How can matching grants in agriculture facilitate access to finance?

Learning from the World Bank Group’s experience with matching grants for agriculture

Rachel Sberro-Kessler
F&M Global Practice – Agriculture Finance
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Introduction

Matching grants are an instrument aimed at promoting private sector development which has been used extensively over the past years, in particular for agriculture development. A matching grant is defined as “a one-off, non-reimbursable transfer to project beneficiaries, for a specific purpose, based on the condition that the recipient makes a contribution for the same purpose”\(^1\). These grants can be used for a variety of activities including technical assistance, investment in assets or financing of working capital. A recent review\(^2\) showed that the WBG had supported 106 private-sector development matching grant projects over the past decades, including 21 in the agriculture sector. While agriculture projects account for a small portion of the total number projects, total grant financing dedicated to agriculture reaches 650 million USD or almost twice the volume of those outside of agriculture\(^3\). In addition, the proportion of matching grants projects supporting agriculture has significantly increased in the 2000s. Recent interest for this instrument to support agriculture might be due to growing concerns about forms of support which distort financial markets such as interest rate subsidies, as well to the compatibility of such agricultural subsidies with World Trade Organization requirements\(^4\).

However, there is very limited rigorous evidence on the effectiveness of matching grants, both on additionality and sustainability. The issue of additionality can be summarized as: “do matching grants crowd out private investment by subsidizing investment that would have been made anyway?” On the other hand, the issue of sustainability asks: “Can supported projects be self-sufficient after the matching grants project closes”? The conclusion from the recent WBG review\(^5\) indicates that “experience has shown that matching grants rarely yield the type of broad and durable economic benefits that would justify the subsidization of private enterprises with public funds.”\(^6\)

While matching grants are often used as substitutes for well-functioning financial markets, literature suggests that matching grants do not sufficiently work as enablers of financial markets. Indeed, while the primary objective of matching grants is often to increase the income of beneficiaries in the absence of well-functioning financial markets, matching grants should also be designed in a way that help beneficiaries build relationships with financial institutions so that their future expenses and investments can be undertaken without the need for grants\(^7\). However, a recent report on matching grants for productive alliances in Latin America and the Caribbean\(^8\) indicates that “In their design, almost all Productive Alliance projects mention the goal of enhancing producers’ access to commercial financial services to complement project grant financing and beneficiary contributions, but in practice few such linkages have materialized”.

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1 See IFAD, 2012, Matching grants technical note
3 These numbers only capture closed projects
4 In some cases Matching Grants might distort financial markets and violate Article 6.2 of WTO agriculture agreement. In at least one case, the World Bank discontinued an MG fund on the belief that the fund violates WTO rules, which had come into existence since the project was approved. To satisfy the requirements of the framework agreement of the WTO, grants are defined as nonactionable subsidies because they are not specific. Specificity under WTO rules typically involves “targeting of geographic regions or economic sectors”.
5 See reference above
6 Campos et al. 2012
7 In this paper, “access to finance” for farmers and agricultural SMEs is defined as access to suitable formal financial services such as savings, credit, insurance and payments.
8 WBG, 2016, Linking Farmers to Markets through Productive Alliances An Assessment of the World Bank Experience in Latin America
Building on previous literature as well as a detailed analysis of WBG agriculture matching grants projects, this paper focuses on three specific issues: 1/ What is the rationale for using matching grants in agriculture and why does the financial sector matter? 2/ What has been the specific experience with WBG matching grants for agriculture and what are the key drivers of success? 3/ What are the various models of linkages with financial institutions and how can matching grants be used to promote financial inclusion? Based on this analysis, this paper suggests emerging good practice on when to use matching grants for agriculture, and how to design them in a way that promotes sustainable impact and linkages with the financial sector.

1. Why using matching grants and why engaging the financial sector may matter

**Summary:** Based on a literature review as well as an analysis of WBG matching grants projects, this section analyses the rationale for matching grants projects and the role of matching grants to address agriculture and rural finance constraints. It shows that WBG matching grants generally lack proper identification of a market failure therefore leading to sub-optimal objective-setting and limited long-term impact. This analysis suggests that when a market failure related to the lack of access to finance is identified, matching grants projects should include the improvement of access to financial services as a project objective. Matching grants may however not always be the most cost effective instruments to help farmers invest in productive activities when rural financial markets are limited, and it is recommended that constraints to agriculture and rural finance are systematically assessed before setting-up a matching grants project. Finally, in order to avoid misallocation and market distortions, matching grants should be designed to exclude bankable segments and bankable projects, and to offer tailored features by type of segment and type of project.

1.1 The rationale for matching grants and the limited evidence on their impact

Matching grants may stimulate market development, innovation and promote asset-building among low-income segments. Matching grants may help foster private investments and investors towards underserved markets by addressing specific barriers to market development. Matching grants may help farmers and agricultural SMEs invest in activities that have great potential to generate growth but they are unwilling or unable to finance due to a variety of constraints which can be internal or external, financial or non-financial. In particular, matching grants are often used as a way to stimulate innovation, or technology adoption, as investors might be reluctant to invest due to high risks. For instance, a large matching-grant program managed by the Colombian innovation agency COLCIENCIAS provides evidence that, over the period 1995-2007 COLCIENCIAS funding had an average impact on labor productivity of 15%\(^9\). Matching grants may also mainly promote asset building as an objective in itself, as the experience in the USA suggests (see Box 1). Building assets can both provide a vital financial cushion against poverty when shocks happen, but also serve as a springboard for investments.

However, matching grants can also potentially be misallocated - if public resources are used for projects that are non-viable investments or captured by elite – and can also distort markets – if they substitute savings or commercial credit. The use of grants can be justified to address market failures or on poverty grounds. Literature suggests that matching grants are least controversial when used to support public goods (e.g. agricultural research and development, agriculture extension) or semi-public goods (irrigation schemes, climate-smart agricultural investments or market facilities benefitting several members of a community). In particular, support to semi-public goods can be justified by positive externalities (e.g. job creation in rural areas, increased food safety) and spillover effects (e.g. support to technology adoption among beneficiaries may lead to further adoption by non-beneficiaries, training of beneficiaries may then benefit non-beneficiaries).

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\(^9\) Interamerican Development Bank, 2011, "Evaluación del Impacto de los Fondos de Desarrollo Tecnológico (FDT): El caso de COLCIENCIAS"
Matching grants should only be used when they are determined to be the most adapted and least-cost tool to achieve broad and durable impact\(^{10}\). The recent WBG review of matching indicates that without a rigorous economic analysis of the market failure might lead to “limited additionality and spillovers, weak demand and disbursements, unintended consequences on the business development services market or nonsustainable impact if the project does not address binding constraints for SMEs (e.g. access to credit)”. Matching grants are not a sustainable financing instrument, but their objective should be to support sustainable investments. Indicators of sustainable investments suggested by IFAD\(^{11}\) include “improved access to financial services by the beneficiary” and “replacement or expansion of the productive asset by the beneficiary over time”.

However, WBG matching grants generally lack proper identification of a market failure therefore leading to sub-optimal objective-setting and limited long-term impact. More than a decade ago, a WBG review of matching grants\(^{12}\) indicated: “Loose claims of market failure can easily result in misguided interventions with grants (...) The fact that the private sector does not invest in certain fields is not necessarily a sign of market failure.” Unfortunately, a more recent review highlights the same weaknesses in WBG projects: “the justification for the use of this instrument is rarely well articulated in the reviewed projects and (...) a quarter of the projects in the sample had no meaningful indicator with which to gauge success”. One of the key conclusions of this report is that “matching grants rarely yield the type of broad and durable economic benefits that would justify the subsidization of private enterprises with public funds”. Ideally, matching grants for agriculture should support investments which improve product quality, reduce post-harvest losses, and/or enhance productivity on a long term basis.

Overall, literature suggests that there is limited rigorous evidence on the effectiveness of Matching Grants. Most studies only compare beneficiaries before and after matching grants, and only a few Randomized Controlled Trials have been undertaken. In addition, most studies track one specific indicator (increase in sales, increase in productivity) without analyzing broader measures of impact (increase in income, profits, number of people employed etc..). One completed study is a randomized controlled trial (RCT) of a government-led matching grant scheme in Mexico (Bruhn et al., 2014). The results on one-year impacts show positive effects on return-on-assets and total factor productivity\(^{13}\). A study in Yemen (Cusolito et al., 2015) which was interrupted due to eruption of civil conflict showed that in the first year after the program, the matching grant was found to have led to more product innovation, firms upgrading their accounting systems, marketing more, making more capital investments, and being more likely to report their sales grew. A meta-analysis of 20 individual assessments of matching grants suggests a positive impact on firms’ performance and employment (Piza et al., 2015). Attempts to conduct seven RCTs in six countries in Africa revealed not possible to implement due to political and technical reasons\(^{14}\). While the RCT method could not be used, an impact evaluation in Mozambique suggested that matching grants had led to an increase in sales of beneficiary firms above 20% but not to an increase in profits.


\(^{11}\) See IFAD, 2012, Matching grants technical note


\(^{13}\) Owners had also positive improvements in “entrepreneurial spirit” when compared with the control group. The analysis finds a large increase in the number of employees and total wage bill several years after the program. The paper documents that there is no singular mechanism for all firms.

\(^{14}\) The reasons include ethical concerns of Government for randomizing out eligible applicants; application rates to the programs were too low to enable the planned selection of a random sample of eligible applicants, and continued implementation delays prevented the impact evaluation to start
1.2 How matching grants can help address constraints to access to finance

1.2.1 Matching grants, when? Analyzing constraints to agriculture and rural finance and comparing matching grants to alternative instruments

Matching grants for agriculture may be used to address a variety of market failures. These include demand-side constraints both non-financial (e.g. lack of willingness to invest in business development services, or in technology which has unproven results) and financial (e.g. lack of trust of financial institutions). These also include supply-side constraints both non-financial (e.g. lack of supply of business development services providers) and financial (limited supply of rural finance). Additionally, financial supply-side constraints may themselves be due to a variety of reasons including lack of information, lack of know-how, lack of liquidity, or high risks, and costs associated with rural finance.

Most WBG matching grants projects identify the lack of rural finance as a sufficient rationale for matching grants, without fully identifying the specific market failure and whether other instruments might be more appropriate to unlock rural and agriculture finance. As an example, the use of MG in the Nigeria Fadama III Development project (P096572) is justified in the Project Appraisal Document as follows: “This approach to financing is adopted due to the low performance of rural financial markets in Nigeria, which are particularly deficient and limited in terms of outreach in the rural areas”.

