined by aggregating project-level data at the country level. Since project approval dates differed between countries, this created an unbalanced panel data sample of 484 observations.

For the analysis of the cofinancing disbursed at completion, a desk review of project completion report validations (PCRVs) was undertaken to collect the data. PCRV is desk-based validation of projects completion reports using available documentation, including mid-term reviews, memorandums of understanding and President's reports. The PCRV is prepared by IFAD's Independent Office of Evaluation (IOE) on projects that have reached the end of their implementation cycle. PCRVs assess the results and impact of IFAD-financed projects, including ratings of project relevance, effectiveness and efficiency. They were chosen as reference documents for this analysis since they offer an immediate overview of projects' financial status, comparing approved and actual disbursed amounts, broken down by financier, along with valuable qualitative information.

The data sample used to analyse disbursed cofinancing comprised all projects approved between 1995 and 2017 and subsequently completed (this includes projects approved from 1996 until 2011). Only projects with available data on both the approved amount of cofinancing reported in internal systems and the disbursed amount reported in PCRVs were included in the sample.

2.2 Selection of key explanatory variables

As presented in the logical framework in chapter 1, a well-defined model that explains aid allocation behaviour must specify variables that control for recipient needs, donor self-interest and recipient merits. Most of the existing studies on aid allocation relied on country-related macroeconomic variables and some project-related variables to capture the three dimensions of the aid allocation framework. This study extended the common framework by including variables under IFAD's direct control as additional predictors of resource mobilization and donors' commitment throughout the project life cycle. This is a distinctive feature of this study compared with previous research. More details on the variables included in the econometric models are presented below.

Country-related variables

Income level

Two aspects of countries' income level were considered. The first pertained to poverty status and was captured by a dummy variable indicating the country's grouping as a low-income country (LIC), lower-middle-income country (LMIC) or upper-middle-income country (UMIC). This classification was based on the level of gross national income (GNI) per capita.⁴ Poverty status (captured by per capita income) is one of the most common indicators used in the literature to control for recipient need for economic development (Neumayer, 2003a). In this case, the historical income status of each country from 1995 to 2014 was used. According to existing literature (McKinlay and Little, 1977; Neumayer, 2003a; Winters and Streitfeld, 2011), an increase in foreign aid allocation (international cofinancing) was expected in LICs, whereas domestic contributions were expected to decrease in LICs.

The second aspect of income level considered was growth in GDP, which is an indicator of countries' economic performance. This variable was computed as the average of the past three years' values and was measured as a percentage. A higher level of a country's economic growth in previous years was expected to predict greater willingness to contribute domestic cofinancing in the current year. In contrast to a country's poverty status, which indicates its need for development assistance, economic performance captured by GDP growth is viewed as a merit, and was expected to be positively correlated with international cofinancing.

Population

A country's population is another important indicator of need within the aid allocation framework. Population density (measured as the number of inhabitants per km²) and the size of the country's rural population (measured as the percentage of total population) were used to capture the effect of population on domestic and international cofinancing. Since need increases with the size of a given country's population – especially the size of the rural population – a positive effect of population on international cofinancing was expected, in line with past studies (Neumayer, 2003a,b,c; Winters and Streitfeld, 2011).

Since most poor people in developing countries live in rural areas, the size of the rural population is correlated with the poverty status, and a negative effect of the rural population size on domestic cofinancing was expected. Populous countries may realize higher absolute GDP relative to less populous countries. Therefore a positive effect of population density on domestic cofinancing was expected.

4. World Bank classification.

Governance Index

The Governance Index is a composite variable calculated as the average of a country's scores on six governance quality sub-indices:⁵ control of corruption, governance effectiveness, political stability and absence of violence/terrorism, regulatory quality, rule of law, and voice and accountability. Each sub-index was measured as a percentage, indicating a country's rank among all countries included, with 0 corresponding to the lowest rank and 100 corresponding to the highest rank. Percentile ranks were adjusted to correct for changes over time in the composition of the countries covered by the World Bank governance indicator database.

The Governance Index variable was included as a merit factor indicator in the logical framework. Good governance translates into lower investment risk and better capacity of a recipient country to effectively transform development resources into results. Foreign donors are more willing to allocate development funds to countries that score higher on the Governance Index because of the merits of such partnerships. International cofinancing is expected to increase along with the Governance Index score.

Countries with a high Governance Index score are expected to manage their public resources better and be more inclined to initiate the development projects for which they seek international partnerships. Therefore, domestic cofinancing was expected to be higher in countries with higher Governance Index scores.

Good governance and rural-level institutional capacity were also tested through IFAD's rural sector performance (RSP) score. A correlation test was performed for RSP scores of countries and their cofinancing ratios, to gauge the effects of the quality of rural institutions and policies on resource mobilization. A positive correlation was expected between both domestic and international cofinancing ratios and RSP scores.

Democracy Index

The Democracy Index is a second composite variable that indicates a country's merit. This variable evaluates the overall state of democracy in a country and is measured as the average of scores for five attributes of democracy: representative government, fundamental rights, checks on government, impartial administration and participatory engagement (International IDEA, 2017). Each attribute is scored from 0 (lowest) to 1 (highest).⁶

Democratic countries are viewed as good providers of public goods and thus attract more funds for development projects. Like the Governance Index, the Democracy Index was

5. Control of corruption captures perceptions of how much public power is exercised for private gain. It includes both petty and grand forms of corruption, and the "capture" of the state by elites and by private interests. Governance effectiveness captures perceptions of the quality of public services; the quality of the civil service and the degree of its independence from political pressure; the quality of policy formulation and implementation; and the credibility of the government's commitment to supportive policies. Political stability and absence of violence/terrorism measures perceptions of the likelihood of political instability or politically motivated violence, including terrorism. Regulatory quality captures perceptions of the government's ability to formulate and implement sound policies and regulations that promote private-sector development. Rule of law captures perceptions of confidence in and compliance with the rules of society, with a focus on the quality of contract enforcement, property rights, the police and courts, and the likelihood of crime and violence. Voice and accountability captures perceptions of citizens' participation in selecting their government as well as freedom of expression and association, and a free media.
6. More detailed information on the attributes, sub-attributes and indicators comprising the Democracy Index can be found in International IDEA (2017).

expected to positively predict the level of international cofinancing in a country while the effect on domestic contribution was uncertain.

Fragility

Fragility enters econometric models as a dummy variable (i.e. whether or not a country is classified as a fragile state) and is taken from the OECD harmonized list of fragile situations.⁷ Fragility status is a need-based explanatory variable and was therefore assumed to be positively correlated with international cofinancing and negatively correlated with domestic cofinancing.

Indicators of fragility considered in this study that may influence resource mobilization in a country include the occurrence of conflict and natural disasters. This study controlled for the influence of these variables, and it was expected that international donors would be motivated by humanitarian reasons to provide cofinancing in countries afflicted by conflict or natural disasters.

Finally, the model accounted for the vulnerability dimension of fragility by testing the correlation between the cofinancing ratios and the IFAD Vulnerability Index (IVI). Countries were classified as “high”, “moderate” and “low” on vulnerability, according to the value of their index score. Humanitarian motives may drive more international cofinancing towards highly vulnerable countries. Therefore a positive correlation was expected between vulnerability and international cofinancing ratio. In contrast, highly vulnerable countries were expected to provide less counterpart funding to IFAD-financed projects, denoting a negative correlation between vulnerability and domestic cofinancing ratio.

Military expenditures

In most developing countries, bilateral defence treaties signed with a developed country determine the main procurement source for military equipment, technologies and expertise (Maizels and Nissanke, 1984). These agreements are commonly established between countries sharing a colonial history. For example, previous colonies of France and the United Kingdom typically import most of their military goods and services from their former colonial rulers.

The military expenditure variable is therefore used as a proxy of donors’ trading and political interests in recipient countries (Neumayer, 2003a; Maizels and Nissanke, 1984), and is measured as a percentage of total GDP. Assuming that donors – especially bilateral donors – prioritize developing countries in which their interests are highly represented, it was expected that the military expenditures of a recipient country will predict its international cofinancing ratio. However, the link between military expenditures and the domestic cofinancing ratio is uncertain.

7. “Fragile situations” include countries or territories with (i) a harmonized Country Policy and Institutional Assessment (CPIA) rating of 3.2 or less and/or (ii) the presence of a United Nations and/or regional peacekeeping or political/peacebuilding mission during the last three years. The list includes only International Development Association (IDA)-eligible countries and non-member or inactive countries or territories without CPIA data. It excludes International Bank for Reconstruction and Development countries (for which the CPIA scores are not publicly disclosed) unless there is the presence of a peacekeeping or political/peacebuilding mission. In this case, the country would be included on the harmonized list excluding its CPIA score. Harmonization is achieved by averaging World Bank Group CPIA scores with those of regional development banks (such as the ADB and the African Development Bank) to arrive at a harmonized rating of 3.2 or lower. Political and peacebuilding missions are defined as the presence of a United Nations or regional (e.g. European Union or African Union) peacebuilding mission within the last three years. See: WorldBank, Harmonized List of Fragile Situations (July, 2018).

Public budget availability

During internal consultations, it was stressed that public budget limitations are a major determinant of domestic counterpart contributions. Proxies for the availability of public budget include variables such as government consumption expenditure growth (annual percentage growth)⁸ and the external balance on goods and services (percentage of GDP).⁹

As expenditures restrict budgetary space, and an increase in the external balance is a source of additional revenues, a positive effect of the latter on the domestic cofinancing ratio is expected along with a negative effect of the former. The link between these two variables and international cofinancing is uncertain.

Region

Dummy variables for each of IFAD's five regional divisions (Asia and the Pacific Division [APR], Near East, North Africa and Europe Division [NEN], West and Central Africa Division [WCA], East and Southern Africa Division [ESA] and Latin America and the Caribbean Division [LAC]) were included to account for unobserved regional fixed effects. These variables are also considered to be proxies for a country's geopolitical and geostrategic importance to a given bilateral donor. For example, France as a bilateral donor may concentrate its aid allocation on West and Central Africa, which is home to several of its previous colonies and where its trading interests are the most represented. The United States as a bilateral donor may be more willing to allocate funds to Latin America and the Caribbean, given the geopolitical importance of these countries.

The inclusion of regional dummy variables also facilitates an understanding of regional differences in resource mobilization and can inform the development of a context-specific targeting strategy.

Project-related factors

The willingness of donors or recipient countries to commit funds to development projects is not entirely limited to humanitarian motives, self-interest or the availability of public resources (as captured by most country-related factors). The main rationale behind promoting cofinancing is to assemble enough resources to achieve development results while building a stronger sense of ownership in recipient countries. This goal is achievable when the project objectives are aligned with both donor and recipient countries' long-term priority areas for development. Therefore, the type of project or activity is of strategic importance when it comes to mobilizing development funds. For this reason, the model included a set of variables to capture key characteristics of IFAD-supported projects such as project size, project type, percentage of budget allocated to each activity and the project's performance rating and environmental risk classification.

8. General government consumption includes all government current expenditure for purchases of goods and services (including employee compensation – it includes most expenditure on national defence and security, but excludes government military expenditures that are involved in government capital formation). See World Bank, World Bank national accounts data, and OECD National Accounts data files, last updated November 2018.

9. The external balance on goods and services (formerly resource balance) equals exports of goods and services minus imports of goods and services (previously non-factor services). See World Bank, World Bank national accounts data, and OECD National Accounts data files, last updated November 2018.

Project size

Project size was included as a dummy variable indicating whether a project approved in a given country at a given time is small (total budget less than US\$18.8 million), medium (total budget between US\$18.8 million and US\$49.12 million) or large (total budget greater than US\$49.12 million). It was hypothesized that small projects would attract less cofinancing than larger projects.

Project type

Project type is a dummy variable indicating whether the main intervention sector is in agricultural development, rural development, research, access to markets, irrigation, fisheries, financial services or livestock. It was complemented by variables capturing the share of the project budget allocated to “soft” activities (including training, market research, local capacity building, literacy and institutional support), financial activities (including credit, rural financial services and venture capital) and infrastructure activities (including rural infrastructure, roads, market infrastructure, irrigation infrastructure and fisheries infrastructure). Given IFAD’s comparative advantage, a positive effect would be expected on cofinancing ratios when the project sector or activities are focused on financial services, agriculture or rural development.

Project performance

A project’s performance rating was considered only in the analysis of the disbursed cofinancing amount at completion. This variable measures the overall IOE project achievement¹⁰ rating, as found in the PCR. IFAD projects are rated on a scale from 1 (unsatisfactory) to 6 (very satisfactory), based on an average of the ratings for relevance, effectiveness, efficiency and sustainability of benefits. The overall achievement performance indicator provides an overarching assessment of the intervention. Another indicator of performance is the disbursement rate at completion. A correlation test was performed to investigate the link between cofinancing and disbursement. Projects performing better were more likely to at least maintain the cofinancing level committed at approval.

Environmental risk

A project’s environmental risk classification was used in the econometric models as a dummy variable of whether a project belongs to class A (high risk), B (moderate risk) or C (low risk). Projects with risk of any kind can be less attractive to donors if not supported with a sound risk mitigation strategy. However, if the design report incorporates a strategy for addressing risks, then projects with high environmental risks can attract more “green” funds, such as those from GEF or the Adaptation for Smallholder Agriculture Programme. Regarding domestic cofinancing, projects with high environmental risk may create disincentives for local partner contributions, given the high opportunity costs. However, for international cofinancing, high environmental risk projects may be appealing to donors with a specific mandate on environmental issues.

IFAD-related factors

IFAD-related variables are organizational factors that put the Fund in a stronger or weaker position to leverage resources for the development projects it supports. Among these factors,

10. This provides an overall assessment of the intervention, drawing upon the analysis and ratings for rural poverty impact, relevance, effectiveness, efficiency, sustainability of benefits, gender equality and women’s empowerment, innovation, scaling up, environment and natural resource management, and adaptation to climate change (IOE, 2017).

the analysis considered lending terms, country programme manager (CPM) profile, the presence of field offices, the number of partnerships mobilized for a specific project and IOE's performance rating of IFAD as a development partner.

Lending terms

The lending term variable entered the estimation models as a dummy variable, indicating whether or not a country received IFAD loans on concessional terms. The hypothesis was that less-concessional financing terms drain more contributions from the recipient country, given the low opportunity costs of relying on its own resources. Likewise, more non-concessional loans to a country may demonstrate its creditworthiness and may therefore predispose the country to attract more international financing.

CPM profile and proximity to clients

The CPM profile includes variables such as the CPM's experience in the country and other countries (measured in years), the number of projects in the CPM's portfolio and the value of the CPM's project portfolio (measured in US dollars). A positive relationship was expected between a CPM's portfolio size and the cofinancing ratio. The same positive relationship was expected between the CPM's experience in the country and the cofinancing ratio.

The dummy variable of whether or not an IFAD field office was present in the country in a given year was also included in the model. Since IFAD's field presence may be correlated with effective policy engagement with authorities in recipient countries, a positive effect of the presence of a field office on the cofinancing ratio was expected.

The scope of partnership

To control for the effect on the cofinancing ratio of building an extended partnership around a project, the average number of the financiers that contributed to the projects in a given country in a given year was considered. Another important hypothesis tested through this model was that international and domestic cofinancing drive each other. The study tested whether or not a high domestic cofinancing ratio translates into a high international cofinancing ratio and vice versa. Both ratios reflect the extent to which an extended partnership built around the project stimulates cofinancing.

A large amount of domestic contributions or a large number of domestic partners attracted to a project may translate into strong ownership by the recipient, supporting foreign donors' willingness to collaborate on the project. On the other hand, when a high level of international cofinancing is mobilized for a project – or when the project attracts many international partners – its strong poverty reduction potential and political appeal may mobilize more domestic resources as well.

IFAD's performance as a partner

Finally, the effect of IFAD's performance rating as a partner in cofinancing was evaluated (but only in the analysis of the Heckman two-step model). This rating was derived by following similar procedures to those used for the IOE project performance rating.¹¹ A positive perception of IFAD's performance in assuming its expected roles in the project life cycle (leading to a higher rating) favours partnerships based on trust with both the beneficiary

11. This criterion assessed partners' contributions to project design, execution, monitoring and reporting, supervision and implementation support, and evaluation. Each partner's performance was assessed on an individual basis to determine their expected roles and responsibilities in the project life cycle.

country and development partners. A higher rating therefore creates a higher probability of an increase in cofinancing at completion and a lower probability of a decrease.