Matching grants are a temporary instrument but can help address a variety of demand-side and supply-side constraints to agriculture finance. Some of these benefits are only applicable during the course of the project (ex: reduction of risks and costs associated with financing farmers) while others are sustainable after the project ends (ex: generation of trust,
knowledge and skills). In Figure 1 below, the first category of constraints and benefits is highlighted in light blue boxes and the second category is highlighted in deep blue boxes\textsuperscript{15}.

**Figure 1: Demand-side and supply-side constraints that can be addressed with matching grants**

\textbf{Demand-side Constraints that can be addressed with Matching Grants}

- **Lack of willingness to invest**
  - Matching Grants can promote demand for credit by demonstrating to farmers the profitability of agricultural investments (e.g., see in Colombia, more than 11,000 rural households that were not beneficiaries of matching grants nevertheless adopted at their own expense improved practices promoted through the Project)

- **Lack of skills to invest**
  - Matching Grants can help farmers and SMEs develop skills to prepare business plans (both for current project and future activities)

- **Lack of trust towards financial institutions**
  - When Matching Grants projects require beneficiaries to save a specific amount at a specific frequency, matching grants projects can build financial capacity and trust towards financial institutions

\begin{itemize}
  \item Constraint addressed in the long term (and also potentially for non-beneficiaries)
  \item Constraint addressed only during the course of the project and for project beneficiaries
\end{itemize}

\textsuperscript{15} Add literature references on how MG can help increase access to finance:

1/ In addition to the matching grants providing the needed funds, the approval of their business proposal by the government might serve to signal the quality of their proposed investment and increase access to credit access to finance the remainder of the investment (Campos et al., 2012).

2/ Risk-sharing to induce higher adoption. Risks are widespread in rural productive activities and small farmers have limited access to credit and insurance, in particular to smooth common shocks. The high variability of the climate and the associated risk of poor harvests heighten this risk thus lowering farmers’ propensity to invest in new technologies (Dercon and Christiaensen, 2010). This is even more so in a situation where farmers produce similar crops, increasing covariant risk. A matching grant scheme can potentially provide the necessary risk sharing arrangement by lowering the expected loss for the organization and inducing a producer group to engage in a profitable activity it would have not have engaged in otherwise.
In this example, the lack of collateral is classified as a supply-side constraint as – although collateral is required by most financial institutions for access to credit - some financial institutions manage risks in a different manner. Lack of collateral is constraint that can sustainably be addressed through matching grants, but only for project beneficiaries.

However, matching grants may not always be the most cost effective instruments to help farmers invest in productive activities when rural financial markets are limited, and it is therefore recommended that constraints to agriculture and rural finance are systematically assessed before setting-up a matching grants project. Indeed, some constraints to agriculture and rural financial maybe be addressed on a more sustainable basis through other instruments (e.g. high risks, costs and lack of long term liquidity), while others cannot be addressed with matching grants at all (e.g policy and regulatory environment). These alternative instruments are detailed Figure 2 below. According to the WBG analysis of matching grants for productive alliances in LAC, almost all Productive Alliance projects have aimed to enhance producers’ access to commercial finance, but these efforts have rarely been successful. Such difficulties might be due to constraints affecting rural financial markets that could not be addressed through matching grants on their own (e.g. regulatory issues that prevent financial institutions from making loans to groups of producers etc..). The WBG has recently designed an agriculture finance diagnostic tool16 which aims at providing guidance to governments on key constraints and opportunities for the development of agriculture and rural finance. Such an approach may help policymakers make more effective choices of public instruments to support agriculture finance. Similarly, key constraints to agricultural competitiveness may lie in broader policy environment related to land regulation, trade policies (e.g. imports restrictions), and agricultural support policies (e.g. input subsidies only available to a specific segment of the population creating distortions for other market players). Such constraints cannot be addressed with matching grants.

**Figure 2: Agriculture finance constraints which can be addressed with alternative instruments**

16 See upcoming WBG Agriculture Finance Diagnostic for Cote d’Ivoire and Senegal.
### Constraints that can be addressed with alternative instruments

<table>
<thead>
<tr>
<th>Constraint</th>
<th>Matching Grant Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of know-how on agriculture finance</td>
<td>- Technical assistance to develop lending methodologies with improved risk management</td>
</tr>
<tr>
<td>Lack of collateral</td>
<td>- Develop alternative forms of collateral recognized by central bank regulations including warehouse receipts systems (benefits all segments of the economy)</td>
</tr>
<tr>
<td>Risks</td>
<td>- Establish a Partial Credit Guarantee (sustainable)</td>
</tr>
<tr>
<td>Costs</td>
<td>- Support the development of agricultural insurance (might require long-term subsidies)</td>
</tr>
<tr>
<td>Lack of long term liquidity</td>
<td>- Technical assistance to develop lending methodologies with improved risk management (sustainable)</td>
</tr>
<tr>
<td></td>
<td>- Promote the use of digital finance/ agent banking (sustainable)</td>
</tr>
<tr>
<td></td>
<td>- Subsidize start-up costs to open branches in rural areas (might require long-term subsidies)</td>
</tr>
<tr>
<td>Policy and regulatory environment</td>
<td>- Support the mobilization of long term savings (sustainable)</td>
</tr>
<tr>
<td></td>
<td>- Support credit lines for long term funding (temporary)</td>
</tr>
<tr>
<td></td>
<td>- Revise elements in the policy and regulatory environment that may hinder the supply of financial services (e.g. interest rate cap, loan forgiveness programs etc..)</td>
</tr>
</tbody>
</table>

* Lack of collateral is constraint that can sustainably be addressed through matching grants, but only for project beneficiaries.

### 1.2.2 Matching grants for who and for what? Balancing sustainability with additionality

Matching grants should be designed in a way that excludes both fully-bankable projects (additionality) and non-viable projects (sustainability). “Fully-bankable” projects can be defined as projects that have sufficient collateral, future cashflow, and high probability of success, to be acceptable to institutional lenders for financing. “Potentially bankable” projects are projects that have growth potential but do not fully present these features\(^{17}\). Projects that may be supported by matching grants include bankable or “potentially bankable”\(^{18}\) projects undertaken by segments with limited or no access to financial services. On the other hand, segments that already have access to financial services (e.g. SMEs) should only be supported for potentially bankable projects. This “do no harm” approach aiming at avoiding misallocation is represented in figure 3 below.

Balancing additionality with sustainability also requires to introduce different design features depending on segment type and project type. Segments that already have access to financial services should be granted “high-leverage grants” which require high levels of financial discipline while segments with very limited access to financial services should “low-leverage grants” which offer higher levels of matching but gradually pave the way for higher financial inclusion. Such design features are described in more details in section 2 (see Boxes 2 and 3).

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\(^{17}\) Each financial institution defines “bankability” differently depending on its business model. This section therefore uses the term “Fully-bankable projects” for projects that can be perceived as bankable by at least one financial institution.

\(^{18}\) “Potentially bankable projects” include investments which are perceived as particularly risky or innovative by financial institutions (e.g. investments in new drought-resistant crop varieties with high return potential, large projects with long return periods etc..)
2. WBG experience with Matching grants in agriculture and drivers of success

**Summary:** The quantitative analysis below builds on the recent WBG analysis of 106 matching grants projects for private sector development, by focusing on the 21 agriculture projects. It describes the specificities of agriculture matching grants compared to other sectors and analyses whether specific features are associated with success. The referenced report analyzed all WBG active and closed lending operations including a matching grant component and assigned “implied ratings” for the matching grant component based on information provided in ICR and IEG evaluations. Among the sample of 21 agriculture projects, most of the quantitative analysis analyzing drivers of success focuses on the 15 closed projects which have implied ratings. Some of the analysis also includes an additional sample of 7 projects which are not specifically focused on agriculture but include agriculture as one of their priority sectors. This analysis shows that the proportion of matching grants projects supporting agriculture has significantly increased in the 2000s, and that most agriculture projects have focused on the Africa Region, although Latin America the Caribbean is the first region by volume of matching grants components. Matching grants for agriculture are generally more successful and larger than outside of agriculture. Two notable specificities of agriculture projects are that all of them allow groups to benefit from matching grants, and also allow the purchase of equipment. While the eligibility

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19 Among the 15 closed projects, some of them did not have an ICR when the review was undertaken and therefore do not have ratings. These unrated projects have an “n/a” success rate in the analysis below.

20 compared to 72% for all 106 projects

21 compared to only 22% for non-agriculture projects.
of groups can yield several advantages, allowing the purchase of equipment been the subject of much debate. Together with the provision of technical assistance\textsuperscript{22}, the availability of various levels of matching depending on beneficiary type or activity type as well as the linkage of matching grants with an “access to finance component” seem to be important features for agriculture matching grants projects. Although no causal relationship is established, these modalities appear to be emerging good practices.

2.1 Use of Matching grants in agriculture and regional distribution at the WBG

The proportion of matching grants projects supporting agriculture has significantly increased in the 2000s, although the number of such projects seems to have declined in more recent years. Over the period 1996-2015, most agriculture projects have focused on the Africa Region, although Latin America and the Caribbean is the first region by volume of matching grants components.

\textsuperscript{22} - This feature was highlighted in the recent WBG review of 106 projects as the design modality which is most often correlated to positive outcomes.
There is no apparent learning curve in the design of matching grants projects, as most recent projects do not have higher ratings on their matching grants component than older projects. Such result is unexpected given that several good practices were established for matching grants projects in the early 2000. However, such result might also be linked to the fact that indicators are more sophisticated over time and new variables get measured to assess success. The list of 15 closed matching grants projects in agriculture is provided in Table 1 below.
Table 1: List of 15 closed matching grants projects in agriculture

<table>
<thead>
<tr>
<th>Project ID</th>
<th>Project Name</th>
<th>Fiscal Year</th>
<th>Country</th>
<th>Matching grant fund amount (mUS$)</th>
<th>Expected number of beneficiaries</th>
<th>Is there an access to finance component (Y/N)</th>
<th>Percent of match (%)</th>
<th>Implied MG component rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>P04955</td>
<td>Mix Agricultural Product</td>
<td>1999</td>
<td>Mexico</td>
<td>343</td>
<td>Irrigation: 33,000 small individual producers Dairy: 10,000 groups and 51,000 producers Improved pasture: 110,000 producers 750,000 poor and small producers</td>
<td>No</td>
<td>50% for small farmers, 70% for poverty targeted rural development program</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>P076467</td>
<td>N: Chart DRPP</td>
<td>2003</td>
<td>India</td>
<td>53</td>
<td>20k community investment projects, Dairy: 33,000 small individual producers Dairy: 10,000 groups and 51,000 producers</td>
<td>No</td>
<td>50% for rural infrastructure development (beneficiaries to contribute 10% in cash or kind)</td>
<td>Moderately Satisfactory</td>
</tr>
<tr>
<td>P063682</td>
<td>NG-Fadama Sil 2 (FY04)</td>
<td>2004</td>
<td>Nigeria</td>
<td>58.2</td>
<td>Irrigation: 33,000 small individual producers Dairy: 10,000 groups and 51,000 producers Improved pasture: 110,000 producers 750,000 poor and small producers</td>
<td>No</td>
<td>50% for irrigation and mechanization (initially 30%), 70% for drainage, 50 to 100% for fisheries</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>P047062</td>
<td>N: Assam Agric Competitiveness Project</td>
<td>2005</td>
<td>India</td>
<td>37.0</td>
<td>Irrigation: 33,000 small individual producers Dairy: 10,000 groups and 51,000 producers Improved pasture: 110,000 producers 750,000 poor and small producers</td>
<td>No</td>
<td>50% for irrigation and mechanization (initially 30%), 70% for drainage, 50 to 100% for fisheries</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>P049721</td>
<td>ASCIC COMPETITIVENESS</td>
<td>2005</td>
<td>Kazakhstan</td>
<td>26.6</td>
<td>400 subprojects</td>
<td>No</td>
<td>40% for post-harvest infra projects, 40% for infrastructure development</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>P104567</td>
<td>CO-Second Rural Productive Partnerships</td>
<td>2008</td>
<td>Colombia</td>
<td>24.8</td>
<td>100PP with 25,300 farmers</td>
<td>No</td>
<td>50% for fisheries</td>
<td>Moderately Satisfactory</td>
</tr>
<tr>
<td>P049718</td>
<td>FA Rural Productivity (former 2nd Rur Po</td>
<td>2007</td>
<td>Panama</td>
<td>19.8</td>
<td>50 business plans of rural producer associations, representing 5,000 small-scale producers</td>
<td>No</td>
<td>50% max (association provides minimum 10% in cash or in kind)</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>P108886</td>
<td>VN - Agriculture Competitiveness Project</td>
<td>2009</td>
<td>Vietnam</td>
<td>10.6</td>
<td>100 partnerships</td>
<td>No</td>
<td>40% for domestic market improvement component, 50% for agricultural export promotion, 50% for support to farmers associations</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>P081704</td>
<td>ML-Agr Compet &amp; Diversif (FY06) - (PCDA)</td>
<td>2006</td>
<td>Mali</td>
<td>9.9</td>
<td>500 partnerships</td>
<td>No</td>
<td>60% for extension and technology development</td>
<td>Moderately Satisfactory</td>
</tr>
<tr>
<td>P061605</td>
<td>SL-Rural Dev &amp; Priv Sec Dev Sil</td>
<td>2007</td>
<td>Sierra Leone</td>
<td>8</td>
<td>75% for domestic market improvement component, 50% for agricultural export promotion, 50% for support to farmers associations</td>
<td>No</td>
<td>75% for domestic market improvement component, 50% for agricultural export promotion, 50% for support to farmers associations</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>P087025</td>
<td>RD Land for Agricultural Dev</td>
<td>2008</td>
<td>Bolivia</td>
<td>7.9</td>
<td>2,200 families</td>
<td>No</td>
<td>80% for irrigation and mechanization (initially 30%), 70% for drainage, 50 to 100% for fisheries</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>P070083</td>
<td>EM-Agr Dev Support Program (FY06)</td>
<td>2006</td>
<td>Zambia</td>
<td>3.3</td>
<td>40k beneficiaries, 40 projects</td>
<td>Yes</td>
<td>100% for irrigation and mechanization (initially 30%), 70% for drainage, 50 to 100% for fisheries</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>P04724</td>
<td>AGRIBUSINESS &amp; MARKETING</td>
<td>2005</td>
<td>Kyrgyz Republic</td>
<td>1.3</td>
<td>30% match to cooperatives, the other 70% loan from PFIs who administer program match only paid after loan is repaid</td>
<td>Yes</td>
<td>30% for small producers and SMs, 70% for cooperatives, the other 70% loan from PFIs who administer program match only paid after loan is repaid</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>P110588</td>
<td>Sudan Gum-Arabic Export Marketing Projec</td>
<td>2010</td>
<td>Sudan</td>
<td>0.7</td>
<td>30 producer associations</td>
<td>No</td>
<td>33% for private companies and 67% for public agencies/producer associations</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>P083609</td>
<td>SN-Agr Markets &amp; Agribus Dev (FY06)</td>
<td>2006</td>
<td>Senegal</td>
<td>No</td>
<td>Variable for small producers and SMs, 50% for smallholders, 50% for SMs</td>
<td>No</td>
<td>Variable for small producers and SMs, 50% for smallholders, 50% for SMs, 70% for irrigation, 50% for family farms, 20% for SMs</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>
2.2 Characteristics of agriculture matching grants projects and success factors

Performance of matching grants projects in agriculture compared to other sectors

Matching grants (MG) projects for agriculture generally have higher ratings than non-agriculture projects. Indeed, among rated MG projects for agriculture, 73% had ratings for the MG component satisfactory and above compared to 47% for non-agriculture projects.

When including in the sample MG projects which target several specific sectors including agriculture, the difference in ratings becomes lower. “Broad agriculture” projects are MG projects which are not solely focused on agriculture but target a few specific sectors (ex: construction, tourism etc..) which include agriculture. Among rated “broad agriculture” MG projects, 56% had ratings for the MG component satisfactory and above compared to 50% for other projects.

However, ratings reflect achievements of initial objectives rather than long-term impact. Indeed, ratings strictly reflect the achievements of initial objectives, which often have a limited scope and do not take into account the improvement of access to financial services (cf Section 3.1). In addition, these objectives are sometimes only partially achieved\(^\text{23}\).

\[^{23}\text{For instance, the IEG review of the Zambia Agricultural Development Program (P070063) indicated “inadequate evidence on the extent to which” the key objective of the matching grants – namely improvements in agricultural productivity - had been achieved.}\]
Size of matching grants projects in agriculture compared to other sectors

Agriculture projects have matching grants components which, on average, are more than 5 times larger than in other sectors. Indeed, the average fund amount is 46 million USD for closed agriculture projects compared to 8 million USD for closed non agriculture projects. Such a difference is linked to the fact that most agriculture matching grants allow the purchase of equipment, which is described below in the sub-section on “eligible expenses”. As a result, although agriculture projects account for a small portion of total number of closed projects (25%), total grant financing dedicated to these projects reaches almost twice the volume of those outside of agriculture.

Rationale and objectives

The 14 closed agriculture projects used a total of 31 indicators, 60% of which were output indicators such as number of funded projects or beneficiaries. The table 2 below presents the frequency of use of each of the indicators.

Table 2: List and frequency of use of M&E indicators for agriculture matching grants projects
Eligible expenses

All projects in the sample allowed the purchase of equipment through matching grants. Agriculture matching grants include a variety of eligible expenses including fixed capital, working capital and technical assistance (both to prepare and implement business plans). Allowing the purchase of equipment is quite unusual (31%) for non-agriculture projects. This feature is due to the fact that investments in equipment (e.g. irrigation infrastructure, storage or processing facilities) are some of the investments most needed by farmers and agricultural SMEs but for which there is generally no commercial funding available due to the long term and risky nature of these investments. For instance, the Mali Agriculture Competitiveness and Diversification project (P081704) mainly support investments in irrigation equipment.

Using matching grants for equipment is has often been considered both unjustified and risky. Indeed, as argued by Phillips (2001)\(^{24}\), the fact that a market failure in financing of fixed assets is less likely than for financing of know-how, the high appropriability of the return on physical assets and the limited public good aspect would traditionally not justify a subsidy. The paper therefore suggests to “unbundle equipment loans” by offering grants for know-how with a public goods element combined with commercial credit for bankable equipment investments. Another concern commonly identified with equipment is the risk of abuse as equipment could be resold for profit.

However, agricultural equipment might often be considered a semi-public good and there are effective ways to reduce the risk of grant misuse and equipment resale as part of matching grants projects. Indeed, it can be argued that investments in fixed assets are often semi-public as they are often allowed for village groups and cooperatives, and also can have spillover effects on the economy (generating higher demand and higher supply of credit for equipment). In addition, specific types of climate-smart investments can also be justified by their positive externalities on the environment. Moreover, there are effective ways to mitigate risks associated with equipment. These include: 1/ Ensuring that the equipment is linked to a specific objective of the project and provides value to beneficiaries, 2/ Ensuring good practices within the PIU through tight selection, training and supervision of PIU members, 3/ facilitating supervision of beneficiaries through an up-to-date database of beneficiaries including their names, address, photo ID and GPS location, 4/ transferring funds to providers of goods and services rather than beneficiaries (once beneficiaries have paid their share of the investment and show receipts), 5/ creating accountability mechanisms among beneficiaries, for instance through a strong communication plan and visibility through local radio and television.

Assets that are accepted as collateral by financial institutions, such as land, are sometimes excluded from matching grants so as not to crowd out commercial credit. For instance, the Bolivia Land for Agricultural Development Project (P087925) excludes land purchase from eligible expenses for matching grants.\(^{25}\) Similarly, the Angola Local Development Project (P105101) excludes from eligible expenses all assets that commercial banks accept as collateral.

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\(^{25}\) Indeed the project involves two components: the first one consists of a revolving line of credit to facilitate finance land purchases and the second one is for the provision of matching grants for infrastructure and productive investments on the purchased lands. The acquired land can serve as collateral for long term credit.
Matching grants projects in agriculture generally support two types of activities: investments in infrastructure and development of productive alliances. Productive alliances are defined as partnerships between producers or between producers and buyers which can help farmers upgrade their production facilities and skills to strengthen their linkage to the market. Such projects may also support partnerships between farmers and input suppliers, so that farmers can obtain better prices and more stable market relationships. Productive Alliances have been widely promoted in LAC in the past few years and are now being experimented in other regions. For instance, the Panama Rural Productivity project (P064918) supported rural producer associations which had an alliance with at least one agro-processor, wholesaler or another commercial partner. Eligible expenses included fixed capital (plant and equipment, minor infrastructure), working capital and technical assistance.

Groups of beneficiaries

While private sector development projects sometimes restrict eligibility to single firms, all of the agriculture projects in the sample allow groups of farmers or SMEs to apply for a common project or to benefit jointly from BDS. This modality has the advantage of fostering linkages between groups, as well as reducing program administration costs when individual grants are small. Such an arrangement can sometimes take the form of a productive alliance between a lead agribusiness and producers groups.

Availability of different levels of matching and levels of matching

A majority of all projects in the sample (60%) offered a level of matching of 50% or above, and a majority of projects (60%) offered different levels of matching depending on beneficiary or activity. While most projects that had various levels of matching offered levels of matching in the same range (above or below 50%), two projects in the sample had a level of matching for small producers above 50% and a level of matching for SMEs below 50%. These two projects are displayed below as “Variable for small producers and SMEs” in figures below.