2.3 Analytical models

The first analytical model focused on the development funds committed by the project partners at the design phase. The second model focuses on variations between the amount of cofinancing committed at appraisal and the actual amount disbursed during the project life cycle.

Econometric model for estimating the drivers of cofinancing committed at appraisal

The analysis of the approved amount of cofinancing sought to clarify what determines the cofinancing ratios in IFAD-supported projects. It also aimed to highlight country, regional and sectoral differences in these ratios. The data on approved cofinancing were disaggregated between domestic and international contributions, in line with IFAD Management's approach to setting separate targets for these two types of contributions. The cofinancing ratios were computed annually based on a three-year moving average of past amounts. This method has the advantage of smoothing outlier values in the ratios and accommodating late reporting of data in the system.

The analysis involved an econometric estimation of the determinants of domestic and international cofinancing ratios (see section 2.2) and was complemented by correlation tests. For example, correlation tests were used to investigate the association between IFAD-related factors, such as IVI, countries' RSP scores and cofinancing ratios (more details are provided in chapter 3). These correlation tests were run in parallel with the regression model instead of including them in the model. This was done to avoid strong multicollinearity, which may result from the correlation between the IVI or RSP and the other explanatory variables in the regression equation (see equation 1). For example, the IVI is a composite index that includes the rural population variable, which is already specified as a country factor in the regression equation. Correlation tests have also been used to examine the links between the cofinancing committed at approval and project performance at completion. Since performance is not observed at approval, it cannot be specified in the regression equation.

One notable challenge in conducting the econometric analysis is the limited number of previous studies addressing domestic cofinancing. There is a reasonable amount of literature on aid allocation by foreign donors; however, most studies are old and do not involve rigorous empirical analysis of the drivers of counterpart funding. The work by Winters and Streitfeld (2011) is the only empirical study found to investigate the determinants of counterpart funding in development projects.

Using historical project data from 1995 to 2014, a panel regression model (equation 1) was used to explain the variations in international and domestic cofinancing ratios (as reported at project approval) among countries and over time. The selection of potential explanatory variables was guided by the literature and includes country, project-related and IFAD-related factors, as described in section 2.2. Regional dummy variables and time dummy variables were also included to control for unobserved time-variant and time-invariant effects. The model allowed for the estimation of the magnitude, direction and statistical significance of each potential influencing factor.

Equation 1

$$\begin{aligned} \text{Ratio}_{(c,y)} = & A_0 + \eta_i T + \sum_{i=1}^n \theta_i \text{Country factors}_{(c,y)} + \sum_{i=1}^n \beta_i \text{Project factors}_{(c,y)} \\ & + \sum_{i=1}^n \delta_i \text{IFAD factors}_{(c,y)} + a_c + \varepsilon_{(c,y)} \end{aligned} \quad (1)$$

$T = 1995, 1996 \dots 2014$

$i = 1, 2, 3, \dots n$

In equation 1, the domestic and international cofinancing ratios (**Ratio**_(c,y)) of IFAD-supported country c in specific year y were assumed to be functions of (i) country-level drivers (Country factors_(c,y)) observed at year y , (ii) project-related characteristics for country c observed in year y , and (iii) IFAD-related factors that applied to country c in year y . The functional form used for the domestic ratio was the natural logarithm and the international ratio was specified in level form. The choice of these functional forms was motivated by the greatest goodness of fit for these models. Subscript i corresponds to the number of explanatory variables for each of the three categories of factors. The variables used to control for each of the model's three components are described in section 2.2 along with their computation method.

The term $\varepsilon_{(c,y)}$ encompasses all other factors specific to country c and year y that could not be observed in the process of generating data and which vary over time. For this reason, $\varepsilon_{(c,y)}$ is also called the time-varying error term. One example of an element captured by $\varepsilon_{(c,y)}$ is the cultural value of a country, which is not easily measurable but may evolve over time.

The term a_c controls for the time-invariant unobserved factors specific to country c that affect the dependent variable (Ratio_(c,y)); these are often referred to as the unobserved fixed effects. Regional differences are one example of a time-invariant factor controlled by a_c . In this model, a_c is assumed to be uncorrelated with the other independent variables. Therefore, a random effects estimation technique was used with STATA software. In order to evaluate the bias induced by treating the unobserved fixed effect a_c as random instead of being correlated with other explanatory variables, results of the pooled ordinary least squares were compared with the estimation of random effects and fixed effects.

The year dummy variable (T) allowed the intercept to vary over time, thus accommodating for trends or cyclical effects on cofinancing ratios.

The coefficients θ_i , β_i , δ_i were the parameters of interest to be estimated and translated the expected marginal effects of each factor on the cofinancing ratios. Negative values of θ_i , β_i , δ_i indicated the amount by which the cofinancing ratios decreased from a one-unit increase in the value of the factors. Positive values of these parameters indicated the amount by which the cofinancing ratios increased from a one-unit increase in the value of the factors. For the domestic cofinancing ratio, the parameters represented the percentage change in the dependent variable (in logarithmic form), and, for the international cofinancing ratio, the parameters represented the absolute change.

A unique feature of panel data is that the characteristics of the units of analysis (individual, firms, countries, households, etc.) are observed in different periods of time (usually years). In this case, IFAD-supported countries were the units of analysis, and their cofinancing ratios (along with other country-level characteristics) were observed for each year between

1995 and 2014. Observing the same units over time leads to several advantages compared with one-time observed data (Wooldridge, 2015). Examining the data over time allows the researchers to control for unobserved characteristics of the countries that have been omitted from the model specification. Panel data also permit the researchers to account for the lagged effects of certain variables, which may be important, given that most economic decisions, policies and other changes yield results only after time has passed (Wooldridge, 2015).

Given a large number of observations with zero values (left censoring) for international cofinancing, the Tobit variant of the panel regression was used to rule out this left censoring of the data. A dataset is censored when the values for all the explanatory variables are observed but the values of the dependent variable are missing for some observations.¹²

Econometric model for estimating the drivers of the difference between appraisal and disbursed cofinancing amounts

One of the challenges of resource mobilization for development is that funds initially committed by project partners may not always be fully disbursed. Many factors related to aid conditionalities, procedural bottlenecks during implementation and external shocks incurred by recipient countries may explain aid unpredictability (as laid out in section 1.2). A good understanding of the factors driving the variations between commitments and disbursements – whether positive or negative – is crucial to ensure that development targets are met as planned. Using data in PCRVs, this study analysed the determinants of the variations between the cofinancing committed at project approval and the amount disbursed at completion.

To measure the difference in cofinancing amounts between appraisal and completion, a difference ratio was calculated to represent the change as a percentage of the approved amount. Observations with a positive change in the total financing (**Difference Ratio_{n/p}**) were separated from observations with a negative change (**Difference Ratio_n**). The Heckman two-step selection model was applied to each case, to identify the drivers of these variations.

Equation 2

$$\text{Difference ratio}_{n/p} = \left(\frac{\text{Actual amount} - \text{approved amount}}{\text{Approved amount}} \right) * 100 \quad (2)$$

The Heckman model corrects for sample selection bias that arises when a subsample of the population being studied is sampled for a specific reason and the sampling process is not random (Heckman, 1979). In this analysis, there was a risk of sample selection bias because the countries included were not selected randomly: the data were purposely split into subsamples of countries: those with a positive change and those with a negative change in their total cofinancing.

The model estimation was undertaken in two steps. First, it estimated the probability of observing a value of the difference ratio (as calculated in equation 2) that was different from zero, based on a set of explanatory factors. If the probability was high for a given variable, this suggested that the variable influenced the variation of the ratio. The results of this first step explained the reasons why a variation was observed in the total financing amount between design and completion. In the second step, the determinants of the magnitude of the difference ratio were estimated using a new set of explanatory factors.

12. www.bauer.uh.edu/rsusmel/phd/ec1-24.pdf

The results from this step explained how much the difference ratio varied, based on the individual effect of each explanatory factor.

Therefore, the Heckman selection model assumes that there exists an underlying regression relationship (Heckman, 1976):

$$\text{Difference ratio}_{j(n/p)} = \gamma_j \beta + u_{1j} \quad \text{regression equation}$$

The dependent variable (**Difference Ratio**_{*j(n/p)*}), however, is not always observed. Rather, the dependent variable for observation *j* is observed if

$$z_j \gamma + u_{2j} > 0 \quad \text{selection equation}$$

where

$$u_1 \sim N(0, \sigma)$$

$$u_2 \sim N(0, 1)$$

$$\text{corr}(u_1, u_2) = \rho$$

The term γ_j includes a set of explanatory variables of the dependent variable (**Difference Ratio**_{*j(n/p)*}). The term z_j is a set of explanatory variables for the probability of observing an increase/decrease in the disbursed cofinancing amounts. These terms include variables controlling for aid conditionalities, project implementation quality, external shocks and other variables described in figure 1.

One advantage of the Heckman model over other sample-selection-correction models is that it allows the set of explanatory variables used in the two steps to be different. For example, while IFAD performance ratings and project performance ratings might significantly influence the probability of an increase in the disbursed cofinancing amount, it was assumed that the amount of these increases were not proportional to the value of the rating.

3 Trends in cofinancing ratios between 1995 and 2017

Identifying partnerships that can be used to leverage cofinancing is a key component of a cofinancing strategy that strengthens IFAD's capacity to assemble resources for its projects. Where these partnerships are likely to succeed and be sustained over time – and how to incentivize them – are the key questions behind the analysis described below.

3.1 Descriptive statistics of domestic and international cofinancing committed at design

The following tables and figures give an overview of the distribution of cofinancing¹³ over time. The analysis employed central distributional statistics (e.g. mean, median) and trend analysis to highlight the main features, patterns and relationships in the data over the past 20 years.

IFAD's performance over the last four replenishment cycles

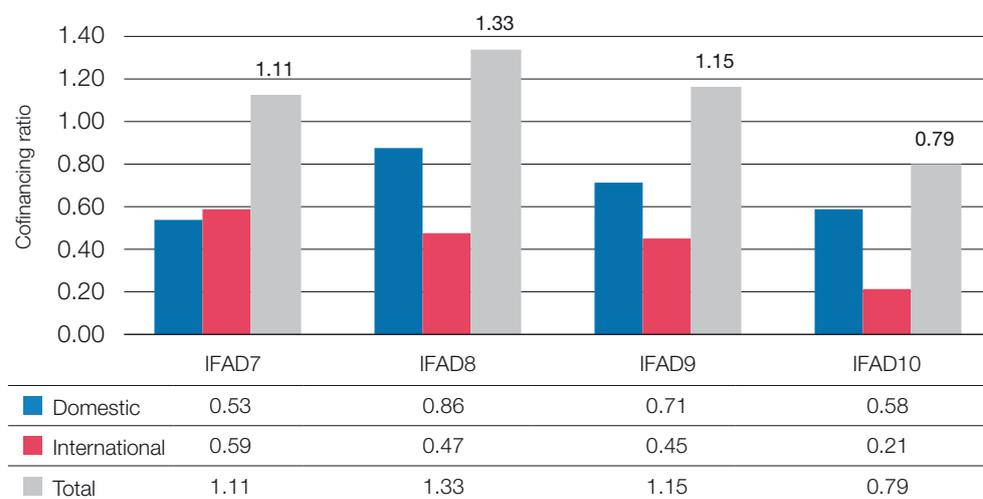
Looking at the evolution of IFAD's performance in resource mobilization, figure 2 depicts the average domestic and international cofinancing ratios achieved during the past four replenishment cycles (considering cofinancing amounts committed at approval). The highest total cofinancing ratio was recorded in IFAD8 (2010-2012), driven by domestic cofinancing. IFAD10 (2016-2018) was the most challenging replenishment cycle. Of the last four cycles, the highest international cofinancing ratio was achieved during IFAD7 (2009-2007), and the highest domestic cofinancing was achieved in IFAD8. A closer look at the data reveals that, during IFAD8, ESA and LAC mobilized substantial amounts of domestic cofinancing. While the 2010-2012 food crisis may have incentivized governments to support projects aligned with IFAD's mandate, Spanish Trust Fund contributions drove domestic cofinancing considerably in LAC.

In absolute terms, between IFAD9 and IFAD10, the total amount of domestic cofinancing contributed to IFAD programmes and projects has slightly decreased from US\$2.3 billion mobilized during IFAD9 to US\$1.8 billion in IFAD10.¹⁴ This decline was driven by a substantial decrease in government contributions and cofinancing from domestic financial institutions. Drawing on the information gathered from an extensive internal consultation, the main reasons explaining the shortcomings in domestic resource mobilization in many cases are related to countries' macroeconomic conditions (fiscal space, level of indebtedness, poverty rate, fragility, etc.) and the political priority given by the government to agriculture and rural development. The decline can also be explained by factors related to IFAD internal institutional and operational processes that slackened cofinancing partnership building (i.e. project design processes; the quality of in-country networks/relationships

13. The ratios were calculated based on the approved financing amounts committed at design.

14. This includes 2018 pipelines as of 28 June 2018.

Figure 2 Average cofinancing ratio per replenishment cycle



Source: Grant and Investment Projects System (GRIPS) financing data as of 21 March 2018 excluding funding not identified (approved amounts)

built; IFAD visibility and the effective communication of projects performance; alignment with national plans; engagement with the relevant national counterparts; and the weak articulation of IFADs comparative advantage among other development partners present in the countries).

Between IFAD9 and IFAD10, the total international cofinancing amounts sharply dropped from US\$1.7 billion mobilized in IFAD9 to US\$905 million in IFAD10.¹⁵ This decline was driven by the decrease in contributions from a few big donors such as AsDB, the European Union and the World Bank. Shortcomings to international cofinancing mobilization in the IFAD context (as also revealed by the internal consultation) were attributed to:

- a weak consultation with other development partners to define common areas of interest
- the constraints linked to the approval processes of donors' budgetary allocation
- the lack of flexibility and alignment with donors' processes such as the reporting requirements
- weak communication and networking with international partners
- the absence of an assessment and monitoring framework for cofinancing partnerships

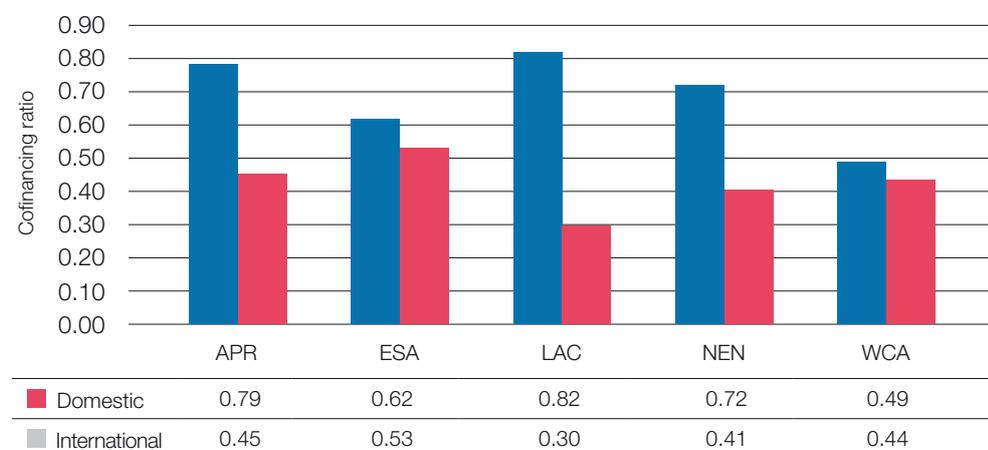
Best-performing regions and countries

Starting with a regional overview of domestic and international cofinancing, figure 3 compares the average domestic and international cofinancing ratios for IFAD's five regional divisions, calculated on the approved cofinancing amounts.

Over the 20 years studied, the Asia and the Pacific Division (APR), and Latin America and the Caribbean Division (LAC) recorded the highest domestic cofinancing ratio, with US\$0.80 in cofinancing leveraged for each dollar of IFAD financing. Considering the average cofinancing ratios in 1995-2017, the countries with the highest domestic cofinancing ratios in APR Division were middle-income countries: China (1.48), Solomon Islands (1.47), India (1.38), the Maldives (0.88), the Philippines (0.76), Fiji (0.72) and

15. This includes 2018 pipelines as of 28 June 2018.

Figure 3 Average cofinancing ratios by region, 1995-2017



Source: GRIPS financing data as of 2 May 2018 excluding funding not identified (approved amounts)

Bangladesh (0.64). In LAC Division, domestic cofinancing was led by Venezuela (1.91), Brazil (1.81), Argentina (1.45), Cuba, Peru (0.79) and Ecuador (0.76). See annex 1 for more details.