Offering a variety of matching levels depending on beneficiary or activity type seems to be linked to positive outcomes. A majority of rated projects which had various levels of matching (86%) have ratings satisfactory and above, compared to 50% for projects which had a single level of matching.

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26 See “WBG, 2016, Linking Farmers to Markets through Productive Alliances An Assessment of the World Bank Experience in Latin America”: Productive Alliance involves three core agents: a group of smallholder producers, one or more buyers, and the public sector. These three agents are connected through a business proposition, or “business plan”, which describes the capital and services needs of the producers and proposes improvements that would allow them to upgrade their production capacities and skills to strengthen their linkage with the market, i.e. the buyer(s). The implementation of such a business plan through a subproject is typically supported through three core inputs and/or activities directed towards the producers’ needs: productive investments, technical assistance, and business development. These core inputs are financed through public grants provided by the project, which are matched by the beneficiary producers and in some cases also by the buyer(s).

Though the sample size is small, 83% of rated projects that had a level of matching above 50% have ratings satisfactory and above (compared to 50% for projects that had a level of matching under 50%). This might be due to higher level of disbursements for matching grants projects with high level of matching.

In general, literature suggests that level of matching should be as low as possible so as to encourage ownership and commitment from beneficiaries, however this “as low as possible” can vary widely depending on segments and country context. Technical guidance from IFAD from instance, suggests that matching grants for private or semi-private benefit should be in the range of 10 to 60% of the investment. The sample of WBG agriculture projects shows levels of matching going from 30% (Kyrgyz Republic) to 95% (India Chhattisgarh). The impact evaluation of the matching grants in India however indicates that 30% of common interest groups supported with matching grants failed to function effectively and were considered unsustainable at the end of the project, which raises the question of whether the level of required contribution (5% cash) was sufficient to ensure project ownership.

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28 IFAD, 2012, Matching grants technical note – additional guidelines include “The lower the contribution of the recipients, the lower their ownership, the higher the interest of local politicians and potential beneficiaries, and the faster the disbursement rate.”
There appears to be no connection between the level of matching with the penetration of rural financial services at country-level. Penetration of rural financial services is estimated by Findex data on the percentage of adults in rural areas with an account. One outlier seems to emerge in the case of the Kyrgyz Republic where the penetration of rural financial services was very low (less than 2%) and where however the level of matching offered to rural cooperatives was significantly low as well (30%).

![Level of matching by penetration of rural financial services](chart.png)

Provision of diagnostics and Technical Assistance (TA)

A majority of projects (73%) offered a form of diagnostic or technical assistance which could take place before the matching grant application and/or after. Such support include mandatory initial diagnostic to verify eligibility, TA to prepare sound business plans provided freely or for a fee, a complementary project component to create a pipeline of applicants, and continuous provision of TA to support beneficiaries from application to implementation. The recent WBG review of 106 projects shows that this feature is the design modality which seems to be most often correlated to positive outcomes, and our sample also shows that 70% of rated agriculture matching grants projects which include diagnostics and/or TA are rated satisfactory and above.

![Success rate by provision of diagnostic](chart2.png)

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29 Source: Findex data 2011
Selection mechanism

A vast majority of projects (86%), used a “first come first served basis” selection mechanism as opposed to a “competitive” selection mechanism. Eighty percent of “first come first served basis” projects have ratings satisfactory and above, but given the small number of “competitive” projects, it is hard to determine whether the choice of selection mechanism brings any systematic benefits.

Access to finance component and combining matching grants with other instruments

Although MG components are generally part of larger projects with other components, a minority of agriculture matching grants projects include an access to finance component. Only 27% of agriculture matching grants projects included an access to finance component, compared to 34% for all WBG projects including non-agriculture. This specific component generally includes setting-up a line of credit for financial institutions, a Partial Credit Guarantee, providing technical assistance to financial institutions but can also include support to an equity financing, or promoting risk mitigating financial instruments\(^{31}\). By addressing the root cause of the lack of agriculture and rural finance, such a feature can be very effective at ensuring the sustainability of matching grants projects.

The volume and scope of the access to finance complementing matching grants can vary widely depending on projects. For instance, the Zambia Irrigation Development and Support Project (P102459) included a rather small access to finance component (4% of budget dedicated to matching grants) aimed at improving Access to Long & Short-Term Financing. This component included a line of credit for financial institutions, technical assistance to financial institutions and technical assistance to agricultural cooperatives to ensure linkages with financial institutions. To the contrary, the Zambia Agricultural Development Program (070063) included an access component which had twice the budget of the matching grants component. This component also included a line of credit as well as technical assistance to financial institutions.

Such a feature also seems to be associated with positive outcomes as 75% of rated projects which included an access to finance component had ratings satisfactory and above. However, as we will show in Section 4, including an “access to finance component” is not necessarily the only way to ensure linkages with the financial sector.

\(^{31}\) See Niger Agro-Pastoral Export Promotion (P095210)
Complementing matching grants with other instruments may indeed offer a holistic solution to the various constraints that often hamper agriculture finance, and help combine short term with long term benefits. Agriculture and rural finance is often constrained by a variety of constraints, which often need to be addressed in parallel to effectively increase access and usage of financial services by farmers and agricultural SMEs. As described in Section 1, matching grants can be effective at addressing several of these constraints both on the demand side (e.g. lack of willingness to invest, lack of trust etc..), and on the supply-side (e.g. lack of information on farmers, lack of collateral etc..) but fail to address other key constraints such policy and regulatory constraints, risks, or lack of liquidity. In addition, complementing matching grants with other instruments may allow to combine short term with long term benefits. Indeed, setting up a sustainable PCG or reforming the regulation of interest rates may generate profound changes in rural financial markets but such projects might take time. To the contrary, matching grants are a temporary subsidy that can quickly help underserved segments access resources for their projects.

3. Promoting access to finance through grants and the four roles of financial institutions

Summary: This section is based on a qualitative analysis of six case studies stemming from projects reviewed in section 2, as well as three other relevant case studies from the literature review and interviews with experts. In particular, all project Appraisal Documents, Implementation Completion Reports and IEG reviews of agriculture matching grants projects have been reviewed to identify potential linkages with financial institutions. This analysis shows that none of the reviewed projects included the improvement of access to financial services as of their objectives, which questions the sustainability of supported investments. However, several projects include some form of linkage with the financial sector, either through the inclusion of an “access to finance component” and/or through specific design features. These specific design features have taken four major forms. (1) Financial institutions are deposit-takers, (2) Financial institutions are funders, (3) Financial institutions are managers of grants, (4) Financial institutions are advisors. This section analyses the advantages and challenges associated with each of these four roles.

3.1. Matching grants projects and financial inclusion

None of the reviewed projects included the improvement of access to financial services as of their objectives, which questions the sustainability of supported investments. Indeed, while most projects identify the lack of access to credit as of the market failure justifying the use of matching grants, none of the projects include the improvement of rural
financial markets as one of their project development objectives. The challenges associated with such an approach are highlighted in the ICR for the Vietnam Agriculture Competitiveness Project (P108885): “There are limits on the scalability of matching grants and it is important to build in an ‘exit’ strategy, in the form of improved farmer group access to commercial financial services. Even if the Partnership scheme does not involve distinctive activities to link the farmer organizations with commercial banks, a project should at least prepare farmer organizations to access credit once project support is completed”.

Several projects however include some form of linkage with the financial sector, either through the inclusion of a specific “access to finance component” and/or through specific design features. The inclusion of an “access to finance component” in the project refers to the setting-up of complementary instruments (e.g. PCG, lines of credit) and the introduction of legal reforms as described in section 2.3.

Some projects have promoted linkages with financial institutions, through specific design features which can take four major forms. As illustrated in the figure 4 below, by order of frequency among projects, the four major roles that financial institutions can play in such projects are as follows: (1) Financial institutions are deposit-takers as beneficiaries are encouraged to save – a specific amount and/or at a specific frequency - from the proceeds of their activities, (2) Financial institutions are required or incentivized to provide credit to finance part of the activities, (3) Financial institutions are involved in the management of grants including the appraisal and disbursements of grants, (4) Financial institutions advise beneficiaries in the preparation of their business plans.

These four models can also be summarized in two types of approaches: “high-leverage” matching grants blended with credit for segments which have some access to formal financial services, and “low-leverage” matching grants incentivizing savings for segments who have no access to financial services. These two approaches are described further in Boxes 3 and 4.

*Figure 4: Financial institutions play four potential roles as part of matching grants projects*
Countries displayed in brown in figure 4 refer to projects that are not part of the initial project sample but stem from literature review or interview with experts. In some projects, financial institutions are in more than one of the four categories. Financial institutions may also move over time from one category to another.

**Box 3: The experience with high-leverage matching grants in Europe and Central Asia**
The model which blends Matching Grants (MG) with commercial credit for rural beneficiaries has been implemented successfully in the mid-1990s and early 2000s in various countries in ECA. In this model, the level of matching is relatively low (about 20-30%), and grants are granted to beneficiaries who obtain access to a loan. In some projects, in case of non-repayment of the credit portion, the grant is cancelled and becomes a loan. Countries where high-leverage grants have been experimented include the Kyrgyz Republic (see details in following section), Moldova (MG for startups, for groups of farmers, or after agricultural shocks), Latvia (MG for startups), Uzbekistan (MG for silk producers). This model is currently being replicated beyond ECA, for instance in India (project P157702 under preparation in Tamil Nadu).

In this approach, financial institutions generally both play the role of funders and “core managers” of grants. In general, high-leverage matching grants are combined with other instruments to promote rural finance such as credit lines and Partial Credit Guarantees.

Such a model can potentially help financial institutions serve rural markets. It is suitable to segments that have some access to financial services and potentially bankable projects but that banks are still reluctant to serve as they are not aware of market opportunities. For instance, farmer groups may be composed of farmers who individually have access to finance, but still have difficulties accessing finance as a group.

This model reduces collateral requirements for beneficiaries, but does not eliminate it completely. Indeed, due to the uncertainty on the value of rural assets, lenders generally have collateral requirements that are above the value of the asset. In addition, due to a timing issue (the asset needs to be registered before loan is approved), beneficiaries need to provide collateral for the time period between loan approval and asset registration.

Pros and cons for financial institutions:
- Advantage: The MG design provides strong incentives for clients to repay on time which acts as an implicit guarantee. In addition, such model creates an opportunity for financial institutions to serve a new segment that has benefited from technical assistance prior to the loan application.
- Disadvantage: the grant cannot be used to cover losses for the lender as the grant portion is returned to the PMU (lender has to rely on collateral). In addition, interest income is lower if beneficiaries repay loan portion on time.