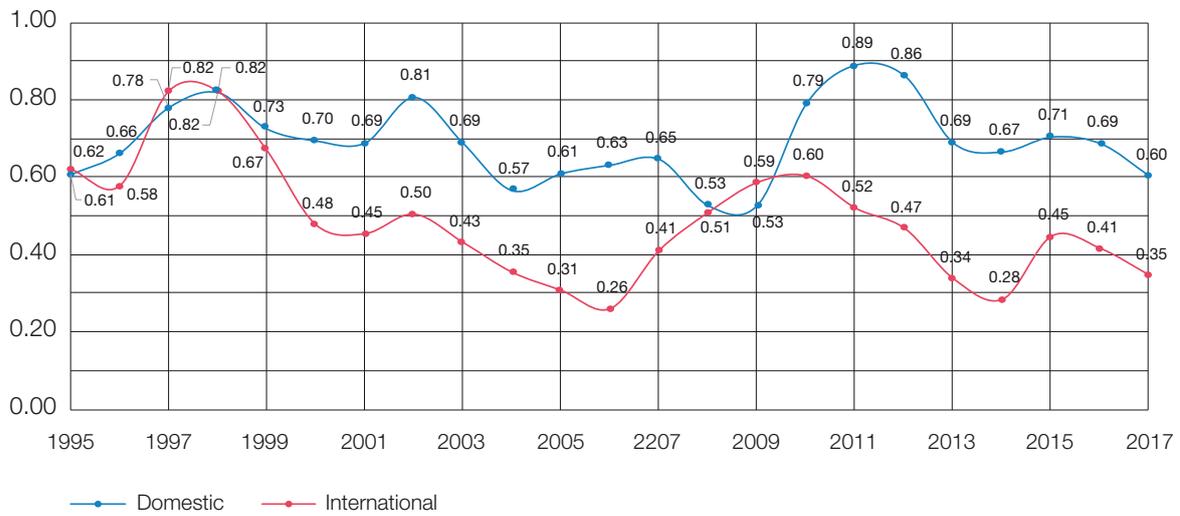
This pattern was reversed when it came to international cofinancing: in the past, the top regions for leveraging international resources were East and Southern Africa Division (ESA) and West and Central Africa Division (WCA). The countries with the top international cofinancing ratios in ESA Division were mostly low-income countries and included Swaziland (2.74), Tanzania (0.88), Uganda (0.86), Madagascar (0.85), South Sudan (0.67) and Ethiopia (0.58). In WCA Division, international cofinancing was the highest in Togo (1.51) followed by Ghana (0.95), Mali (0.85), The Gambia (0.79) and Niger (0.73).

WCA recorded the lowest average domestic cofinancing ratio for 1995-2017. Internal consultations revealed that most countries in the region are low-income countries facing budgetary limitations and highly constrained macroeconomic conditions, which may explain the difficulties in mobilizing domestic cofinancing in the region. In addition, this region is also home to some of the world's greatest development challenges, leading to a considerable number of development projects competing for limited public resources.

LAC had the lowest average international cofinancing ratio in 1995-2017. Internal consultations confirmed the high volatility of donors' contributions in this region. Another major constraint to resource mobilization in LAC was a shift in national priorities from rural to urban development as the region undergoes increasing urbanization.

For IFAD, effective domestic resource mobilization should leverage on a strong country ownership enabled by clear alignment of project objectives with national priorities. Regarding international cofinancing, IFAD should focus on strategic areas of collaboration while capitalizing on its comparative advantages.

Figure 4 Trend in the cofinancing ratios, 1995-2017



Source: GRIPS financing data as of 21 March 2018 excluding funding not identified (approved amounts)

Trends in the cofinancing ratios

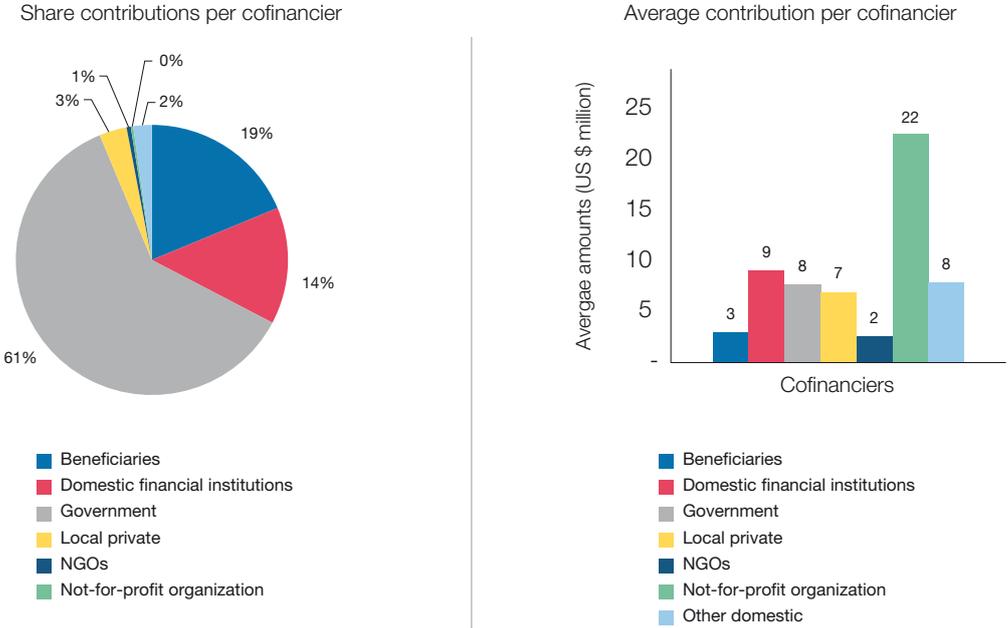
Figure 4 shows the distribution over time of the domestic and international cofinancing ratios between 1995 and 2017. The yearly ratios were calculated on the approved financing data as a rolling average of three years including the current year.

Overall, the distribution of both domestic and international cofinancing ratios followed a downward trend over the last 20 years. Between 1995 and 2017, domestic cofinancing ratios declined by 0.2 per cent each year on average whereas international cofinancing ratios were decreasing by 3 per cent each year on average. Despite the three-year rolling average calculation method, which was meant to smooth out the values, the distribution of the ratios still showed high variability over time, denoting challenges in maintaining the stability of partners' commitments to IFAD projects. For example, between 2008 and 2012, the domestic cofinancing ratio was as high as 0.89 and as low as 0.51. The international cofinancing ratio fell as low as 0.26 but also reached 0.60 between 2005 and 2010. Between 2008 and 2012 a substantial increase in both domestic and international cofinancing ratios were observed. The food crisis that struck many developing countries during this period may have boosted governments' and international donors' support to projects aligned with IFAD's mandate of fighting rural poverty and food insecurity. Thus, while volatility needs to be minimized, it may also offer opportunities for learning from periods in which cofinancing ratios significantly improved.

Sources of financing of IFAD-supported projects

IFAD collaborates with both domestic and international cofinanciers to support the implementation costs of projects financed by its programme of loans and grants. Domestic cofinanciers comprise partners in recipient countries, while international cofinanciers include international development organizations, such as bilateral and multilateral entities, NGOs, private partners and other actors from the international donors landscape. A breakdown of IFAD project partners at domestic and international levels is presented below along with tables comparing these partners based on the proportion of their contributions.

Figure 5 Contributions per domestic cofinancier in IFAD projects



	Beneficiaries	Domestic financial institutions	Governments	Local private	NGOs	Not-for-profit organizations	Other domestic
Ratio	0.13	0.10	0.44	0.02	0.004	0.002	0.02

Source: GRIPS financing data as of 21 March 2018 excluding funding not identified

Main domestic cofinanciers

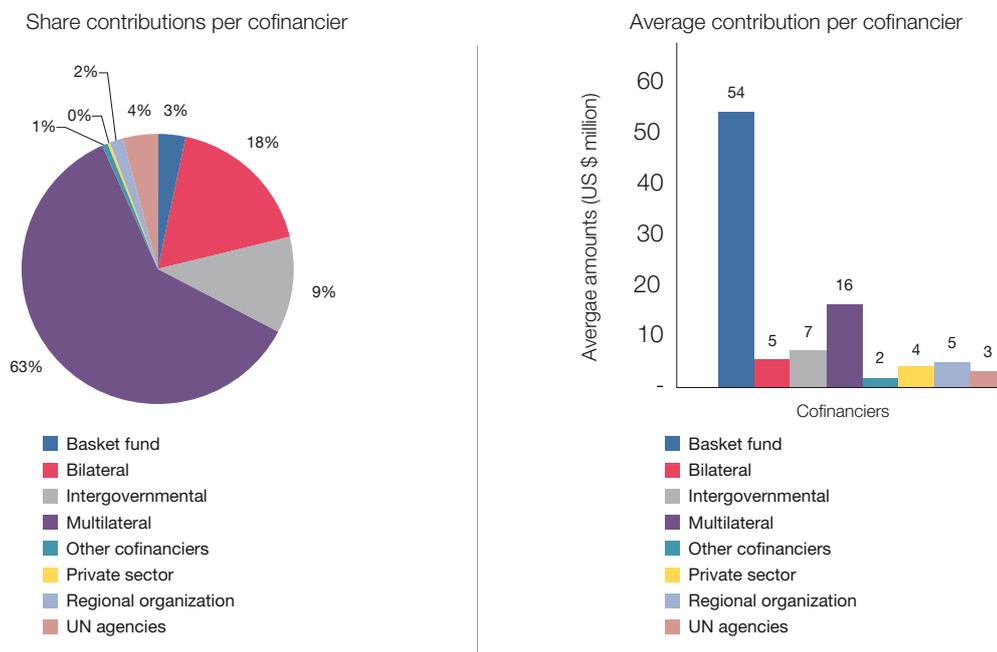
The top three domestic cofinanciers (governments, beneficiaries and financial institutions) contributed 94 per cent of the total domestic cofinancing between 1995 and 2014.

Between 1995 and 2014, governments, beneficiaries and financial institutions contributed US\$0.44, US\$0.13 and US\$0.10, respectively, for each dollar of IFAD financing on average. They made up 94 per cent of the total amount of domestic cofinancing mobilized during that period (figure 5). Considering the average amounts contributed by each cofinancier, the highest amount of domestic cofinancing was contributed by not-for-profit organizations (US\$22 million for one project cofinanced) and domestic financial organizations (US\$9 million on average for 121 projects cofinanced). The NGOs and other domestic cofinanciers were relatively negligible sources of domestic cofinancing. Between 2015 and 2017, governments, beneficiaries and domestic financial institutions remained the main sources of domestic cofinancing, followed by the local private sector.

Main international cofinanciers

The top three international cofinanciers (multilateral, bilateral and intergovernmental organizations) contributed 90 per cent of the total international cofinancing amount mobilized between 1995 and 2014.

Figure 6 Contributions per international cofinancier in IFAD projects



International cofinancing was driven by bilateral, multilateral and intergovernmental organizations and, to some extent, by United Nations agencies. These institutions accounted for 90 per cent of the total international cofinancing attracted between 1995 and 2014 and have the highest cofinancing ratios (figure 6). Looking at the average amount contributed by each international cofinancier, basket funds have provided the largest amount (US\$54 million) of international cofinancing to IFAD projects, although they contributed to only three projects during 1995-2014. Multilateral organizations have contributed the second largest average amount (US\$16 million) of international cofinancing (over 197 projects cofinanced), followed by intergovernmental organizations (over 66 projects cofinanced).

More than 80 per cent of the bilateral partners' contributions came from the Spanish Trust Fund, the Belgian Survival Fund, the Asian Development Fund, the United States Agency for International Development, the United Kingdom Department for International Development (DFID), and the Governments of the Netherlands, Germany, Japan and Denmark. Contributions from multilateral partners were sourced essentially from AsDB, the International Development Association (IDA), the African Development Bank, the Islamic Development Bank, the Arab Fund for Economic and Social Development, the Global Agriculture and Food Security Program and GEF. The OPEC Fund for International Development was the only notable intergovernmental organization partnering with IFAD between 1995 and 2014.

Between 2015 and 2017, the share of the private-sector organizations' contributions substantially increased, as did the share of intergovernmental and multilateral organizations' contributions to the total international cofinancing mobilized. At the same time, the share of bilateral organizations' and United Nations agencies' contributions declined significantly.

Cofinancing and project characteristics

Most international donors adopt a selective and targeted approach to cofinancing, favouring projects with development objectives aligned to their own priority areas. For domestic counterpart funding, governments should be willing to allocate part of their resources to projects that significantly contribute to the broad national strategic frameworks for poverty reduction and sustainable development. Identifying the project-related factors that most influence domestic and international cofinancing is key to achieving a more effective, tailored approach to resource mobilization.

The following analysis investigated the association between cofinancing and some project characteristics, such as size, performance and intervention areas (or sectors).

Project size

Results show a positive correlation between project size and cofinancing. As illustrated in figure 7, both domestic and international ratios increase as the size of the projects enlarges. The appeal of larger projects may be partly explained by their potential for easy and efficient scaling up of country-level development impacts, creating stronger political buy-in from governments. Negotiating financial agreements for large programmes with longer lifespans may also be more cost-effective for donors than engaging in myriad small projects with high transaction costs. These efficiency gains may encourage donors' preference for large projects. This is consistent with information gathered in internal consultations (see annex 4) regarding the positive effect of a portfolio of larger projects on cofinancing. Therefore, this calls for a more programmatic approach to IFAD's engagement in developing countries, with a greater focus on larger projects.

Therefore, this calls for a more programmatic approach to IFAD's engagement in developing countries, with a greater focus on larger projects.

Project performance

It was stressed during consultations that cofinancing may be influenced by project performance. There are two measures of project performance that are important to consider: overall achievement ratings, as described in section 2.1, and the disbursement

Figure 7 Correlation between project size and cofinancing ratio

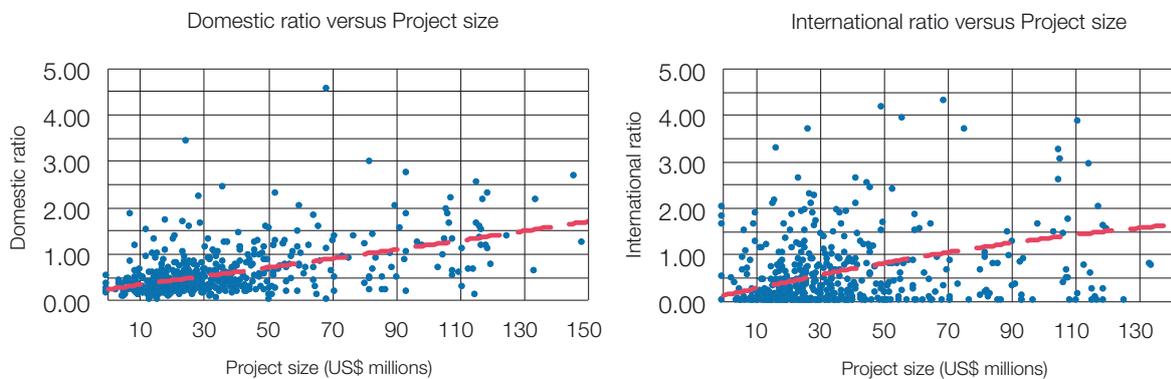
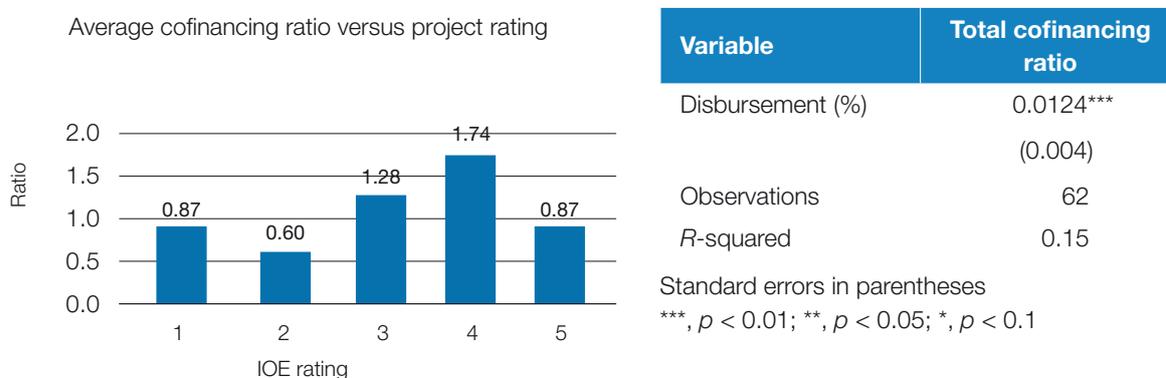


Figure 8 Correlation between project performance and total cofinancing ratio



rate, which reflects implementation performance. Since these performance measures are observed at completion, they could not be specified in the econometric model analysing the drivers of cofinancing at appraisal (however, the IOE performance ratings were included in the econometric model to identify the drivers of cofinancing disbursed at completion). Nonetheless, a correlation test was performed, as illustrated in figure 8, to determine if projects with a large amount of cofinancing at appraisal performed better during implementation.

Although only a weak positive correlation between cofinancing and overall project achievement ratings was evidenced by the data, it appears that on average projects rated 4 (satisfactory) recorded the highest total cofinancing ratio. A strong positive correlation was found between the total cofinancing ratio at approval and the disbursement rate at completion. This implies that projects with well-established financing partnerships at both the domestic and international levels achieved better implementation performance.

Project sector

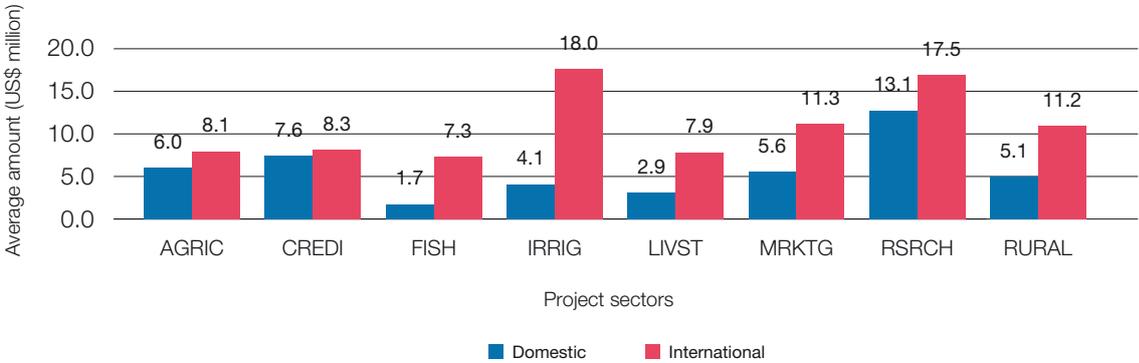
Figure 9 displays the average domestic and international cofinancing invested in each project intervention area between 1995 and 2014. IFAD-supported projects are categorized by their sector of intervention based on project components and activities implemented. Projects were categorized as (i) agricultural development, (ii) credit and financial services, (iii) fisheries, (iv) irrigation, (v) livestock, (vi) storage/processing/marketing, (vii) research/extension/training and (viii) rural development.¹⁶

The data show that, on average, projects implementing research activities (RSRCH) between 1995 and 2014 attracted more domestic cofinancing than others. After the research sector, projects providing financial services (CREDI) and those promoting agricultural development (AGRIC) attracted the second and third largest amounts of domestic counterpart funding, respectively. The top three project sectors for attracting international cofinancing were the irrigation (IRRIG), research (RSRCH) and marketing (MRKTG) sectors.

Extending the period studied to 1995-2017, the data show evidence of IFAD cofinanciers' interest in five main project intervention areas: irrigation, research, access to markets,

16. When several types of activities are being financed within the same component, the selection of component type corresponds to the largest share of total financing. The same logic is applied to the selection of the project type or sector, which is calculated using an algorithm based on the allocation of costs among project components: if 50 per cent or more of the project costs are associated with one IFAD project type, then that type was assigned to the project.

Figure 9 Average domestic and international contributions per project sector (1995-2014)



agricultural development and credit. A tailored approach to resource mobilization should ensure that these areas are mainstreamed into project design and that projects are formulated to facilitate alignment with donors’ own priority intervention areas.

Cofinancing and country conditions

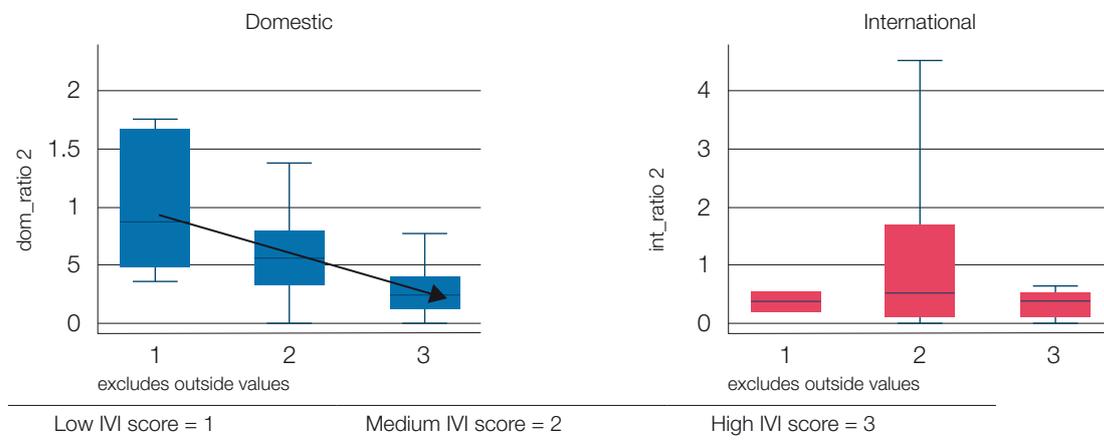
Vulnerability Index

The IFAD Vulnerability Index (IVI) was used to examine the correlation between cofinancing and the country conditions that are relevant to IFAD’s specific mandate. The IVI is a composite index created to capture the multidimensionality of rural poverty in a country and includes sub-indicators that can be associated with one or more of the IVI focus areas, namely food security, nutrition, inequality and climate vulnerability. Figure 10 shows the distribution of domestic and international cofinancing ratios in 2017 for countries categorized as low IVI, medium IVI and high IVI. This categorization was based on the following distribution:

- Low IVI = IVI score ≤ 0.33 (10th percentile)
- Medium IVI = 0.33 < IVI score < 0.58
- High IVI = IVI score ≥ 0.58 (75th percentile).

It appears that the domestic cofinancing ratio was negatively correlated to countries’ IVI scores. As can be seen in figure 10, the domestic ratio was highest in countries with low IVI scores and lower in countries with high IVI scores. On the other hand, there seemed to be a positive correlation between international cofinancing ratio and IVI score, which means that highly vulnerable countries on average received more international cofinancing than less vulnerable countries. However, this pattern seemed to be more compelling when comparing low-IVI and medium-IVI countries; the distribution of international cofinancing in countries with the highest IVI score (group 3) was more or less similar to that of countries with the lowest IVI (group 1). A univariate panel regression corroborated the strong negative correlation shown in figure 10 (see annex 2) between the IVI score and domestic cofinancing. For the international cofinancing ratio, the result of the univariate regression was inconclusive.

Figure 10 Distribution of cofinancing ratios within the vulnerability index groups



The rural sector performance score

The RSP score, compiled by IFAD every three years in its countries of intervention, was used to measure the quality of policies and institutions in areas related to rural development and rural transformation. As another proxy of country conditions relevant to the IFAD mandate, the RSP score was used to examine the correlation between cofinancing ratios and the performance of rural institutions and governance in IFAD-supported countries. Figure 11 shows the distribution of domestic and international cofinancing ratios between 2007 and 2015 for countries categorized as low RSP, medium RSP and high RSP. Categories were assigned based on the following distribution:

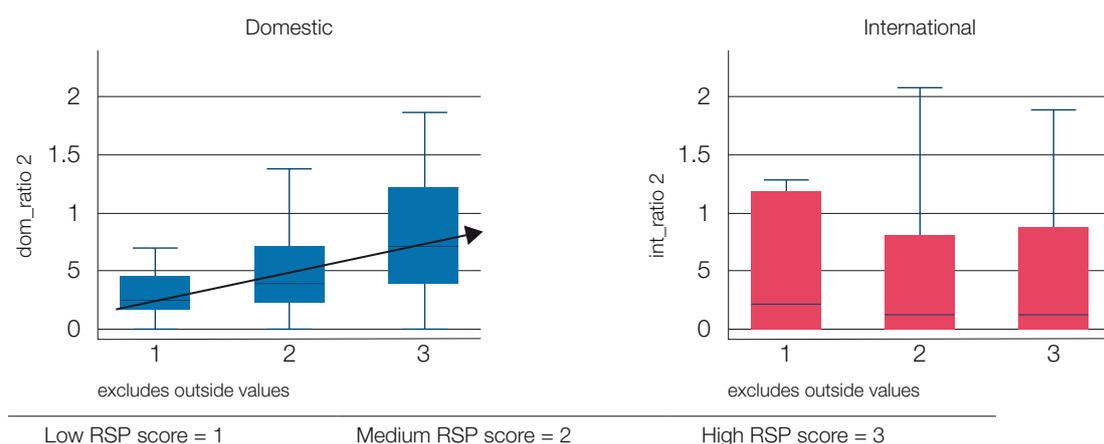
Low RSP = RSP score \leq 3.165 (10th percentile)

Medium RSP = 3.165 < RSP score < 4.32

High RSP = RSP score \geq 4.32 (75th percentile)

It appears that the domestic cofinancing ratio was positively correlated to countries' RSP scores. As can be seen in figure 11, the domestic ratio was highest in countries with high RSP scores, while low domestic cofinancing ratios were recorded more often in countries with lower RSP scores. There appears to be a negative correlation between the international cofinancing ratio and the RSP score. This indicates that countries with weak rural institutional capacity (RSP class = 1) on average attracted more international cofinancing, while countries with a high

Figure 11 Distribution of cofinancing ratios within the RSP score groups



RSP score attracted less on average. However, given the very high variability in international cofinancing ratios in countries with medium to high RSP scores, this correlation was not compelling. Univariate panel regressions also revealed a strong positive effect of rural sector institutional performance on the domestic cofinancing ratio (see annex 2). Although the results of the univariate panel regression confirmed the negative effect of the RSP score on international cofinancing, the effect was not statistically significant (as explained by the high variability observed above).

3.2 Descriptive statistics of cofinancing disbursed at completion

Often the cofinancing amounts committed at project design were lower than the amounts actually disbursed at completion. In other cases, projects benefited from additional funding during implementation, and the amounts of cofinancing disbursed at completion exceeded the planned cofinancing. In either case, it is important to understand the distribution patterns of cofinancing disbursed at project completion as well as the factors that drive donors' interest in investing more than their initial commitment. While the drivers of the variations are identified in section 4.2, figures 12 and 13 below illustrate the difference between cofinancing committed at approval and actual cofinancing disbursed at project completion.

The difference between the approved and disbursed cofinancing is a ratio expressed as a percentage (see chapter 2 for the calculation method). Of the 131 projects analysed, 35 per cent (46 projects) saw an increase in the total domestic cofinancing amount at completion compared with the approval figure, whereas 42 per cent (55 projects) saw a decrease in the domestic cofinancing amount at completion. The total international cofinancing mobilized per project had increased at completion for 15 per cent (19 projects) and decreased for 31 per cent (40 projects) of the projects analysed. The overall disbursed domestic cofinancing amount was 25 per cent higher than the approved amount on average. The disbursed international cofinancing amount was overall 6 per cent lower than the approved amount on average, as presented in figure 12. United Nations agencies accounted for the largest percentage decrease in international cofinancing allocated to IFAD's projects between approval and completion. They were followed by regional organizations and intergovernmental organizations. Bilateral organizations and private-sector donors provided more on average at completion than they committed at approval.

At the regional level, between 1995 and 2014, domestic cofinancing committed at approval was fully disbursed in ESA, LAC and NEN. The data show that, in ESA, LAC and NEN, IFAD's projects disbursed higher amounts of domestic cofinancing at completion on average than those committed by domestic partners at approval. For example, projects in LAC disbursed 16 per cent more at completion than the approved domestic cofinancing amount. However, the importance of looking at the regional level was highlighted in ESA, where a 138 per cent increase in cofinancing was mainly driven by one project in Uganda, which received important private-sector involvement (US\$120 million), and another project in Swaziland, which received a US\$150 million government contribution. In the case of Uganda, at the design stage, the total project costs were estimated at US\$60 million and cofinancing from the private-sector partner was US\$33.1 million. Increased activity in the oil palm component of the project created the need for an increase in funding. Therefore, the private investor increased its contribution to US\$120 million. In NEN, a 4 per cent increase was observed in

the amount of domestic cofinancing disbursed compared with the amount approved. In APR and WCA, IFAD's projects disbursed lower amounts of domestic cofinancing on average at completion than those committed at approval. The decrease in the domestic cofinancing at project completion was mainly observed for contributions from beneficiaries and financial institutions.

Regarding the variation in international cofinancing between approval and completion at the regional level, it appears that, on average, IFAD's projects struggled to maintain international donors' commitments as initially agreed throughout the project lifespans. In all the regions except ESA, the amounts of international cofinancing mobilized at approval had decreased by project completion. The largest decrease in international cofinancing between approval and completion was recorded in LAC.

Figure 12 Overall variation between approved and disbursed cofinancing amounts

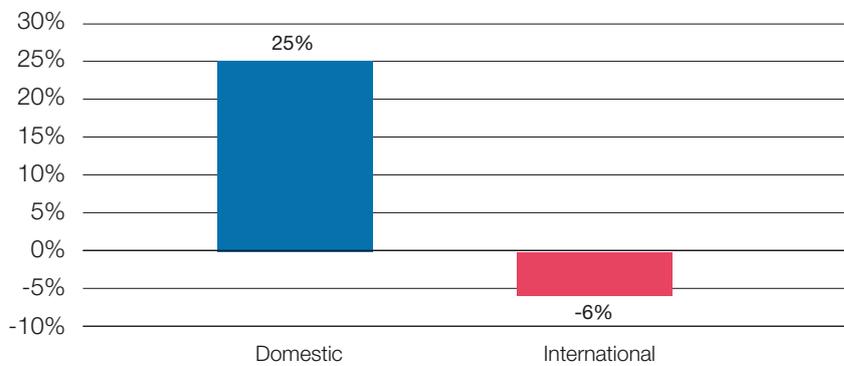
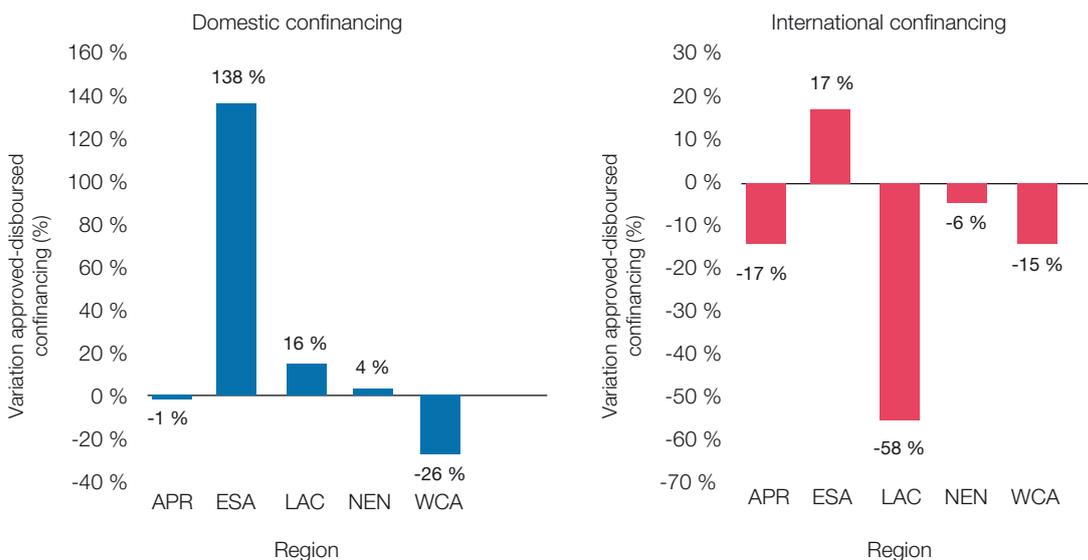


Figure 13 Regional variation between approved and disbursed cofinancing amounts



4 Drivers of cofinancing in IFAD investment projects – results of the econometric analysis

The main objective of this study was to achieve a deeper understanding of the driving factors and historical patterns of cofinancing in IFAD-supported projects. While this has been partially addressed in previous sections, the following section discusses the results of the econometric analysis performed (as explained in chapter 2) to identify the determinants of domestic and international cofinancing.