Positive sustainable impact: This model increases access to finance for beneficiaries as repayments rates are high, and most beneficiaries manage to access loans on their own after the project closes. In the case of Moldova Rural Investment and Services Project (P060434), the high-leverage matching grants led to over 700 enterprises created and financed, creating on average four jobs, and an average increase of 55% of salary income. The six participating financial institutions increased their lending to rural clients by 39% as a share of their portfolio while maintaining an acceptable recovery rate of 96%.

Box 4: The experience with low-leverage matching grants in Africa
Low-leverage grants are matching grants with high levels of matching (above 50%) which are designed in a way that facilitates the entry of beneficiaries into the formal financial system. Such approach includes business development services, incentives to save at a financial institution (e.g. a specific amount, at a specific frequency), and support to business formalization.

In this approach, financial institutions generally play the role of deposit takers. Financial institutions may also be used to play the role of “light managers” or advisors.

This approach has been successfully implemented with individual savings accounts in Angola (see details in section below). It has also been used to promote collective savings in a revolving fund (see Nigeria example below).

Facilitating the path to financial inclusion may require additional support measures both to beneficiaries and partner financial institutions. Such support may include financial literacy trainings to beneficiaries, as well as technical assistance to partner financial institutions to ensure that processes are in place to deal with this new segment of clientele (ex: simplified processes for deposits, trainings to beneficiaries on how to access loans etc.). Partnerships with financial institutions which offer no maintenance fee transaction accounts, or temporary financial support to waive account maintenance fees may also be considered. Stronger support measures include setting-up credit lines or PCGs for financial institutions.

3.2. Financial institutions as deposit-takers

Under this scheme, beneficiaries are required or incentivized, over the course of the project, to set-aside – either individually or collectively - part of revenues generated from the matching grant-financed activities. The “deposit-taking” role for financial institutions is the most common role for financial institutions when engaged in matching grants projects. Two different approaches have been experimented: (1) Each producer group sets-aside money in a revolving fund, (2) each individual sets-aside money in a savings account. This section builds on cases studies from Colombia, Nigeria, India and Angola described in details in Annex 1.

The revolving fund model – used in Colombia, Nigeria and India - can help producer groups get better access to finance as well as their members [32]. For instance, the Colombia Second Rural Productive Partnerships project (P104567) required producer organizations to set-aside 70% of the grant received in a revolving fund. The objective of the revolving funds was to allow producer organizations to continue their operations after the project, as well as build up their credit worthiness, in order to enable them to obtain commercial financial credit. The impact evaluation shows that — compared to control group producers—beneficiary producers have obtained credit for productive investments and more of them reinvest part of their net revenues in their agricultural production compared to the control group. Similarly, the Nigeria Third National Fadama Development Project (P096572) introduced a savings mechanism called Fadama Users’ Equity Fund (FUEF). Indeed, the project required that 10% of the replacement value of the common assets used for income generating activities of Fadama User Groups (FUG) is saved annually (with effect from year 2). This feature served as sustainability provision on the project and aimed at facilitating the observed desire of participants to continue investment after completion of the matching grant. With the project support, a total of 37 Fadama Farmers Community Association (FFCA) were created, one for each state and Federal Capital Territory, with the objective of transforming some of the vibrant FFCA into self-sustaining institutions. Of them, seven institutions have generated enough capital and expertise to have applied for license to operate as a Microfinance Bank, and one of them has obtained a banking license in 2015. Finally, the India Chhattisgarh District Rural Poverty Project (P076467) required Community members to place 10% of the matching grant amount into a village fund (Apna Kosh) as a condition for the release of the second tranche of the sub-projects. The fund was aimed at covering operation and maintenance costs and further village development beyond the lifetime of the project. Impact evaluation (IE) showed that project beneficiaries had more confidence in dealings with banks, access to bigger loans and displayed stronger savings discipline. Indeed, beneficiaries, especially women, highlighted a considerable

[32] Information included in the ICR of the Sudan Gum Arabic Export Marketing Project (P110588) seems to suggest that a similar approach was adopted for this project, however the PAD for this project was not available.
increase in their confidence in dealing with banks. While the IE did not show a significant difference in the share of Common Interest Groups (CIG) beneficiaries with bank accounts compared to control areas, it did find that more CIG members with bank accounts succeeded in taking loans compared to the situation in control villages (48% v. 37%), whereas in control areas more still used money lenders. Also, the total amount of loans taken by CIG households is 30% higher than the amount borrowed by non-CIG households.

However, setting up revolving funds among producer groups requires caution and clear communication. Indeed, such design feature can only work in contexts where producer groups are well-managed and members trust that the revolving fund will be used in a way that benefits them. It also requires that groups have sound governance as well as some expertise in managing loans and financial accounts. When this is the case, farmer groups can grow into viable financial institutions as shows the experience of Raffeisen in Germany\textsuperscript{33}. In the case of Nigeria, one institution obtained a banking license however, less than half of the state-level institutions created as part of the project were still in operation by the end of the project, which confirms challenges related to financial capability and governance of producer groups. In addition, in cases where most of grant portion needs to be repaid in a collective revolving fund, it might be confusing to label the support as a grant\textsuperscript{34}.

The individual savings account approach – used in Angola - can be an effective instrument to pave the way for farmers and agricultural processors to enter the financial system. For instance, the Angola Local Development Project incentivizes each individual within beneficiary producer groups to save 20% of the grant amount in a savings account over the course of the project, with monthly deposits\textsuperscript{35}. Beneficiaries receive small rewards for each monthly deposit made on time (phone cards with airtime). On the one hand, such requirements and incentives can foster savings discipline among beneficiaries. On the other hand, as these segments build a transaction history, this requirement can foster better knowledge of farmers and agricultural SMEs among financial institutions. The impact evaluation shows that beneficiaries gradually fulfilled financial institutions’ requirements through the project (ex: had an active account, had collateral, were formal enterprises) and some of them managed to access loans from financial institutions.

Regardless of the choice of an individual or collective approach, requiring matching grant beneficiaries to save money can be an effective instrument to pave the way for financial inclusion but also requires caution related to feasibility and additionality. Requiring high levels of savings might not be feasible, in particular for farmers involved in long production cycles and facing significant production risks. For instance, in Colombia, only 50% producer organizations managed to reach the required recovery rate of 70%. In particular, farmers involved in perennial crops (e.g., cacao, forestry, mango), which have long gestation periods, had limited capacity to repay quickly. In addition, unusually adverse weather significantly affected a large number of beneficiary producers who suffered significant losses during project, and therefore were unable to repay into their revolving funds. Such difficulties in accumulating savings show that such requirement might have the advantage of strengthening financial discipline without exposing project beneficiaries to challenges associated with non-repayment of formal credit. However, to the contrary, the fact that some beneficiaries manage to “repay” a large portion of their grant into a savings account or a revolving fund raises the question of the “additionality” of matching grants. Indeed, it is possible that the 50% of producer organizations that managed to obtain a recovery rate of 70% could have financed could have financed their project from commercial credit. Such model illustrates the trade-off between the need to ensure additionality (channeling grants only to segments who are not able to finance their investments through credit) while promoting sustainability (channeling grants in a way that beneficiaries do not need grants for their future investments).

\textsuperscript{33} Raffeinsen came from multipurpose cooperatives with a strong agricultural focus which span off their financial activities into dedicated financial institutions.

\textsuperscript{34} One last area for caution is compliance with WBG Operational Policy 10 related to revolving funds

\textsuperscript{35} The option for a producer group to have a collective savings account was also allowed, however all producer groups preferred setting up individual savings account.
3.3 Financial institutions as funders

Under this scheme, matching grants beneficiaries are—either required or incentivized—to secure a loan from a financial institution to cover part of the investments. The “funding” role for financial institutions is the second most common role for financial institutions when engaged in matching grants projects. This section builds on cases studies from Kyrgyz Republic, Honduras, India, and Colombia described in details in Annex 2.

In some cases, such as in Colombia, blending grants with commercial credit is only incentivized. Indeed, in the Colombia Second Rural Productive Partnerships project (P104567), the level of matching and ceiling grant amounts were higher for beneficiaries which managed to obtain credit. For example, if the partnership obtained a credit of CoS$100,000 per household, the government financial incentive could be increased by CoS$100,000 per household. This 1:1 relationship would be respected up to a maximum of CoS$2 million per household. Similarly, in all matching grants projects where the level of matching is low, beneficiaries have an implicit incentive to seek commercial credit as they might not be able to fund their required contributions from their own funds only. Furthermore, another way to incentivize commercial credit is to restrict grants to expenses that financial institutions are reluctant to finance (assets, technical assistance) and limit the use of matching grants for working capital so as to crowd in commercial credit. A recent Matching Grants project in Argentina also incentivized commercial credit through:1/ referrals to credit institutions when semi-capitalized family farmers present a subproject to the PIU, 2/ varying level of matching depending of the level of capitalization of farmers (see Box 5).

**Box 5. Incentivizing commercial credit in Argentina for Climate Smart Agriculture Investments**

**Context:** Most of vulnerable family farmers in Argentina have limited access to formal financing through banks or other financial institutions. In addition, some of the Climate Smart Agriculture (CSA) technologies are innovative and/or they have significant positive externalities and so farmers require an incentive to try them.

**Targeted investments and segments:** Matching grants are offered to encourage farm-level adoption of validated CSA technologies and risk management instruments. The project also includes special incentives for matching grants to groups that include women farmers (additional scores for prioritizing matching grant proposals and higher percentage of matching grants).

**Linkage with Financial Institutions:** Matching grants are intended to help vulnerable family farmers integrate into the formal financial system. Key features to facilitate financial inclusion are as follows: 1/ Depending on the level of capitalization of farmers, the level of matching varies and the process for obtaining matching grants may include banks. 2/ Commercial banks, who may not be familiar with complex CSA technologies, receive support from the PIU for such complex investments.

The mechanisms for obtaining and disbursing grants for family farmers to invest in CSA technologies differ depending on whether the technology is simple or complex:

- Some CSA and risk management practices and technologies consist of **specific, simple solutions** that are well known and relatively easy to evaluate, such as irrigation systems, direct sowing, and nets to prevent hail from damaging crops. Farmers can apply for such grants directly at a bank, or they may be referred to commercial banks if they have

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36 The grant amount could be increased to a maximum of CoS$6 million per beneficiary producer household during the course of subproject implementation if the partnership could demonstrate that it had mobilized an additional CoS$2 million per household in commercial credit

37 For instance, the Angola Agriculture Commercialization project (P159052) under preparation considers capping working capital expenditures to 25% of the grant amount.

38 Ongoing project in Argentina: Integrated Risk Management in the Rural Agroindustrial System (P162316)
applied to the PIU and lack sufficient resources to provide the counterpart funding for these investments. If banks cannot finance the counterpart resources requested by these farmers, they may approach local or provincial funds or other non-bank sources of credit.