4.1 Result 1: Drivers of cofinancing committed at appraisal

The panel model specification had very good explanatory power, since it successfully predicted about 50 per cent of the total variation in domestic cofinancing ratios, as evidenced by an overall R^2 value of 0.503. Approximately 68 per cent of the variation in the domestic cofinancing ratio between countries was explained by the variables included in the model, while 30 per cent of the variation over time was explained by the predictors considered (Nau, 2014).

The results of the panel regression corroborated the main hypothesis that recipient countries' needs and merit for development, as well as donors' interests, are significant determinants of cofinancing in development projects. The main findings of the econometric estimation are reported below, complemented by expert opinions gathered during internal consultations. The full results can be found in annex 2.

Effect of country-related factors

Country factors included in the models and analysed as drivers of cofinancing were income level, economic performance, institutional performance, fragility situation, population size, government expenditures and budget. Their effects on cofinancing are presented below.

Income effect

Used as proxies for recipient countries' needs for development, a country's income group, GNI per capita growth and GDP per capita growth were significant determinants of its domestic cofinancing ratio (see table 1). Results showed that the domestic ratio was on average significantly lower in LICs and higher in UMICs. It also appears that recent growth in GNI per capita had a positive effect on domestic cofinancing. In contrast to this study's hypothesis, increased GDP growth in the preceding three years appeared to undermine domestic cofinancing. One explanation of this result may be that countries with growing GDP attract more foreign direct investment, so the need for financing from the national budget is lower.

Table 1 Income effect on domestic and international cofinancing ratios

Country factors				
Variables	Domestic ratio		International ratio	
	(1) Impact	(2) Coefficient (%)	(3) Impact	(4) Coefficient (unit point)
Income effect				
LIC (if LIC = 1, otherwise = 0)	-	-29*** (0.09)	ns	0.02 (0.13)
UMIC (if UMIC = 1, otherwise = 0)	+	34*** (0.12)	-	-0.35* (0.19)
GDP growth (%)	-	-3*** (0.008)	+	0.03** (0.01)
Per capita GNI growth (%)	+	2** (0.009)	ns	-0.012 (0.013)
Number of observations		484		484

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$; +, statistically significant positive impact; -, statistically significant negative impact; ns, no statistically significant impact.

Columns 1 and 2 in table 1 present, respectively, the direction and marginal effect size (as a percentage) of the explanatory variables' impact on the domestic cofinancing ratio. LICs' domestic cofinancing ratio was on average 29 per cent lower than other countries, while UMICs' domestic cofinancing ratio was on average 34 per cent higher than others. These results were statistically significant.

International cofinancing was also affected by the income effect. Columns 3 and 4 in table 13 present the direction and size of the explanatory variables' effect on the international cofinancing ratio. Foreign donors were less willing to provide development aid to richer countries: UMICs' average international ratio was significantly lower (by 0.35 points) than other countries. However, the international cofinancing ratio of countries that had experienced an incremental percentage growth in GDP was higher by 0.03 unit points than in other countries. This marginal effect is statistically significant.

Population effect

Population density, the size of rural population and population growth were included in the panel regression to capture the population effect on cofinancing ratios. Results showed that cofinancing is indeed driven by the population effect, supporting the hypothesis that the need for development is an important determinant of resource mobilization (see table 2).

As expected, the domestic cofinancing ratio was reduced by 0.7 per cent on average for every 1 per cent increase in a country's rural population. Since the size of the rural population in developing countries is likely to be positively correlated with the poverty rate, this finding confirms that poor countries tend to contribute less in counterpart funding. In addition, although they showed a positive effect on the domestic cofinancing ratio, the effects of population density and percentage growth in population size were not significant.

Table 2 Population effect on domestic and international cofinancing ratios

Country factors				
Variables	Domestic ratio		International ratio	
	(1) Impact	(2) Coefficient (%)	(3) Impact	(4) Coefficient (unit point)
Population effect				
Population density (people/km2 of land)	ns	0.02 (0.00)	+	0.00084 (0.00)
Population growth (%)	ns	5 (0.04)	ns	0.008 (0.06)
Rural population (% total population)	-	-0.7** (0.003)	ns	-0.00132 (0.004)
Number of observations		484		484

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; +, statistically significant positive impact; -, statistically significant negative impact; ns, no statistically significant impact.

Regarding international cofinancing, the results showed that donors allocated more funding to populous countries in the IFAD portfolio. Although the incremental effect of population density on international cofinancing was relatively small (0.001 unit point) as expected, the effect was nevertheless highly significant. International cofinancing seems to be unrelated to the size of the rural population and the percentage population growth.

Fragility effect

The effect of countries' fragility on cofinancing was estimated using three predictors included in the model: the dummy variable of the country's classification as a fragile state, the frequency of natural disasters in the country and the total population affected by the natural disasters.

As presented in table 3, a country's fragile situation had a negative effect on domestic cofinancing (30 per cent on average, in line with the study's hypothesis). Nevertheless, it appeared that, when countries experienced multiple natural disasters within a year and a large number of people were affected, this had a positive effect on domestic cofinancing of development projects. Although the relationship was not statistically significant, it appears that state conflicts undermined domestic cofinancing.

Fragility is also an important predictor of international donors' contributions to IFAD projects. However, contrary to expectations, foreign donors' aid allocations appeared to be more sensitive to the risk dimension of fragile status than motivated by humanitarian concerns. Indeed, the international cofinancing ratio was significantly decreased (by 0.29 unit points on average) when a country experienced conflict or a high exposure to natural disasters, both of which amplify the risks of investment. Although the effects were not significant, there was a positive correlation between international cofinancing and a country's fragility status. The total number of people affected by natural disasters also positively affected the international cofinancing ratio.

Table 3 Fragility effect on domestic and international cofinancing ratios

Country factors				
Variables	Domestic ratio		International ratio	
	(1) Impact	(2) Coefficient (%)	(3) Impact	(4) Coefficient (unit point)
Fragility effect				
Fragile situation (if fragility = 1, otherwise = 0)	-	-30.4*** (0.10)	ns	0.169 (0.15)
People affected by natural disaster (number)	+	3.12e-07** (1.22e-09)	ns	1.81e-09 (1.66e-09)
Occurrence of natural disaster (number of times/ year)	+	-2.30*** (0.01)	-	-0.0221* (0.01)
State conflict (if conflict = 1, otherwise = 0)	ns	-0.105 (0.08)	-	-0.287** (0.11)
Number of observations		484		484

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$; +, statistically significant positive impact; -, statistically significant negative impact; ns, no statistically significant impact.

These results suggest that fragility is both a risk and a humanitarian dimension that exerts different effects on foreign aid allocation. In IFAD-supported projects, international donors were more concerned with the risks of an investment portfolio located in countries in fragile situations than the humanitarian dimension.

Institutional effect

The Governance Index and Democracy Index are variables linked to countries' institutional capacity, which is a proxy for the merit factor used to explain donors' contributions to development projects. The results showed that institutional factors were not significant determinants of domestic and international cofinancing in IFAD's projects (see table 4).

Although the coefficient was positive, the results did not show a statistically significant effect of Governance Index score on domestic or international cofinancing. The Democracy Index was also not found to be a driver of cofinancing in IFAD's projects.

Public budget limitation effect

The analysis also investigated the links between the availability of public funds and the mobilization of resources for development projects. As a proxy for the availability of public budgets, variables such as government expenditure growth (annual percentage growth) and the external balance (percentage of GDP) were introduced.

As expected, when countries experienced higher growth in public expenditures, they tended to contribute less in counterpart funding. Results showed that a 1 per cent increase in government expenditure growth decreased the domestic cofinancing ratio by an average of 0.62 per cent, highlighting the negative effect of budgetary limitations on domestic cofinancing. Although a high external balance on goods and services had a positive effect on counterpart funding

Table 4 Institutional effect on domestic and international cofinancing ratios

Country factors				
Variables	Domestic ratio		International ratio	
	(1) Impact	(2) Coefficient (%)	(3) Impact	(4) Coefficient (unit point)
Institutional effect				
Governance Index	ns	0.03 (0.003)	ns	0.002 (0.005)
Democracy Index	ns	-28 (0.34)	ns	-0.64 (0.52)
Number of observations		484		484

Standard errors in parentheses. ns, no statistically significant impact.

as expected, the effect was not statistically significant. In addition, no statistically significant effect of public budgetary limitations on the international cofinancing ratio was found.

Military expenditure effect

As hypothesized, military expenditure, used as a proxy for donors' strategic interests, was found to have a significant positive effect on international cofinancing (see table 5). This suggests that the more developing countries invest in military goods and services, the more international development aid they receive. On average, the international cofinancing ratio increased by 0.02 unit points for a 1 per cent increase in the share of military expenditure in GDP. Military expenditure also had a strong positive effect on domestic cofinancing – an unexpected finding. This may suggest that countries with a strong military base tend to be more sovereign and thus less dependent on foreign aid for development.

Regional dummies

Regional dummies were included in the model to control for time-invariant fixed effects specific to each region. Therefore, the interpretation of their coefficients is of little interest. Regional differences are highlighted in chapter 2, which presents descriptive statistics. Nevertheless, the results of the regression model confirmed the negative trend revealed by the analysis described in chapter 3 (see also annex 2).

Effect of IFAD-related factors

IFAD-specific factors found to have significant effects on cofinancing included the number of project cofinanciers, the presence of an IFAD Country Office, CPM turnover, CPM experience and the size of the portfolio managed by the CPM. The results of the regression are presented below.

Country presence

IFAD's country presence was found to significantly increase international cofinancing (see table 6). This variable entered the model as a dummy for whether or not an IFAD office was present in a specific country in a specific year. The results of the panel regression

Table 5 Effect of public budget availability on domestic and international cofinancing ratios

Country factors				
Variables	Domestic ratio		International ratio	
	(1) Impact	(2) Coefficient (%)	(3) Impact	(4) Coefficient (unit point)
Public budget/expenditure				
Government expenditure growth (%)	-	-0.6* (0.003)	ns	-0.003 (0.005)
Military expenditure (% of GDP)	+	1.7** (0.01)	+	0.02** (0.01)
External balance (% of GDP)	ns	0.14 (0.002)	ns	-0.007 (0.004)
Number of observations		484		484

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$; +, statistically significant positive impact; -, statistically significant negative impact; ns, no statistically significant impact.

showed that countries with an IFAD office averaged 0.27 points higher on their international cofinancing ratio than those that did not. This marginal effect on international cofinancing was highly significant. The presence of an IFAD office was also found to have a positive effect on the domestic cofinancing ratio, although this effect was not statistically significant.

CPM profile

CPMs play a critical role in resource mobilization. They are among the key players taking part in negotiating financing agreements with project stakeholders before IFAD Board approval. Given the important role they play in making projects attractive to donors and aligning them with national development priorities, it was necessary to investigate their effect on cofinancing. The CPM-related variables considered were the experience in the country managed (in years), turnover (expressed as the number of CPMs serving the country in a single year), the number of projects managed and the value of the portfolio (measured in US dollars of IFAD financing).

As expected, CPM experience and portfolio size were found to have positive effects on the domestic cofinancing ratio (see table 6). The greater the experience of the CPM in a country, the higher the domestic cofinancing ratio. In fact, every additional year of experience acquired in a country caused the domestic ratio to increase by 0.04 per cent on average – a marginal effect that was highly significant. Similarly, when a CPM managed a large portfolio (in terms of total project costs), the average domestic cofinancing ratio was significantly higher. Surprisingly, it was also found that, the higher the turnover of CPMs was, the higher the domestic cofinancing ratio was.

For international cofinancing, results showed that, in countries in which CPMs managed large portfolios, less international cofinancing was mobilized. Since large projects seem to attract more domestic resources, the need for additional financing from external actors might be minimal. In contrast, the number of projects managed by the CPMs was positively correlated with international cofinancing: every additional project added to the CPM's portfolio resulted in an increase of the international cofinancing ratio by 0.046 points. High CPM turnover disincentivized international cofinancing, as shown by a negative coefficient.

Table 6 Effect of IFAD country presence on domestic and international ratios

IFAD-related factors				
Variables	Domestic ratio		International ratio	
	(1) Impact	(2) Coefficient (%)	(3) Impact	(4) Coefficient (unit point)
CPM profile				
CPM turnover (number of CPMs)	+	0.03*** (0.01)	ns	-0.03 (0.02)
Experience of CPMs (years)	+	0.04** (0.02)	ns	-0.01 (0.02)
Number of projects managed by CPMs	ns	-0.02 (0.02)	+	0.04* (0.03)
Portfolio value of CPMs (US\$)	+	1.14e-09** (4.70e-10)	-	-2.98e-09*** (8.58e-10)
Country presence				
IFAD Country Office (ICO = 1, other = 0)	ns	0.09 (0.09)	+	0.24* (0.13)
Number of observations		484		484

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$; +, statistically significant positive impact; -, statistically significant negative impact.

Other IFAD factors

Among the other IFAD factors analysed, the following variables were used in the regression model: the average number of cofinanciers in a specific project, the dummy variable of whether or not IFAD financing was on concessional terms and the cofinancing ratios.

No significant effect of IFAD's lending terms on domestic or international cofinancing was detected. However, as expected, countries that succeeded in building an extended partnership for IFAD's approved projects tended to mobilize more domestic and international cofinancing. On average, the marginal effect on domestic cofinancing of each additional financing partner (domestic or international) brought to a project was approximately 7 per cent. For the international ratio, the marginal effect of an additional cofinancing partner was 0.15 unit points. These effects were strongly significant.

The results substantiated the hypothesis that domestic and international cofinancing drive each other. On average, projects with high international cofinancing attracted more domestic cofinancing, and projects with high domestic cofinancing attracted more international cofinancing. This finding corroborated the assumption that strong ownership of development projects by recipient countries is a major driver of foreign aid allocation.

Effect of project-related factors

Project characteristics expected to predict cofinancing ratios at appraisal included project size, sector, and environmental risk class.

Table 7 Effect of other IFAD factors on domestic and international cofinancing ratios

IFAD-related factors				
Variables	Domestic ratio		International ratio	
	(1) Impact	(2) Coefficient (%)	(3) Impact	(4) Coefficient (unit point)
Project financing terms				
Non-concessional (NC = 1, otherwise = 0)	ns	-0.003 (0.11)	ns	0.10 (0.16)
Number of financiers	+	0.04** (0.02)	+	0.15*** (0.03)
International ratio	+	0.25*** (0.04)		- -
Domestic ratio		-	+	0.54*** (0.06)
Number of observations		484		484

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; -, statistically significant negative impact.

The data strongly confirmed the effect of project size on both domestic and international cofinancing ratios (see table 8): it appears that small projects attracted less domestic and international cofinancing, an effect that was strongly significant. Data on the effects of environmental risk classification on cofinancing indicated that domestic financiers do not prioritize projects with lower environmental risks: the domestic ratio was found to be significantly reduced for projects with lower environmental risks. No strong evidence of the effects of the environmental risk classification on the international cofinancing ratio was found.

The results did not point to a statistically significant effect for the majority of project sectors (see annex 2). This may partly be explained by the limitations of the methodological approach to categorization, as pointed out in a paper by IFAD's Strategy and Knowledge Department (SKD). However, considering the average amount of domestic and international cofinancing mobilized per project, those categorized as research/extension/training, credit/financial services, irrigation and rural development received greater cofinancing than others.

4.2 Result 2: Drivers of cofinancing disbursed at completion

For 81 per cent of the projects analysed (106 out of 131), the total cofinancing amount disbursed at completion was different from the amount committed at approval. Among these projects, 56 per cent disbursed total cofinancing lower than the amount approved, while 44 per cent disbursed total cofinancing higher than the amount approved. International donors' commitments at approval were least often disbursed at project completion, whereas domestic cofinancing committed was more likely to be disbursed at completion. This section presents the results of the econometric analysis explaining the variations in cofinancing amounts between approval and completion. A Heckman two-step selection model was used to explain the discrepancies between approval and completion. The results are summarized in tables 9, 10 and 11.

Table 8 Effect of project size and environmental risk classification on cofinancing ratios

IFAD-related factors				
Variables	Domestic ratio		International ratio	
	(1) Impact	(2) Coefficient (%)	(3) Impact	(4) Coefficient (unit point)
Project size				
Small project size	-	-0.3*** (0.07)	-	-0.2** (0.10)
Environmental risks				
Risk class A (high)	ns	-0.2 (0.2)	ns	-0.2 (0.3)
Risk class B (moderate)	-	-0.4* (0.19)	ns	-0.3 (0.27)
Risk class C (low)	-	-0.5** (0.21)	ns	0.1 (0.29)
Number of observations		484		484

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

Results show that IFAD's performance as a project partner matters. Results of the Heckman regression model showed that IFAD's involvement and contribution throughout the project life cycle lowered the likelihood of a decrease in cofinancing disbursed at completion. As expected, the likelihood of attracting additional financing during project implementation was higher when IFAD's performance as a partner was rated as high. Another IFAD-related factor found to have a positive influence on the amount of cofinancing disbursed was the experience of the CPM. The higher the number of years spent by the CPM in the country, the higher the likelihood of mobilizing more financing at completion. This suggests that continued efforts are needed to sustain IFAD's close engagement with borrowing countries and implementing partners in order to create an enabling environment that catalyses investments.

Attention must be paid to country-specific characteristics as well. Fragility, poverty and economic performance can be significant predictors of the availability of cofinancing in support of IFAD's projects during implementation. Indeed, the results indicated that LICs may face more challenges in maintaining the initial funds invested in IFAD-supported projects. In contrast, fragile states drove more financing on average at completion than was initially committed. Large countries and countries recording strong economic growth generally did not receive additional contributions from donors after the initial commitment. With regard to country characteristics, results indicated that only the need for support generated by an emergency influenced positive variations in cofinancing between approval and completion.

Significant country factors identified in PCRVs that appeared likely to lessen cofinanciers' commitments through the implementation cycle included institutional weaknesses and political instability in borrowing countries.

Most importantly, project size and how well projects are designed and implemented also matter. The overall project achievement performance was a significant determinant of the variation in

projects' cofinancing between approval and completion. Projects rated as highly satisfactory in terms of relevance, effectiveness, efficiency, innovation, scaling up and mainstreaming of cross-cutting issues (such as gender, climate and environment) created more favourable incentives for additional donor contributions during implementation. This was corroborated by the significant positive coefficient of the IOE performance rating variable (see column 1 of table 11) and the negative coefficient (in column 2). The results underline the importance of the design stage as a pivotal process upon which the attractiveness of IFAD projects to investment relies. Both the technical quality of project design and the administrative proceedings at this stage need to be optimized in order to improve projects' attractiveness to further investment. The review of the PCRVs also stressed that poor project performance tends to decrease the amount of contributions mobilized from donors by completion. Whereas external factors (such as adverse climatic phenomena) are often blamed, the review highlighted that internal factors can also undermine implementation performance (e.g. difficulties in complying with IFAD procedures, high turnover of CPMs and difficulties in recruiting and managing staff in project management units).

Large projects were less likely to mobilize more cofinancing than initially committed by completion, but projects with low environmental risks were more likely to drive additional contributions by completion. Infrastructure projects tended to attract more financing on average during the implementation cycle than others.

Table 9 Effect of IFAD-related factors on disbursed cofinancing

IFAD factors		
Variables	Probability of increase	Probability of decrease
IFAD performance (rating)	1.81** (0.76)	-1.59** (0.74)
Government performance (rating)	-0.17 (0.47)	-0.68 (0.45)
If non-concessional (NC = 1, otherwise = 0)	-2.45 (1.59)	1.27 (1.31)
Number of financiers	0.39 (0.25)	-0.24 (0.22)
Experience of CPMs (years)	0.33 (0.21)	-0.30* (0.18)
Number of projects managed	0.32 (0.24)	-0.23 (0.22)
Value of portfolio managed (US\$)	2.42e-09 (9.15e-09)	-3.24e-09 (9.68e-09)
IFAD Country Office (ICO = 1, otherwise = 0)	0.65 (1.25)	0.13 (1.22)
Number of observations	129	129

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

Table 10 Effect of country-related factors on disbursed cofinancing

Country factors		
Variables	Probability of increase	Probability of decrease
LIC (if LIC = 1, otherwise = 0)	-2.14*	2.25**
	(1.17)	(1.08)
Democracy Index	-4.15	8.29**
	(3.88)	(3.77)
Fragile state (if fragile = 1, otherwise = 0)	3.32**	-1.16
	(1.40)	(1.01)
Population density	-0.004*	0.004*
	(0.002)	(0.002)
GDP growth (%)	-0.35**	0.42**
	(0.17)	(0.17)
Government expenditure growth (%)	0.04	-0.08**
	(0.03)	(0.04)
ESA Division (if ESA = 1, otherwise = 0)	3.41**	-4.35***
	(1.35)	(1.36)
Number of observations	129	129

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

Table 11 Effect of project-related factors on disbursed cofinancing amount

Project factors		
Variables	Probability of increase	Probability of decrease
Overall project achievement (rating)	1.37**	-0.93*
	(0.63)	(0.55)
Share of project budget to infrastructure (%)	0.56*	-0.63*
	(0.33)	(0.33)
Share of project budget to financial services (%)	-0.15	0.13
	(0.14)	(0.14)
Population density Share of project budget to "soft" activities (%)	-0.10	0.34
	(0.33)	(0.36)
Small project size	-0.27	0.64
	(0.66)	(0.74)
Large project size	-4.08***	4.53**
	(1.36)	(1.77)
Risk class A (high)	-0.46	1.80
	(1.30)	(1.55)
Risk class B (moderate)	1.60	-1.12
	(1.13)	(1.14)
Risk class C (low)	3.44**	-2.83**
	(1.37)	(1.38)
Number of observations	129	129

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

5 Concluding remarks

This study involved an in-depth analysis of the trends and determinants of cofinancing in IFAD-supported projects, looking at historical data dating back to 1995. The goal of the study was to generate insights that can guide the efforts of IFIs (such as IFAD) to assemble development financing for greater impact.

The research addressed the following questions:

- What are the country and institutional factors that trigger domestic and international cofinancing in IFAD projects?
- Did all financial commitments made at approval by the project partners disburse at the end of the implementation cycle?
- What factors explain the variations between the amount of contributions committed at approval and the actual amount disbursed at completion?

An econometric analysis building on panel regression models was used to rigorously identify the main drivers of domestic and international cofinancing in IFAD-supported projects. In the first stage, the determinants of cofinancing committed at project approval were analysed. In the second stage, the study investigated the difference between the cofinancing committed at approval and the amount disbursed at completion. A Heckman two-step selection model was applied to explain the likelihood of an increase or decrease in the cofinancing amount at completion. The econometric models were guided by the theoretical framework of aid allocation found in the literature, which recognizes three underlying motives for donor contributions to development projects: country needs, donors' interests and country merit factors. This framework was further extended to include project characteristics and other factors specific to IFAD interventions.

The study provided a number of valuable insights for IFAD and other development institutions. First, it accommodated project characteristics and IFAD-related factors as predictors of cofinancing, thereby allowing more actionable recommendations to be drawn from the results. Second, it employed a holistic approach to analysing the drivers of cofinancing by identifying factors that strengthen and weaken partners' commitments to IFAD-supported projects – at both the design and completion stages. Finally, it provided a unique opportunity to collect and integrate experience-based perspectives on the constraints and drivers of resource mobilization using qualitative information from key informant consultations.

National development priorities are determinant in shaping cofinancing structure at both regional and country levels. The analysis highlighted the general downward trend in IFAD cofinancing ratios over the last two decades, as evidenced by a declining annual growth rate. However, this trend camouflaged regional differences along with high variability over time. APR and LAC were the best-performing regions in mobilizing domestic

resources thanks to the favourable macroeconomic conditions of most countries in these regions. For international cofinancing, ESA and WCA show the most promising prospects. These patterns are a clear reflection of the importance of national development priorities in shaping cofinancing at the country and regional levels. For example, as a result of increasing urbanization in LAC, governments' priorities have shifted from the rural sector towards urban development. Given IFAD's focus on rural poverty alleviation, projects with specific targets in the agricultural sector may have created fewer incentives for international donors in the LAC region because of a misalignment with national objectives. On the other hand, for most countries in WCA and ESA, rural development is still a priority area in strategic frameworks for poverty reduction. In these regions, leveraging IFAD's comparative advantage can be an effective vehicle for sourcing international cofinancing while building stronger country ownership. The trend in the cofinancing ratios showed a substantial increase between 2008 and 2012. As this period coincided with the food crisis that struck many developing countries, governments and international donors might have strengthened their support to IFAD's projects, given its focus on rural poverty and food insecurity. In this regard, lessons learned from IFAD's past experiences and those of peer institutions should be capitalized such that, in regions where a positive trend in cofinancing was recorded, the underlying drivers of cofinancing are understood and this knowledge shared with other regions where performance has been lacking.

Cofinancing is very sensitive to disparities in country characteristics. Income level, fragility situation, national budgetary limitations, quality of rural institutions and governance, country size and vulnerability are among the country factors found to have statistically significant effects on cofinancing in IFAD projects. This corroborated the findings of previous studies, which concluded that country needs and merit factors determine the level of cofinancing. Furthermore, internal consultations confirmed that general macroeconomic conditions, national priorities and procedures define the structure of cofinancing, especially domestic cofinancing. At the country level, domestic cofinancing was significantly driven by middle-income status, countries in non-fragile situations, institutional capacities, low Vulnerability Index ratings and ample budgetary space. Populous countries also tended to receive more cofinancing for IFAD projects unless the size of the rural population was large. International cofinancing was significantly more likely to be mobilized in countries with good economic performance (as evidenced by GDP growth), especially LICs and countries with lower political risks. These results call for a differentiated approach to resource mobilization, tailored to regional and country-specific contexts.

Project characteristics are also pivotal for resource mobilization. The results of the quantitative analysis found that project size was a strong driver of both domestic and international cofinancing. Clearly, both domestic and international partners are willing to put more resources into larger projects. Large projects are particularly attractive to domestic governments for their political appeal and potential for scaling up development impacts. Efficiency gains may explain international donors' interest in large projects, which avoid the high transaction costs of negotiating myriad small projects with shorter lifespans. Most importantly, the quality of design and the performance recorded throughout the implementation cycle were crucial for attracting and maintaining the commitments of the donors until completion. Projects with a high performance rating at completion had a higher likelihood of disbursing an increased amount of cofinancing at completion. Better prospects for cofinancing could also

be expected from low environmental risk projects and projects with a large share of budget allocated to infrastructure activities. Of the projects analysed, irrigation, research, financial services and agricultural development projects created more incentives for cofinancing than others. Using projects' cofinancing potential (based on their characteristics) as a selectivity criterion in country strategic opportunities programmes can make a notable contribution to reaching the cofinancing targets. Considering the results on the effect of project size, moving from a project-oriented approach towards a longer term, programmatic approach can contribute to sustaining the financial commitment of governments and development partners throughout IFAD's interventions.

There are a number of factors under IFAD's direct control that offer a window of opportunity to influence cofinancing in the projects it supports. Partners' perception of IFAD's performance was a strong driver of cofinancing. These results demonstrate that, the higher IFAD's performance score was as partner, the higher the probability was of an increase in the amount of cofinancing disbursed at completion. The in-country experience of CPMs and the size of their portfolios are found to significantly influence the cofinancing mobilized in those countries. The presence of an IFAD Country Office also matters for resource mobilization, as evidenced by the positive marginal effect on cofinancing – especially the international ratio. Furthermore, domestic cofinancing was strongly stimulated by high international cofinancing, suggesting that governments pay more attention to projects with better visibility and strong buy-in from international partners. This was corroborated by the finding that, the higher the number of financiers contributing to a project was, the better the domestic cofinancing ratio was. IFAD should therefore use its proximity to clients as an opportunity to build trust and enhance its visibility in order to improve the attractiveness of its portfolio to both domestic and international partners.

This study had some limitations, which need to be addressed in further research. The first limitation was the partial representation of the cofinancing structure. In fact, the analysis focused only on investment projects' cofinancing and did not account for grant cofinancing. The reason for this was that grant cofinancing data were not available in corporate databases prior to 2005 (including incomplete data on grant cofinancing would have biased the analysis). The analysis could be improved by considering the overall total cofinancing, including grant cofinancing; however, the difference in results would be minimal in IFAD's case, given the small amount of grant cofinancing in its portfolio.

Although Management stressed the need to better estimate private-sector catalysation, this could not be addressed in depth. This second limitation resulted from a lack of data on private-sector contributions to IFAD projects given the time frame of the analysis and the analytical framework. Only 37 projects recorded domestic private cofinancing in GRIPS, and just five received international cofinancing between 1995 and 2014. The limited sample size did not allow an econometric analysis to disaggregate private cofinancing from total cofinancing. Thirdly, the catalytic effects of private investment present severe measurement challenges, as recognized by MDBs. Currently no single analytical framework or methodology is available to capture catalysation effects. This study did attempt to provide an overview of the conceptual framework used to define the types of private-sector involvement in development projects. While this laid down a foundation for measurement, further work needs to be done to assign value to IFAD's mobilization of private-sector resources.

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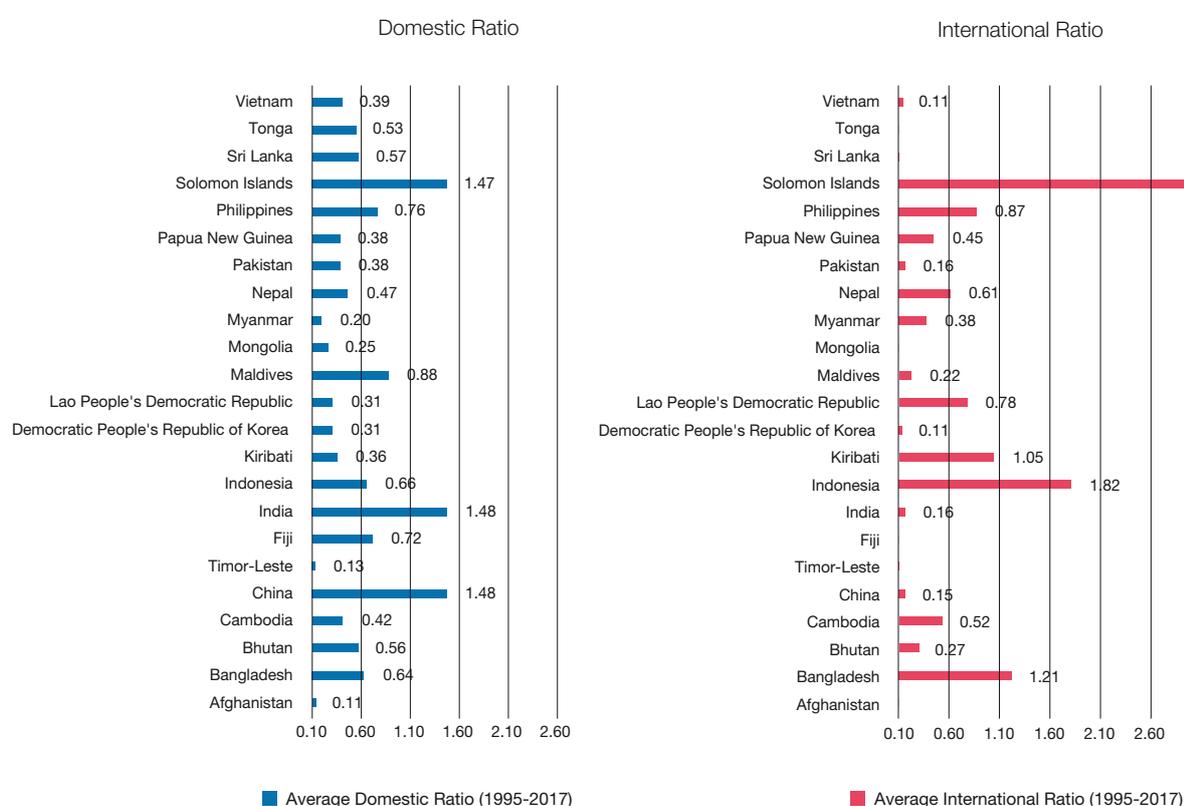
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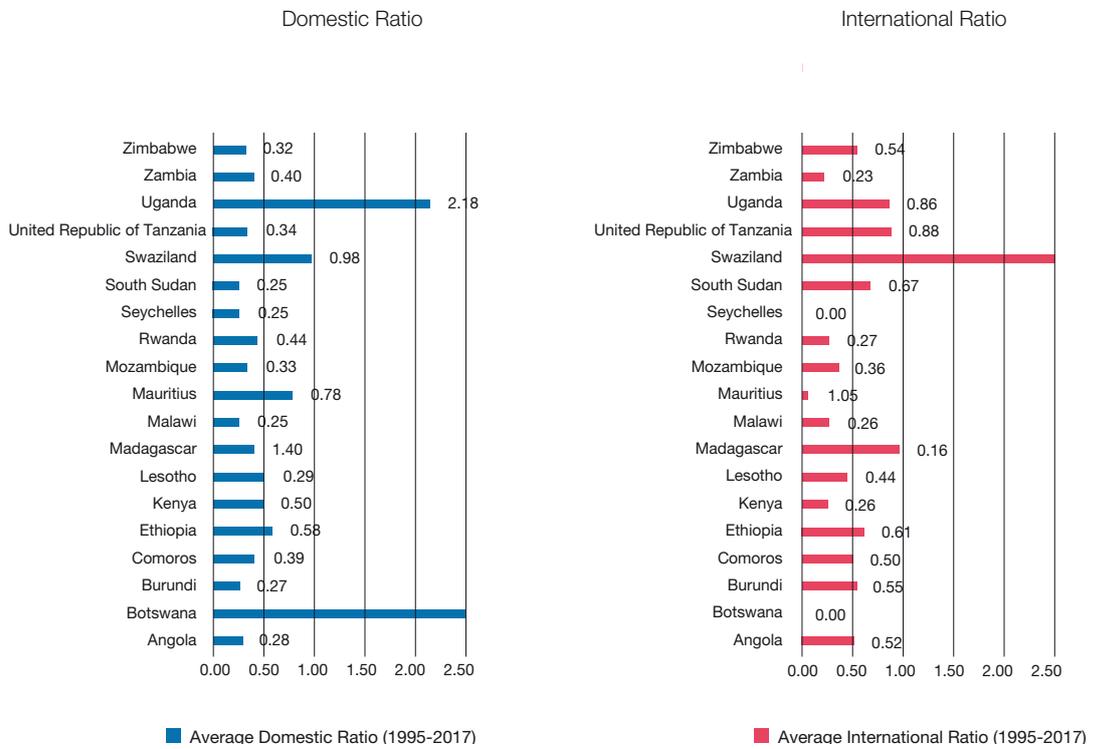
Annex 1 Average cofinancing ratios per country (1995-2017)