- **For complex CSA technologies and practices**, which rely on multiple complementary practices and inputs to produce farm-level changes, banks and other formal financial institutions generally lack the capacity or experience to advise or assess these more complex interventions. These interventions, are prepared by farmers supported by expert consultants, and submitted for evaluation and approval to the PIU with tranches of the grant disbursed through the beneficiaries’ bank accounts. In piloting, local banks may opt to provide financing if beneficiaries require a loan to pay the counterpart portion of the investment.

**In other cases, such as in the Kyrgyz Republic and Honduras, blending grants with commercial credit is required.** The Kyrgyz Republic Agribusiness & Marketing (P049724) project had the highest requirements for commercial credit, as it required that 63% of the investment is provided as a loan from a financial institution and that the matching grant component is converted into a loan if the loan portion is not repaid in full and on time. In this case the matching grant instrument was combined with three other instruments aimed at increasing the supply of agriculture finance services: a credit line to participated financial institutions for agribusiness lending, technical assistance to loan officers to broaden the base of eligible borrowers, and training of agricultural cooperatives to strengthen their management skills and allow them to apply for financing. While the project was small-scale, it had positive impact on the economic activities of beneficiaries (such as increases in sales, profits and market share) and all beneficiaries were all able to reimburse their loans. In a similar approach, the Honduras COMRURAL project (P101209) required that subproject beneficiaries secure a loan from a financial institution, covering at least 30% of total subproject investment costs. The matching grant instrument was combined with a Partial credit guarantee fund to increase the supply of agriculture finance services. As a result of their participation in the project, various producer organizations have received further loans.

**Involving financial institutions as funders can be an effective way to deepen financial inclusion of segments who already have some access to formal financial institutions, but requires a rigorous initial assessment of beneficiaries’ financial capacity as well as a transparent communication plan.** For segments who already have some access to formal financial institutions (e.g. have an account and access to small loans), blending grants with commercial credit can potentially help beneficiaries access new types of loans (e.g. longer maturity, larger volume etc.). However, if beneficiaries’ financial capacity is overestimated, such an approach might jeopardize project disbursements and/or create challenges for borrowers. Indeed, the India Assam Agricultural Competitiveness Project (P084792) initially required that commercial banks cover 50% of the investments but had to be restructured due to slow disbursements and dropped the mandatory commercial bank linkage. Moreover, requiring segments that are excluded from financial services to use commercial credit, could lead to defaults and exclusion of the financial system. In addition, while such a challenge has not been documented in the impact evaluation of these projects, a model whereby financial institutions channel both grants and loans can potentially create confusion among beneficiaries. In such arrangement, it is important to raise awareness among beneficiaries about the difference between grants and loans.

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39 The grant could be obtained in an amount of up to 30 percent of the loan amount. For example, if a cooperative wanted to purchase a tractor, they have to invest 10 percent of own funds (as borrower’s contribution). Of the remaining 90 percent, up to 30 percent could be obtained as matching grant, and the remaining 70 percent was provided by the PFI as a loan from own resources or from the credit line.

40 58 matching grants for a total of US$800,060 were provided to cooperatives.

41 The Tamil Nadu Rural Transformation Project (P157702) under preparation considers a slightly softer approach whereby matching grants beneficiaries are required to obtain commercial credit, but this credit is converted into a grant if the loan is repaid in full and on time.
3.4 Financial institutions as managers

Under this scheme, financial institutions play a role – either “light” or “core” - in the management of matching grants. The “managing” role for financial institutions is the third most common role for financial institutions when engaged in matching grants projects. This section builds on cases studies from Kyrgyz Republic, Vietnam and Burundi described in details in Annex 3.

Under the “light management” approach, financial institutions play a role in the selection or pre-identification of matching grants beneficiaries, which can ensure that only financially viable projects are selected while building agriculture finance knowledge among financial institutions at the same time. For instance, in the Vietnam Agriculture Competitiveness Project (P108885) as well as in the Burundi “Keeping good firms alive & well: Phased e-matching grants to tackle debt overhang and recreate credit histories” project, the evaluation committee for the matching grants business proposals includes representation of the commercial banking sector. In the Burundi case, financial institutions are also involved at more upstream level, during the pre-identification phase of SMEs. Indeed, partner financial institutions are asked to identify some of their client SMEs which have overdue loans but that could potentially have their loans restructured and access new loans with matching grant support. Another design element is partial debt forgiveness from outstanding arrears. While this projects is still in the early-stage of implementation, such an approach might be an innovating way to re-integrate in the formal financial system segments that have lost access to it due to exogenous price fluctuations and a general economic crisis. In addition, including financial institutions in the matching grants committee offers the double advantage of ensuring that only financially viable projects are selected while building agriculture finance knowledge among financial institutions at the same time. Indeed, instead of sharing knowledge of agricultural investments and profitability only among members of a PIU which is time-bound, this approach allows financial institutions to gain valuable knowledge about the relative profitability of various agricultural investments. While none of the projects include such a feature, publishing a briefing note to all financial institutions summarizing the relative performance of matching grants-supported agricultural investments (by type, by value chain, by region etc.) could also be an effective way to capitalize on lessons learnt and promote better knowledge of agricultural investments among financial institutions.

Under the “core management” approach, such as in the Kyrgyz Republic, financial institutions both select beneficiaries and channel grants, which can simplify the investment process but also potentially create confusion for beneficiaries. Such a model makes sense in the Kyrgyz Republic Agribusiness and Marketing Project (P049724), where financial institutions bear most of the financial risk (63% of the investment). This approach can also speed up and simplify the investment process, as matching grants only need to have their investment project by a financial institution rather than go through two separate processes (one loan application and one grant application). Such approach may however generate confusion among borrowers as regards to the nature of the support they receive.

3.5 Financial institutions as advisors

Under this scheme, financial institutions advise matching grants applicants on the preparation of their business plans. The “advising” role for financial institutions is extremely rare, and this section only builds on the example of one ongoing project in Mexico detailed in Annex 4. The Mexico Sustainable Production Systems and Biodiversity Project (P121116) establishes commercial financial institutions as key technical service providers which are hired to support the management of financial services for each producer association as well as on the preparation of business plans.

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42 SME Launchpad project currently under implementation

43 Such a feature is also being considered for the Republic of Congo Commercial Agriculture Project (P159979)
Such an arrangement might offer advantages both for financial institutions and matching grant beneficiaries. Indeed, while this project is still under implementation, such an approach might be an effective way to build knowledge among financial institutions about farmers and agricultural SMEs, while at the same time strengthening financial skills among matching grants beneficiaries. This approach however exposes financial institutions to a reputation risk if financed projects are not successful and it is perceived that the advice provided was sub-optimal. It can also lead to a potential conflict of interest if financial institutions both help prepare business plans and then provide funding for the project.

Conclusion and recommendations

WBG matching grants for agriculture are generally more successful than outside of agriculture but however generally lack perspective on long term sustainability, both on their rationale and on their design:

- Indeed, most projects identify the lack of rural finance as a sufficient rationale for matching grants, without fully identifying the market failure and whether other instruments might be more appropriate to unlock rural and agriculture finance. Low penetration of rural financial services might be due to a wide variety of constraints, and only a subset of these can be effectively addressed with matching grants.
- Most projects do not include an access to finance component and/or include a design feature promoting financial inclusion. Among 21 agriculture matching grants projects, only 6 engaged financial institutions through specific design features and 6 included an access to finance component.44
- Several projects do not capture results effectively. The 14 closed agriculture projects used a total of 31 M&E indicators, 60% of which were output indicators such as number of funded projects or beneficiaries.

Two main approaches have been used in matching grants projects to promote financial inclusion: high-leverage matching grants blended with credit for segments which have some access to formal financial services, and low-leverage matching grants incentivizing savings for segments who have no access to financial services. These two approaches can themselves be broken down into four roles for financial institutions, and each of them is associated with specific advantages and challenges: 1) deposit-takers (2) funders, (3) core or light managers, (4) advisors.

Available impact evaluations show that such projects are successful at improving agricultural income, but also improve access to finance in a sustainable way. For instance, a project in Kyrgyz Republic showed that among matching grants beneficiaries, 41 percent saw an increase in profit, 37 percent saw an increase in total sales, and 47 percent saw an increase in market share compared to before the investments. Furthermore, impact evaluation of a project in India which required beneficiaries to save part of their proceeds at a financial institution showed that saving discipline among beneficiaries had led to increased trust towards financial institutions, more access to loans, and that their loans were larger than non-beneficiaries.45 In addition, some projects have generated large spillover effects, such as a project in

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44 Some projects both have an access to finance component and a design feature promoting financial inclusion.
45 The impact evaluation of the Chhattisgarh District Rural Poverty Project showed that beneficiaries with bank accounts succeeded better in taking loans compared to the situation in control villages (48% v. 37%), whereas in control areas more still used money lenders. According to the IE, the total amount of loans taken by beneficiaries is 30% higher than the amount borrowed by non-beneficiaries. Project households borrow 30% more from banks and 40% less from money-lenders, compared to control households.
where 11,000 rural households that were not matching grants beneficiaries nevertheless adopted (at their own expense) improved practices promoted through matching grants.  

Combining matching grants with other instruments that support commercial credit can prove impactful. A few matching grants projects are combined with other instruments aimed at addressing specific constraints to agriculture finance such as such as lines of credit (to address lack of liquidity), partial credit guarantees (to address exposure to agricultural risks) or technical assistance to financial institutions (to address lack of knowledge of agriculture finance). Such combinations can help address structural constraints to agriculture finance while offering immediate investment opportunities to farmers through matching grants. However, impact evaluations generally do not disaggregate the impact from grants and from additional instruments, making it difficult to assess the respective role of each instrument. Such an analysis may be an area for further research.

Emerging good practices to improve the financial sustainability of agriculture matching grants projects are as follows:

1. **Before designing a matching grant project, a strong economic rationale must be established** and market failures must be properly described (ex: lack of demand or supply of business development services, limited supply of financial services, limited bankable demand of financial services etc.).

2. **If one of the identified market failure is the lack of access to finance for farmers and agricultural SMEs, improving access to agriculture and rural finance should be one of the objectives of the project, and financial sector experts should be involved in project design.**

3. **In order to assess whether matching grants is the most cost effective instrument to improve access to agriculture and rural finance**, constraints to agriculture and rural finance should be systematically assessed through an agriculture finance diagnostic, and various alternative instruments should be considered in replacement or in complement to matching grants.