Top countries Asia and the Pacific Division

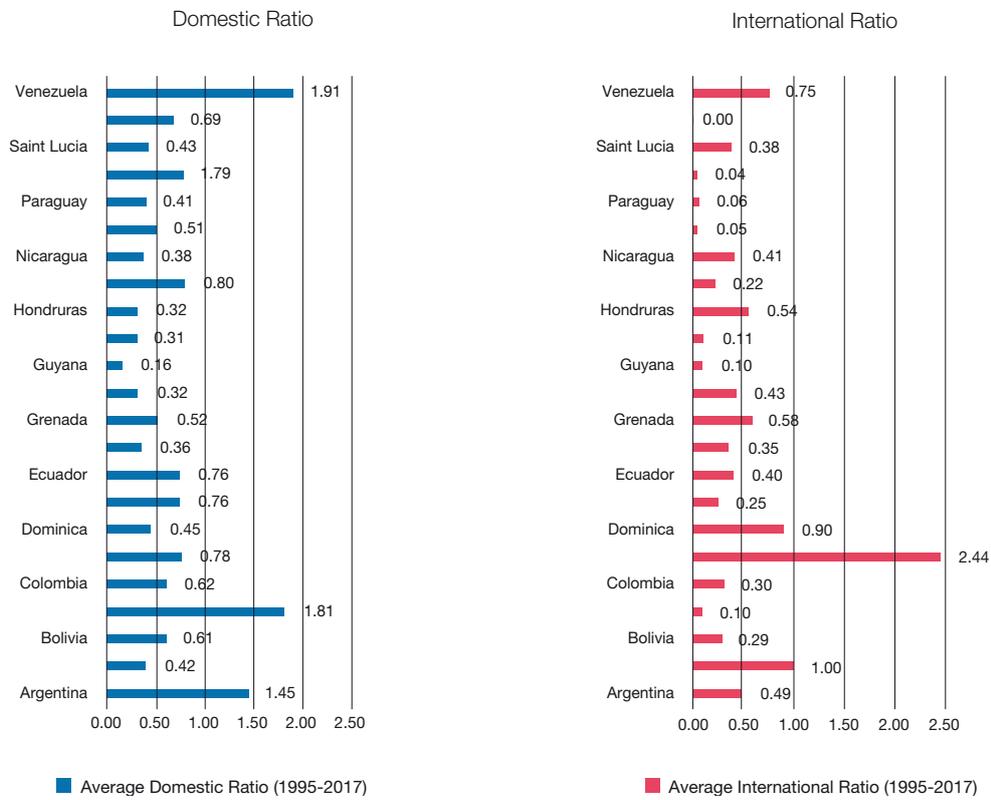


IFAD divisions: (Asia and the Pacific Division [APR], Near East, North Africa and Europe Division [NEN], West and Central Africa Division [WCA], East and Southern Africa Division [ESA] and Latin America and the Caribbean Division [LAC])

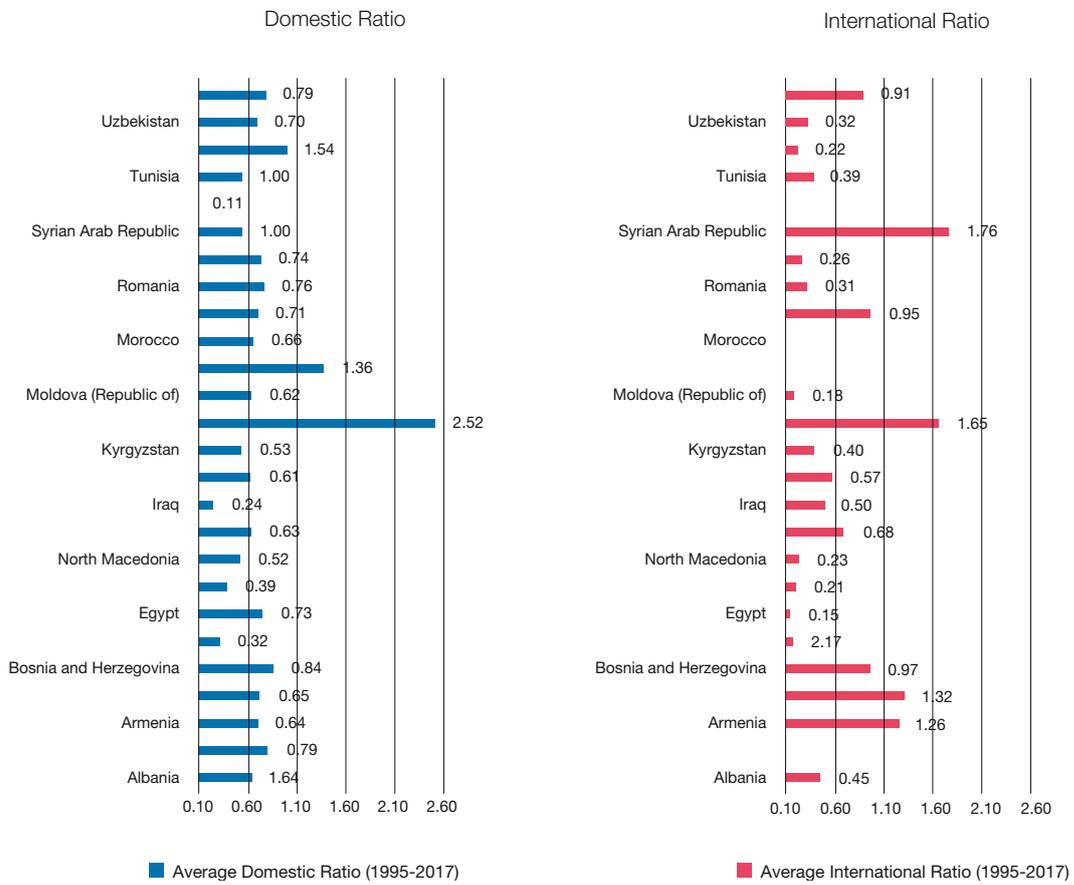
Top countries: East and Southern Africa Division



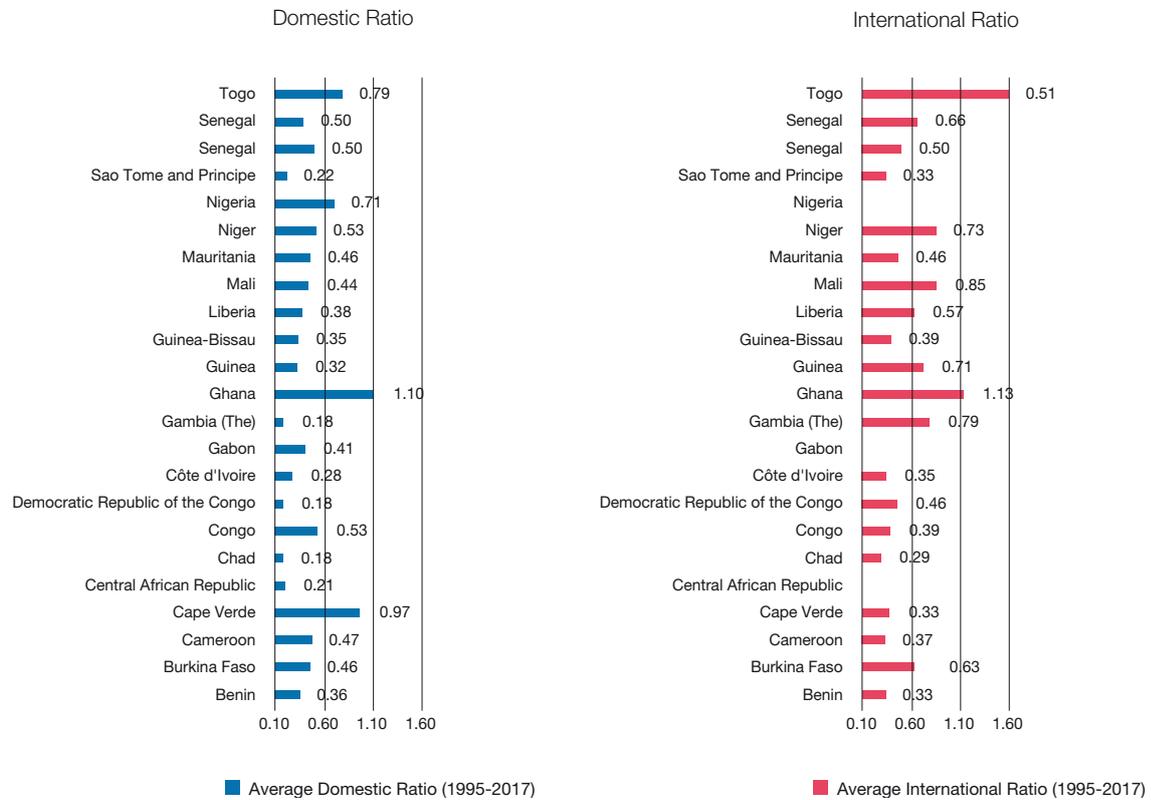
Top countries: Latin America and the Caribbean Division



Top countries: Near East, North Africa and Europe Division



Top countries: West and Central Africa Division



Annex 2 Panel regression results

	Domestic ratio	International ratio
Country factors	Coefficient (%)	Coefficient
Income effect		
LIC	-0.292*** (0.0885)	0.0224 (0.127)
UMIC	0.343*** (0.124)	-0.348* (0.189)
GDP growth	-0.0299*** (0.00796)	0.0276** (0.0110)
per capita GNI growth	0.0198** (0.00878)	-0.0120 (0.0126)
Institutional effect		
Governance Index	0.00315 (0.00322)	0.00243 (0.00464)
Democracy Index	-0.284 (0.336)	-0.643 (0.519)
Fragility effect		
If fragile state	-0.304*** (0.0987)	0.169 (0.152)
People affected by natural disaster	3.12e-09** (1.22e-09)	1.81e-09 (1.66e-09)
Occurrence of natural disaster	0.0230*** (0.00730)	-0.0221* (0.0114)
State conflict	-0.105 (0.0757)	-0.287** (0.115)
Population effect		
Population density	0.000215 (0.000176)	0.000835*** (0.000280)
Population growth	0.0514 (0.0404)	0.00803 (0.0592)
Rural population (% total population)	-0.00691** (0.00272)	-0.00132 (0.00409)
Public budget/expenditure		
Government expenditure growth	-0.00620* (0.00336)	-0.00270 (0.00472)
Military expenditure (% of GDP)	0.0166*** (0.00598)	0.0227** (0.00923)
External balance	0.00137 (0.00245)	-0.00561 (0.00364)

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

	Domestic ratio	International ratio
IFAD factors	Coefficient (%)	Coefficient
Income effect		
Non-concessional loans	-0.00291 (0.109)	0.101 (0.160)
Number of financiers	0.0438** (0.0206)	0.153*** (0.0286)
International ratio	0.251*** (0.0393)	- -
Domestic ratio	- -	0.536*** (0.0576)
Country presence		
IFAD Country Office	0.0903 (0.0922)	0.242* (0.129)
CPMs profile		
CPM turnover (number of CPMs)	0.0338*** (0.0106)	-0.0268 (0.0166)
Experience of CPMs in country (years)	0.0378** (0.0180)	0.0448* (0.0261)
Experience of CPMs in other country (years)	-0.0126 (0.0124)	-2.98e-09*** (8.58e-10)
Number of projects managed by CPMs	-0.0246 (0.0174)	-0.0268 (0.0166)
Portfolio value of CPMs (US\$)	1.14e-09** (4.70e-10)	0.0448* (0.0261)

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

	Domestic ratio	International ratio
Project factors	Coefficient (%)	Coefficient (unit point)
Project size		
Small project size	-0.299***	-0.216**
	(0.0714)	(0.102)
Project sectors/components		
Livestock sector	-0.233	-0.125
	(0.164)	(0.240)
Fishery sector	-0.191	-0.273
	(0.270)	(0.384)
Credit sector	0.0685	-0.162
	(0.119)	(0.164)
Agriculture development sector	-0.0459	-0.115
	(0.0724)	(0.100)
Irrigation sector	-0.0602	-0.206
	(0.158)	(0.223)
Marketing sector	-0.291*	0.0188
	(0.154)	(0.215)
Research sector	-0.0144	-0.582**
	(0.149)	(0.227)
Budget share to infrastructure (%)	-0.00697	0.0202
	(0.0224)	(0.0316)
Budget share to financial services (%)	0.00917	0.0133
	(0.0208)	(0.0287)
Budget share to soft activities (%)	0.0901**	-0.0249
	(0.0371)	(0.0509)
Environmental risks		
Risk class A (high)	-0.195	-0.185
	(0.200)	(0.280)
Risk class B (moderate)	-0.382*	-0.296
	(0.199)	(0.278)
Risk class C (low)	-0.463**	0.117
	(-0.209)	(0.290)

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

	Domestic ratio	International ratio
Region/approval year dummies	Coefficient (%)	Coefficient
Region		
APR	-0.262** (0.127)	-0.418** (0.196)
NEN	0.0592 (0.131)	-0.447** (0.203)
ESA	0.0591 (0.108)	-0.131 (0.169)
LAC	-0.199 (0.138)	-0.0347 (0.210)
WCA	-	-
Year		
1996	0.0573 (0.171)	-0.0766 (0.231)
1997	0.212 (0.195)	-0.0641 (0.262)
1998	0.352** (0.179)	-0.0842 (0.244)
1999	0.129 (0.172)	-0.146 (0.237)
2000	-0.0349 (0.179)	-0.179 (0.247)
2001	-0.0307 (0.181)	-0.0606 (0.249)
2002	0.275 (0.187)	-0.283 (0.257)
2003	0.0504 (0.179)	-0.00257 (0.244)
2004	-0.0456 (0.184)	-0.101 (0.258)
2005	-0.0238 (0.178)	-0.351 (0.249)
2006	0.108 (0.185)	-0.249 (0.254)
2007	0.000250 (0.182)	-0.300 (0.256)
2008	0.196 (0.186)	-0.0882 (0.255)
2009	-0.0602 (0.193)	0.0687 (0.266)
2010	0.0553 (0.194)	0.0980 (0.266)
2011	0.138 (0.186)	-0.131 (0.260)
2012	0.0379 (0.185)	-0.0275 (0.254)

	Domestic ratio	International ratio
Region/approval year dummies	Coefficient (%)	Coefficient
Year (cont.)		
2013	-0.197 (0.211)	-0.316 (0.291)
2014	0.0671 (0.195)	-0.0937 (0.267)
Constant	-0.421 (0.389)	-0.0226 (0.581)
<i>R</i> -squared	Within = 29% Between = 69% Overall = 53%	
Sigma <i>u</i>		0.207*** (0.0765)
Sigma <i>e</i>		0.737*** (0.0334)
Observations	484	484
Number of code	107	107