4. **Matching grants design features should be determined carefully to foster linkages with financial sector and long-term impact:**
   - **Size of the grant and level of grant matching should be different by type of beneficiary** (micro-enterprises and farmer groups, small enterprises, medium enterprises) and **by type of investment** (technical assistance, fixed-assets, working capital) so as to ensure additionality and sustainability.
   - **Beneficiaries’ contribution must be set high enough** to ensure ownership and crowd-in commercial credit.
   - **For beneficiaries who have no relationships with financial institutions a path towards financial inclusion through “low-leverage” matching grants should be promoted.** Such approach would incentivize beneficiaries to save part of the proceeds in an account at a financial institution, but also support legal formalization, preparation of business plans and financial accounts, and acquisition of income-generating assets etc. This model can be an effective instrument to pave the way for financial inclusion but also requires caution related to feasibility (in particular for farmers involved in long production cycles or farmers facing significant production risks) and additionality. Moreover, additional caution is required when savings are set-aside in a collective revolving fund.

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46 One significant spillover effect is the 24.4% higher gross income found for “nearby producers” compared to “distant producers,” showing that the impact of the project Colombia’s rural sector was amplified beyond direct project beneficiaries
• For beneficiaries who have limited relationships with financial institutions “high-leverage grants” should be considered. Such approach requires stronger financial discipline from beneficiaries through required or incentivized blending of matching grants with commercial credit. Opting for ‘high-leverage grants” may be effective at deepening financial inclusion but requires a solid assessment of beneficiaries’ financial capacity and financial institutions’ appetite. In particular, requiring a mandatory share of credit might jeopardize project disbursements and/or create challenges for borrowers. When financial institutions are involved as funders, other instruments to facilitate credit should also be considered (technical assistance, PCGs etc.) to ensure financial institutions’ participation. Moreover, involving financial institutions as “core managers” of matching may make sense when financial institutions bear most of the financial risks of supported projects. Such arrangement may simplify and speed up the investment process but requires strong communication so as to avoid confusion among beneficiaries on the nature of the support.

• For beneficiaries who have lost access to finance, financial institutions could play a leading role in the identification and selection of matching grants beneficiaries.

• When the lack of information and know-how on agriculture of financial institutions is identified as one of the key market failures, involving financial institutions as advisors or “light managers” should be considered. In addition, sharing with financial institutions a database of all agricultural investments as and their relative profitability could help address their knowledge gaps.

• Suggested M&E indicators related to financial sustainability include: % of beneficiaries that have saved more than X% in their account by the end of the project, % of beneficiaries who have saved for the first time at a financial institution, % of beneficiaries who have maintained an active account by the end of the project, % of beneficiaries who have established a track record with a value chain player, % of beneficiaries who have accessed loans for working capital/ further equipment from a financial institution during the project period, % of beneficiaries who have accessed loans on commercial terms after the project, % increase in share of agriculture in lending portfolio of participating financial institutions.

Other emerging practices for successful design of matching grants:

• Matching grants projects should include technical assistance to beneficiaries both to prepare and implement business plans

• Involving the matching grants PIU in the drafting and adjustment of the matching grants manual is important to strengthen the capacity of the PIU, ensure project ownership, and to ensure that processes are flexible. Throughout the project, the matching grants manual should be a working document that can be adjusted according to circumstances. For instance, in a context of low demand for matching grants, it might be useful for the PIU to revise the selection process and switch to a “first come first serve” selection mechanism. Similarly, in case the composition of the matching grants selection committee leads to delays in the selection process, it should be possible to quickly change the composition of the committee so as to maintain the reputation of the project. Alternatively, switching to a “virtual committee” which does not require physical meetings should be possible.

• A strong communication plan about matching grants since the beginning of the implementation is key to ensure equal access to grants, accountability and to foster spillovers. For instance, showcasing matching grants beneficiaries on local television, radio and social media increases project ownership and decreases the risk of grant misuse. Additionally, it can foster innovation and technology adoption among non-beneficiaries which is a key expected impact of matching grants projects. TTLs should work in coordination with social development specialists to ensure communication material and information reaches indigenous populations.
• **Contracts with BDS providers should be designed to ensure quality and results.** For instance, TORs may include a payment schedule where most of the payment is made at the end of the contract based on the achievement of specific objectives (e.g. productivity improved, website built etc.)

• **Suggested M&E indicators related to cost-efficiency include:** % Operative Costs/Total Amount of MG, Increase in beneficiaries income linked to the subproject/Total amount of MG, % Operative Costs/Increase in beneficiaries income linked to the subproject

• **Suggested M&E indicators to track spillovers may include:** % of nearby farmers adopting promoted technology/equipment compared to a control group
References

- **For the sample of 23 agriculture matching grants projects:**
  - Project Appraisal Documents, Implementation Completion and Results Reports and Reviews by IEG

- **Others:**
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  - David McKenzie, 2013, Learning from the experiments that never happened : lessons from trying to conduct randomized evaluations of matching grant programs in Africa
Annexes

Annex 1: Financial institutions as deposit takers

Angola Local Development Project

Description

The Angola Local Development Project aims at improving business development skills and participation in markets of selected producer groups and SMEs in a few targeted sectors including agriculture. This project includes a matching grants component for selected producer groups, SMEs and business development service providers.

Linkage with financial institutions

In Angola, the matching grants agreement incentivizes each individual within the producer group to save 20% of the grant amount in a savings account over the course of the project, with mandatory monthly deposits. Beneficiaries receive small rewards for each monthly deposit made on time (phone cards with airtime).

Positive impact

The Impact evaluation shows that beneficiaries gradually fulfilled financial institutions’ requirements through the project (ex: had an active account, had collateral, were formal enterprises). In addition, there are few examples of beneficiaries who were able to access a loan after benefiting from matching grants. From a sample of 49 subprojects, 2 beneficiaries (4%) got access to a loan from a financial institution by the end of the project. Latest evaluation from 2017 indicated that each $1 spent in grants generated on average $23 in revenues for producer groups and SMEs.

Colombia Second Rural Productive Partnerships project

Description

The Second Rural Productive Partnerships project (2007-2013) included a matching grants component (known as the Incentivo Modular - US$327.13 million, of which IBRD US$24.42 million) that were awarded to beneficiary producer organizations. Grants were available for improving on-farm infrastructure, purchasing machinery and equipment, financing consumable inputs such as seed, fertilizer, and veterinary supplies; or paying for hired labor. Matching grants also paid for technical advisory services, marketing studies, and training activities designed to increase the productivity and entrepreneurial capacity of the beneficiary producer organizations. The Incentivo Modular could not exceed 40% of the total partnership investment cost, and it was capped at Co$5 million per beneficiary producer household (less than $2,000 USD).

Linkage with financial institutions

This project promoted the participation of financial institutions both as funders – through the matching grant design, and as deposit-takers, through the setting up of a revolving fund.

Matching grants were designed in a way that promoted commercial credit. Indeed, the level of matching and ceiling grant amounts were increased for beneficiaries which managed to obtain credit. The grant amount could be increased to a maximum of Co$6 million per beneficiary producer household during the course of subproject implementation if the partnership could demonstrate that it had mobilized an additional Co$2 million per household in commercial credit. For example, if the partnership obtained a credit of Co$100,000 per household, the government financial incentive could be increased by Co$100,000 per household. This 1:1 relationship would be respected up to a maximum of Co$2 million per household.

47 The option for a producer group to have a collective savings account was also allowed, however all producer groups preferred setting up individual savings account.
Additionally, beneficiaries were required to set-aside 70% of the grant received in a revolving fund. Under an earlier matching grants project, many participating producer organizations had experienced difficulty accessing commercial credit. The design for the Second Rural Productive Partnerships project therefore included stronger measures to entice financial institutions to provide credit to the selected partnerships. Producer organizations were encouraged to use and manage their mandatory revolving fund as a tool to finance their working and investment capital requirements. The objective of the revolving funds was to allow producer organizations to continue their operations after the project, as well as build up their credit worthiness, in order to enable them to obtain commercial financial credit.

**Positive impact**

This project generated considerable spillover benefits that have accrued to non-beneficiary producers. More than 11,000 rural households that were not members of a producer organization enrolled in a sub-project nevertheless adopted (at their own expense) improved practices promoted through the Project or were able to benefit from collective goods paid for by the Project. One significant spillover effect is the 24.4% higher gross income found for “nearby producers” compared to “distant producers,” showing that the impact of the project Colombia’s rural sector was amplified beyond direct project beneficiaries.

There were significant improvements in beneficiaries’ savings and access to credit. The revolving funds were mainly used for (i) giving out loans to non-beneficiary producers of the same producer organization (42%), financing technical assistance (25.3%) and (iii) purchasing specialized machinery (20.3%). The impact evaluation shows that—compared to control group producers—beneficiary producers have obtained credit for productive investments (see table below), and more of them reinvest part of their net revenues in their agricultural production compared to the control group.

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**Challenges**

Requiring matching grants beneficiaries to save 70% of the grant in the revolving fund proved challenging in particular for farmers involved in long production cycles and farmers facing significant production risks:

- 50% of producer organizations had a recovery rate below 70%, in particular for organizations involved in producing perennial crops (e.g., cacao, forestry, mango), which have long gestation periods, limiting producers’ ability to repay quickly.

- In addition, production losses due to adverse weather had adverse impact on producers’ ability to repay into their revolving funds. From 2009 to 2011, unusually adverse weather significantly affected a large number of beneficiary producers who suffered significant losses during project implementation from fire (97%), from flooding (87%), from landslides (82%), from drought (42%), and from outbreaks of diseases (34%). These weather conditions had serious adverse impacts on production and sales, and on the producers’ ability to repay into their revolving funds.

48 By the end of the project, the average recovery rate across all producer organizations was 64%, below the 70% target.
Such difficulties in accumulating savings show that many project beneficiaries would not have been ready to reimburse credit, and therefore the project helped pave the way for financial inclusion in a gradual manner.

While the design of the matching grants promoted financial institutions’ participation through favoring beneficiaries that had managed to obtain credit, such model raises the question of the “additionality” of matching grants. Indeed, while this is not indicated in the ICR, it is possible that some of the matching grants beneficiaries could have financed their project solely from credit. Such model illustrates the trade-off between the need to ensure additionality (channeling grants only to segments who are not able to finance their investments through credit) while promoting sustainability (channeling grants in a way that beneficiaries do not need grants for their future investments).

Nigeria Third National Fadama Development Project

**Description**

The Third National Fadama Development Project (2008-2013) included three matching grants components which financed: (a) advisory services for farmers/pastoralists (called “Fadama” users) (b) input support (mainly seeds, fertilizers and agrochemicals) with matching grant of 50 percent of the purchase price of the input, C) capital assets to undertake a broad range of small-scale income generating activities and facilitate access to markets.