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

Correlation between domestic ratio and the introduction of IFAD supervision mission

Variables	(1) Domestic ratio
Introduction of supervision (if supervision = 1, otherwise = 0)	0.0581** (0.0273)
Constant	0.498*** (0.0111)
Observations	543
Number of code	109
<i>R</i> -squared	0.013

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

Correlation between vulnerability index and cofinancing ratios

Variables	(1) Domestic ratio	(2) International ratio
IVI score	-0.437* (0.256)	-0.117 (1.449)
Constant	1.644*** (0.577)	0.612 (0.744)
Observations	61	61
Code number	0.047	0.001

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

Correlation between RSP score and cofinancing ratios

Variables	(1) Domestic ratio	(2) International ratio
RSP score	0.492*** (0.145)	-0.237 (0.206)
Constant	-1.188** (0.577)	1.692** (0.816)
Observations	583	583
Code number	93	93

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

Annex 3 Heckman two-step regression results

IFAD factors	(1) Probability of increase	(2) Probability of decrease
IFAD performance (rating)	1.814** (0.758)	-1.586** (0.745)
Government performance(rating)	-0.165 (0.467)	-0.683 (0.454)
If non-concessional (NC = 1, otherwise = 0)	-2.454 (1.591)	1.268 (1.310)
Number of financiers	0.389 (0.246)	-0.235 (0.218)
Experience of CPMs in country (years)	0.329 (0.213)	-0.299* (0.181)
Experience of CPMs in other country (years)	-0.198 (0.195)	0.471** (0.231)
Number of projects managed	0.322 (0.237)	-0.226 (0.222)
Value of portfolio managed (US\$)	2.42e-09 (9.15e-09)	-3.24e-09 (9.68e-09)
IFAD Country Office (ICO = 1, otherwise = 0)	0.648 (1.250)	0.127 (1.222)

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

Country factors	(1) Probability of increase	(2) Probability of decrease
LIC (if LIC = 1, otherwise = 0)	-2.139* (1.166)	2.247** (1.085)
UMIC (if UMIC = 1, otherwise = 0)	-0.449 (1.519)	-0.380 (1.370)
Governance Index	0.0394 (0.0392)	-0.0360 (0.0328)
Military expenditure (% of GDP)	-0.0762 (0.0555)	0.0947 (0.0672)
Democracy Index	-4.147 (3.882)	8.287** (3.766)
Fragile state (if fragile = 1, otherwise = 0)	3.321** (1.399)	-1.161 (1.088)
Population density	-0.00420* (0.00218)	0.00404* (0.00222)
Population growth	-0.982 (0.779)	-0.530 (0.510)
Share of rural population (% of total population)	-0.0436 (0.0292)	0.0205 (0.0257)
GDP growth (%)	-0.345** (0.173)	0.416** (0.171)
Per capita GNI growth (%)	0.148 (0.136)	-0.190 (0.129)
Government expenditure growth (%)	0.0355 (0.0291)	-0.0796** (0.0360)
State conflict (if conflict = 1, otherwise = 0)	1.267 (0.806)	-0.354 (0.878)
People affected by natural disaster (number)	7.45e-08 (4.87e-08)	-1.59e-07 (1.23e-07)

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

Project factors	(1) Probability of increase	(2) Probability of decrease
Small project	-0.266 (0.662)	0.643 (0.738)
Large project	-4.085*** (1.362)	4.532** (1.768)
Budget share to financial services	-0.153 (0.136)	0.129 (0.142)
Budget share to soft activities	-0.105 (0.332)	0.340 (0.361)
Risk class A (high)	-0.456 (1.299)	1.803 (1.552)
Risk class B (moderate)	1.597 (1.134)	-1.124 (1.141)
Risk class C (low)	3.441** (1.369)	-2.833** (1.380)

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

Region/year dummy variables	(1) Probability of increase	(2) Probability of decrease
APR	-0.0489 (1.375)	-0.832 (1.371)
NEN	1.330 (1.313)	-1.218 (1.290)
ESA	3.413** (1.349)	-4.349*** (1.356)
LAC	-0.321 (1.385)	-0.497 (1.205)
WCA	-	-
1997	5.817 (4.258)	-5.281 (4.269)
1998	7.184 (4.508)	-6.496 (4.016)
1999	3.519 (3.463)	-3.133 (4.616)
2000	1.455 (3.285)	-2.117 (4.788)
2001	2.558 (3.427)	-1.904 (4.780)
2002	0.435 (3.069)	-0.395 (5.337)
2003	1.976 (3.175)	-1.220 (5.008)
2004	1.200 (3.086)	-1.858 (4.848)
2005	2.121 (3.199)	-2.717 (4.776)
2006	2.105 (3.459)	-2.970 (4.785)
2007	0.408 (3.018)	-1.380 (5.203)
2008	-2.135 (0)	-6.023 (5.022)
2009	-15.67 (0)	28.64 (0)
2010	0.849 (4.474)	-21.53 (0)
2011	-8.628 (0)	8.489 (0)
Constant	-13.54* (7.216)	
Observations	129	

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

Annex 4 Report of internal consultations

TIFAD11 Cofinancing Targets and Strategy Focus Group Meeting – 1 March 2018 Minutes

Background

1. In support of the elaboration of an action plan to reach the corporate cofinancing targets for IFAD11, IFAD's Operational Programming and Effectiveness Unit (OPE), in collaboration with the Research and Impact Assessment Division (RIA), undertook a quantitative analysis to examine the historical trends and the drivers of cofinancing in IFAD-supported projects. To complement this study with qualitative information, regional economists and portfolio advisors were invited on 1 March 2018 to discuss the results of the analysis and provide insights into the challenges and opportunities to be considered in the development of the action plan.
2. The discussions were very fruitful and led to a better understanding of the context-specific drivers and constraints faced in mobilizing domestic and international cofinancing. The information they provided will be used to generate insights on the quantitative analysis of historical IFAD project data.

Domestic resource mobilization

3. It was recognized that IFAD's potential to increase domestic contributions from governments is limited. In APR, for example, the most successful cases of government cofinancing were driven by central governments' clear policy decisions to match international aid. Nevertheless, the discussion indicated potential areas for improvement:
 - **IFAD's interventions could be integrated better with broader government plans.** It was suggested that a more strategic approach to engaging with countries should be adopted by moving from a project-oriented approach towards a longer-term programmatic approach in order to sustain governments' and development partners' financial commitments to IFAD's interventions. Experience has shown that large programmes attract more contributions than small projects. This was confirmed by the quantitative analysis, which showed a positive correlation between project size and cofinancing ratio.

- On the other hand, IFAD should be more selective in its partnerships with cofinanciers and draw conclusions from unsuccessful cofinancing partnerships. This requires strengthening efforts to leverage cofinancing from Member States that have failed to honour their domestic cofinancing obligations.
- **Some flexibility should be allowed in financing agreements to include only government contributions.** It was noted that some financing agreements have included clauses related to beneficiary contributions or other domestic contributions that were not within governments' control.
- **Encourage better measurement of in-kind beneficiary contributions.** The discussion confirmed the need to improve the measurement of in-kind contributions and report them along with project costs at the design stage. A well-developed approach to quantify in-kind contributions must inform enhanced beneficiary engagement; it was advised that this issue be addressed at the start of project design. The methodology agreed upon will be included in the action plan. It could draw on the costing already included in the economic and financial analyses. This is an area that is often underestimated and needs more attention in order to reach domestic cofinancing targets.
- **Increase private-sector engagement.** The need to incentivize private-sector engagement in IFAD's projects has been stressed frequently, especially in African countries where the macroeconomic conditions (e.g. external debts) undermine national capacities for cofinancing. Private-sector contributions often come in the form of services provision (e.g. training, capacity-building) directly provided to beneficiaries, and IFAD has no established mechanism to quantify and incorporate these contributions into project costs. It was suggested that a case-study approach be adopted for the measurement of private contributions, which would then allow aggregation at the regional level.
- In APR, domestic cofinancing is driven by middle-income countries such as China, Bangladesh, India and Indonesia. These key players can be used as reference points for the cascading of corporate targets into regional targets. It was noted in the study that the presence of IFAD Country Offices has a very limited impact on the likelihood of domestic cofinancing.
- In LAC, domestic cofinancing is more important than international cofinancing because of the high volatility in international cofinancing. However, the current level of urbanization in LAC is an important constraint on mobilizing domestic resources for rural projects after government priorities have shifted away from rural areas. In order to incentivize domestic resource mobilization in LAC, it was suggested that Brazil's model be followed by approaching state governments instead of national governments, since many state governments have their own development agendas that may be easily aligned with IFAD's priorities and comparative advantages.

International resource mobilization

- **Clearly define complementary financing with other IFIs with a broad development perspective.** Reluctance to develop relationships with international partners is sometimes sustained by the argument that their interventions may not be in line with IFAD's mandate. However, there is real potential to integrate those initiatives into interventions that respect IFAD's mission.

- **Top-down directives from Management are needed.** It is recognized that engaging with other development partners is often burdensome and presents more difficulties than designing and implementing IFAD-only projects. Clear directives from regional directors to country directors have proven beneficial in reaching set targets.
- **Develop memoranda of understanding with key long-term partners.** In APR, for example, a memorandum of understanding with AsDB was the foundation for successful international cofinancing.
- **Apply a selective approach to choosing development partners.** It was advised that IFAD adopt a selective approach to choosing its development partners by systematically documenting the quality of past partnerships. Partners that have a track record of dropping out of projects (e.g. the United Nations Development Programme and the United Kingdom Department for International Development) should be avoided.
- **Leverage “pooled” cofinancing.** Experience with the Spanish Trust Fund and GEF indicates that a pool of resources that can be tapped into for cofinancing – rather than single-project cofinancing – provides a better and more stable funding source.

LIST OF PARTICIPANTS

NAME	DIVISION
Pietschmann, Elena	Programme Officer, ESA
Galastro, Vincenzo	Country Programme Manager, WCA
Brett, Nigel M.	Lead Portfolio Advisor, APR
Sma, AbdelKarim	Country Programme Manager, NEN
Icaza Lara, Carlos Manuel	Programme Analyst, LAC
Twomlow, Stephen	Regional Climate and Environment Specialist, ECD
Topacio, Jeszel	Programme Assistant, APR
Mizunoya, Miyuki	Consultant, APR
Montozzi, Luna	Consultant, RIA
Balint, Tim	Technical Development Effectiveness Specialist, RIA
Marco, María Soledad	Programming and Resource Office, OPE
De Villalobos, Eloisa	Results Specialist, OPE
Toschi, Natalia	Senior Officer, OPE
Edholm Widen, Jesper	Intern, OPE
Sissoko, Manda Dite Mariam	Consultant, OPE

IFAD11 Cofinancing Targets and Strategy
Second Focus Group Meeting – 18 April 2018
Minutes

Background

1. As a second round of consultations to advance the agenda of the cofinancing strategy for IFAD11, the Operational Policies and Results (OPR) team convened a meeting with the points to focus on being nominated by each regional division for the cofinancing strategy; invitations were extended to regional economists and portfolio advisors. The aims of the meeting were to:
 - a. Integrate the qualitative inputs on drivers of cofinancing collected in the first meeting and reported in the minutes previously circulated.
 - b. Elaborate on cofinancing from private-sector and in-kind contributions, as requested by Members. Case studies based on project documents were undertaken and the summary of the analysis was shared with the group for discussion. OPR and RIA prepared case studies based on a review of projects and shared them with the group in advance along with a summary of the analysis.
2. As the participants had limited time, only the topic of private-sector contributions was discussed. The item related to in-kind contributions was postponed.

I. Integration of discussions at first focus group meeting

3. **Challenges in accurately forecasting domestic cofinancing at design.** It was highlighted that, while there may be an accurate picture of international cofinancing at the design stage (as reported in GRIPS), it is difficult to capture domestic cofinancing contributions at this stage; these estimates are often based on assumptions. The contributions of additional partners who might join the project during implementation are not captured at the project design stage. IFAD should highlight the importance of capturing these contributions and establish systems for recording them.
4. **Challenges resulting from missing categories.** Some types of contributions cannot be recorded if they do not fall under the categories used to report on projects' financing data.
5. **More attention is needed to cofinancing at design.** It was mentioned that a good design document should be a prerequisite for seeking more donors' contributions to IFAD-supported projects. Additionally, project performance is key to attracting additional cofinancing during implementation.
6. **Country conditions matter.** It was recommended that IFAD take into account country-specific contexts while developing a cofinancing strategy. For example, most middle-income countries take the lead among donors in selecting financiers, intervention areas, sectors and partnerships, in line with the Paris Declaration. Donors' lending terms and country debt thresholds are also important factors.

7. **Study the implications of new lending tools for cofinancing.** It was mentioned that there is strong interest within IFAD in diversifying its lending tools. The analysis and piloting of these tools should take into account their potential for leveraging cofinancing from different sources. Tools such as results-based financing, budget support, and the Smallholder and Small and Medium-Sized Enterprise Investment Finance Fund hold great potential for leveraging domestic, international and private cofinancing.

II. Cofinancing from the private sector

- **A more accurate definition of private actors is needed.** Well-established farmer organizations (not informal farmer groups) can be considered private-sector partners, given that their functions (input procurement, aggregation of produce, marketing, etc.) are no different from those played by agribusiness or trader companies. For this reason, such organizations can provide cofinancing to IFAD-funded projects through assets (often associated with matching grants) and member services. The definition of the private sector should therefore include these organizations along with large companies and small and medium-sized enterprises. Whether or not financial institutions (banks, microfinance institutions, etc.) are classified as part of the private sector needs to be clarified.
- **Monitoring systems during implementation must be institutionalized.** Private-sector contributions that materialize during implementation are not systematically recorded in systems such as GRIPS or captured in supervision reports. Yet lending from financial institutions is typically recorded, since this information is easier to obtain. This inconsistency in data recording leads to underestimation. It is challenging to predict actual private-sector financing at the project design stage, since it is based on estimates. Most private contributions take place during implementation, and IFAD does not currently have a mechanism to systematically track and record all private involvement throughout the project life cycle. Data are sometimes included in supervision reports or mid-term reports, but are not entered into any corporate system.
- **Attention should be paid to the catalytic effects of IFAD interventions.** The discussions pointed to the case of parallel financing, which is not captured in GRIPS but could be included based on a revised definition of cofinancing. It was recognized that IFAD interventions may have catalytic effects not only on private-sector actors but also on other domestic and international financing partners, which should be accounted for. Donor coordination platforms related to the United Nations Development Assistance Framework may offer an entry point to accounting for parallel financing generated. When developing a cofinancing strategy, IFAD should consider capturing parallel financing at the country strategic opportunities programme level in addition to the project level.
- **The cofinancing strategy should provide clear guidance for the tracking and recording of private-sector contributions.** It was proposed that, for projects known to require private-sector contributions (such as value chain and agribusiness development projects), OPR should develop a template that helps to capture information throughout the project life cycle on the type of actors involved, their roles and the amount they contribute. The template could be piloted to evaluate the quality of information collected.

LIST OF PARTICIPANTS	
NAME	DIVISION
Pietschmann, Elena	Programme Officer, ESA
Galastro, Vincenzo	Country Programme Manager, WCA
Brett, Nigel M.	Lead Portfolio Advisor, APR
Mizunoya, Miyuki	Consultant, APR
Montozzi, Luna	Consultant, RIA
Toschi, Natalia	Senior Officer, OPE
Sissoko, Manda Dite Mariam	Consultant, OPE
Wefers Bettink, Willem	Chief, Technical Units, PRM
Sahli, Malek	Senior Finance Officer and Team Leader, FMD
Bresciani, Fabrizio	Regional Economist, APR
Benhammouche, Aba	Lead Portfolio Advisor, ESA
Chinien, Shirley	Regional Economist/CPM ad interim, ESA
Camagni, Marco	Senior Technical Specialist, PMI
Hennings, Enrique	Lead Technical Specialist, PMI
Migliaccio, Luisa	Lead Portfolio Advisor, LAC
Schollbrock, Sylvia	Portfolio Adviser, NEN

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International Fund for Agricultural Development
Via Paolo di Dono, 44 - 00142 Rome, Italy
Tel: +39 06 54591 - Fax: +39 06 5043463
Email: ifad@ifad.org
www.ifad.org

-  facebook.com/ifad
-  instagram.com/ifadnews
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