**Linkage with financial institutions**

This project introduced an innovative savings mechanism called Fadama Users’ Equity Fund (FUEF). Indeed, the project required that 10% of the replacement value of the common assets used for income generating activities of Fadama User Groups (FUG) is saved annually (with effect from year 2). This feature served as sustainability provision on the project and aimed at facilitating the observed desire of participants to continue investment after completion of the matching grant.

**Federation of Fadama Community Associations (FFCAs):** Under the South-South Cooperation, the Fadama project undertook a study tour of India and Sri Lanka for learning experiences on intensification of federation of community groups, use of agricultural technological innovations and ICT, as well as promoting rural savings-credit revolving scheme.

**Positive impact**

The project promoted the formation of groups called Fadama User Groups (FUG) and which were federated into associations at state level called Fadama Farmers Community Association (FFCA). More than 490 000 farmers had access to agricultural inputs thanks to the matching grants program. Beneficiaries also acquired agricultural productive assets worth N11.6 billion equivalents to about US$72 million. Livestock assets (e.g. poultry production) and crop assets (e.g. water pumps, sprayers) constituted the largest number of productive assets. Across the 36 states, about 7.32% of the value of these assets was saved in FUEF accounts, slightly below the 10% target.

A total of 37 Fadama Farmers Community Association (FFCA) were created, one for each state and Federal Capital Territory, with the objective of transforming some of the vibrant FFCA into self-sustaining institutions. The ICR indicates that a total of 15 FFCA were still functional and providing services to their members. Of them, seven institutions have generated enough capital and expertise to have applied for license to operate as a Microfinance Bank. They are waiting for the Central bank’s approval before commencing operations as microfinance Bank. In the state of Plateau, the Central Bank of Nigeria awarded their banking license in 2015, and the Plateau State Fadama Farmers Microfinance Bank has been operational since January 2016. It is expected that the other seven FFCA will also get banking licenses and will contribute to providing requisite financing.

**Challenges**

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49 rural lands and water resources within the Fadama areas in Nigeria
International experience suggests that rural financial institutions stemming from farmers’ groups can face issues related to lack of financial expertise and governance. The fact that less than half of the state-level institutions created as part of the project were still in operation by the end of the project confirms these challenges.

India - Chhattisgarh District Rural Poverty Project – requirement of 10% of investments in savings for the second matching grants tranche to be disbursed

Description

This project included two matching grants components: (a) matching grants for community investment sub-projects from Common Interest Groups (CIGs) to finance collective income-generating activities including agriculture, as well as traditional activities such as trading; (b) matching grants for Panchayat (village groups) plans to finance investment sub-projects in village infrastructure.

Linkage with financial institutions

Community members had to contribute 5% in cash upfront towards sub-project costs and place 10% into a village fund (Apna Kosh) as a condition for the release of the second tranche of the sub-projects. The fund was aimed at covering operation and maintenance costs and further village development beyond the lifetime of the project. Towards the end of the project it was decided to revise the guideline of village fund and use it as working capital/revolving fund for the federations of the Common Interest Groups (CIG).

Outcome

The project fostered investments in collective income-generating activities as well as village infrastructure:

- **Income-generating Activities**: A total of about USD 39.32 million in matching grants for collective income-generating activities were made to 20,446 completed Common Interest Group (CIG) sub-projects identified by community members. Communities contributed about US$ 2.06 million for these activities. These sub-projects were mainly for agriculture, livestock and traditional local activities.

- **Village Infrastructure**: A total of about USD 13.57 million was made as Matching Grants to finance 3,314 completed investments in village infrastructure. 60% of these investments were for paved cement roads.

Members also consistently raised the 10% of savings, although it led to some implementation delays for poorer individuals. At completion, around USD 3.56 million or 10.1% of actual sub-project costs, has been placed in fixed term deposits.

Positive impact

Project beneficiaries had more confidence in dealings with banks, access to bigger loans and displayed stronger savings discipline. The impact evaluation (IE) shows that beneficiaries, especially women, highlighted a considerable increase in their confidence in dealing with banks. While the IE did not show a significant difference in the share of CIG beneficiaries with bank accounts compared to control areas, it did find that more CIG members with bank accounts succeeded in taking loans compared to the situation in control villages (48% v. 37%), whereas in control areas more still used money lenders. The CIG members’ loans were for productive purposes primarily for agricultural investments and were double the amount of productive loans taken out in control areas. Overall, CIG households save more than non-CIG households, in particular for most excluded beneficiaries. This saving discipline contributes to CIG households becoming more creditworthy. According to the IE, the total amount of loans taken by CIG households is 30% higher than the amount borrowed by non-CIG households. Project households borrow 30% more from banks and 40% less from money-lenders, compared to control households.
**Challenges**
The impact evaluation indicates that 70% of the groups are expected to sustain their improved farm operations during the project period while 30% of the CIGs failed to function effectively and are considered unsustainable. This raises the question of whether sufficient screening was undertaken and whether the level of required contribution (5% cash) was to ensure the availability of CIG projects.

### Annex 2: Financial institutions as funders

**India Assam Agricultural Competitiveness Project**

*Linkage with financial institutions*

In its initial design, the project promoted strong participation of financial institutions, as opposed to an earlier World Bank project in the region. Started in 2004, the Assam Agricultural Competitiveness Project in India included a matching grants component for irrigation investments for farmers. This program initially required that farmers contribute 20% of the investment and that commercial banks cover 50% of the investments. Such design aimed at promoting private sector financing, compared to a previous project providing grants covering 70% of the investment costs.

**Challenges**

*The project had to be restructured due to slow disbursements.* After 18 months the project was able to provide only 470 irrigation pumps against the target of 6,170. The project was therefore restructured to raise the grant to 50 percent with the balance 50 percent contributed by the beneficiary as cash while dispensing with the mandatory commercial bank linkage. This experience highlights the trade-off between promoting a design which promotes sustainability and ensuring quick disbursements. It also illustrates the difficulty to change matching grants pattern after an earlier project with a low level of beneficiary contribution.

**Honduras COMRURAL Project**

*Linkage with financial institutions*

The Honduras COMRURAL project required that a subproject secure a loan from a financial partner, covering at least 30% of total subproject investment costs, in addition to the required 10% in cash or in kind contribution by the PO. From the beginning of the project, a broad range of financial partners were identified as eligible to participate in co-financing the subproject: (i) Commercial banks, finance associations, private finance development institutions regulated by the Banking and National Insurance Commission; (ii) Credit and savings cooperatives affiliated with the Honduran Federation of Credit and Savings Cooperatives; and (iii) Other micro-finance institutions, and other buyers such as input providers.

The MG instrument was combined with a Partial credit guarantee fund to increase the supply of agriculture finance services.

*Positive impact*

During implementation, the Producer Organizations’ contribution was often higher than required, in some cases almost 50% of subproject costs. As a result of their participation in the project, various producer organizations have received further loans.

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50 Rural Infrastructure and Agricultural Services Project (ARIASP) during the period 1995-2004
Annex 3: Financial institutions as managers
Kyrgyz Republic Agribusiness and Marketing – Financial institutions as primary providers of funds (70% required), managers of grants and with grants conditional on loan repayment

**Description:**
The program allowed eligible cooperatives that had participated in the specialized training and required investments in productive assets for agricultural production and small-scale processing to obtain a portion of necessary financing to procure the asset on a conditional grant basis.

**Linkage with financial institutions**
In this project, financial institutions played a key role both in the appraisal of grant requests and in the funding of the investments. The participating financial institutions (PFIs) appraised requests for grant financing, to ensure the cooperatives were financially viable, and filled in any financing gap (between the total amount of the sub-project and the grant financing) from their own credit line resources.

The grant could be obtained in an amount of up to 30 percent of the loan amount. For example, if a cooperative wanted to purchase a tractor, they have to invest 10 percent of own funds (as borrower’s contribution). Of the remaining 90 percent, up to 30 percent could be obtained as matching grant, and the remaining 70 percent was provided by the PFI as a loan from own resources or from the credit line.

The grant represents the last 30 percent of the provided financing – the loan portion (70 percent) had to be repaid in full and on time in order for the 30 percent to become a grant. In case of non-repayment of the loan portion, the entire matching grant amount becomes a loan, repayable with interest.

The MG instrument was combined with three other instruments aimed at increasing the supply of agriculture finance services: a credit line to participated financial institutions for agribusiness lending, technical assistance to loan officers to broaden the base of eligible borrowers, and training of agricultural cooperatives to strengthen their management skills and allow them to apply for financing.

**Positive impact**
While the project was small-scale, it had positive impact on the economic activities of beneficiaries who were all able to reimburse their loans. 58 matching grants for a total of US$800,060 were provided to cooperatives to co-finance investments in agricultural machinery and other productive assets. The repayment rate on the subloans financed through the credit line, amounting to about US$16.6 million and co-financing matching grants investments, was 100%. In the impact survey at the end of the project, 32 percent of the respondents saw an increase in their production output, 41 percent saw an increase in profit, 37 percent saw an increase in total sales, and 47 percent saw an increase in market share compared to before the investments.

**Challenges**
While such challenge is not indicated in the ICR, this model whereby financial institutions channel both grants and loans could potentially create confusion among beneficiaries. In such arrangement, it is important to raise awareness among beneficiaries about the difference between grants and loans.

Burundi “Keeping good firms alive & well: matching grants to tackle debt overhang and recreate credit histories”
The overall objective of this SME Launchpad project is to reintegrate in the financial sector SMEs that have lost access to finance due largely to exogenous price fluctuations and a general economic crisis.

**Linkage with financial institutions**

Commercial banks are involved at two important stages of the selection process: 1/ identification of eligible SMEs based on their credit history 2/ selection of SMEs as the selection committee includes a representative of the National Association of Banks and Financial Institutions of Burundi.

**Preliminary results after 4 months of implementation:**

- 5 commercial banks were involved in the pilot project
- One third of beneficiary SMEs were involved in the production, storing and/or distribution of agricultural products
- 80% of commercial banks participating in pilot acknowledged that project would lead to partial and/or full SME debt write offs
- 50% of participating SMEs reported satisfied or very satisfied by the loan restructuring proposed by their bank on the basis of the investment plan

**Annex 4: Financial institutions as advisors**

Mexico Sustainable Production Systems and Biodiversity Project

The project makes matching grant financing available to existing producer associations and to producer groups that have developed a business plan for the production, processing and marketing of biodiversity-friendly products.

**Linkage with financial institutions**

This project establishes commercial financial institutions as key technical service providers which are hired to support the management of financial services for each producer association. The project includes three types of Technical Service Providers (TSPs) for producer groups, including financial institutions: 1) the Local Technical Groups provide training and technical assistance to producer groups and producer associations; 2) Technology Transfer Units provide services for research, technology development and innovation; 3) Financial Agents support the management of financial services.

Additionally, this project paves the way for better access to finance through the requirement that very producer group needs to be formalized in order to receive financing.