Access to finance innovations for smallholder farmers

Thematic insights from delivering technical assistance to agribusinesses through the African Agriculture Fund’s (AAF) Technical Assistance Facility (TAF)

This project was primarily funded by the EU, managed by IFAD and implemented by TechnoServe. The project received additional donations from the Alliance for a Green Revolution in Africa (AGRA), Italian Development Cooperation and United Nations Industrial Development Organisation (UNIDO).
INTRODUCTION

A key objective of the African Agriculture Fund’s (AAF) Technical Assistance Facility (TAF) – to improve smallholder farmer productivity and incomes – was largely challenged by an unmet need for input credit despite tighter linkages to outgrower companies, access to markets, and Technical Assistance (TA). TAF successfully supported AAF input suppliers to set up and/or expand their distribution schemes (see inputs and mechanisation thematic learnings) to increase the supply of agricultural inputs and services to smallholders. However, TAF found that AAF portfolio companies were not always willing or able to provide credit. Similar to financiers, although there was an acknowledged shared value opportunity, high risk and high costs in linking to smallholder farmers (related to market volatility, side-selling and low and inconsistent production levels) disincentivised TAF portfolio companies from lending. Some companies were also unprofitable, at least when the TAF projects started; and most had aggressive growth plans. Cash was therefore earmarked for other activities.

There is a cost to the learning and innovation required to serve farmers in rural areas that companies as well as financial institutions (FIs) are not always willing or able to fund. TAF recognised the need to work through both AAF portfolio companies and other market partners to de-risk lending to smallholder farmers; and that incentives were needed to crowd in less willing partners. It is on this basis that TAF explored the concept of a smart subsidy to unlock value chain financing by incentivising behaviour change of market actors and buying down risk.

The AAF TAF designed 7 and implemented 6 smart subsidy schemes in four countries (Burkina Faso, Ethiopia, Sierra Leone and Zambia) in the palm oil, soya, and maize value chains. TAF acknowledges that these do not represent a comprehensive suite of smart subsidy types nor markets; and the relatively short timeframe within which to test, iterate, and verify models (often 1-2 years).

This paper aims to capture these experiences and learnings, assess the results and opportunity for these to be replicated in future. Achieving results has required significant investment by TAF in partnership brokerage and solid scoping and design efforts prior to implementation. In addition, capacity building of partners to operationalise the models, govern partnerships, manage risk and monitor performance through simple tools and standard operating procedures have been critical ingredients for success. To this end, this paper documents and analyses TAF’s experience through the following sections:

- Overview of smart subsidies: definition and types tested
- Why do them: analysis of results against planned objectives
- How to do them: Lessons from TAF’s experience

OVERVIEW OF SMART SUBSIDIES: DEFINITION AND TYPES TESTED

TAF’s definition of a “smart subsidy” is a tailored grant to incentivise farmers, companies and financial institutions to invest in loan facilities, loan management resources (e.g. loan officers), insurance and/or financial education to farmers and micro-enterprises. Ultimately, TAF smart subsidies focused primarily on improving access to input credit through loan facilities with one case study in Ethiopia focused on unlocking capex and working capital.

Smart subsidy opportunities in the AAF TAF context were identified and evaluated on a case by case basis, based on a strong justification for: why the subsidy is required, how much needs to be subsidised vs unlocked from commercial actors, what impact it will achieve and how
It will lead to sustainable behaviour change. TAF-funded smart subsidies were deliberately designed to avoid market distortion with project designs approved based on a strong justification for need, additionality and sustainability.

To date, TAF has tested three broad types of smart subsidy investments in four countries as summarised in Figure 1. Table 1 further outlines the suite of smart subsidies that TAF tested in line with these categories.

![Figure 1: Smart subsidy types and uses](image)

Table 1: TAF smart subsidies

<table>
<thead>
<tr>
<th>Subsidy Type</th>
<th>TAF Projects</th>
<th>TAF Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk-share/ loan guarantee</td>
<td>• 1 Input Finance scheme with MRI-Syngenta (input supplier) in Zambia to unlock access to improved seed and herbicides for 102 farmers, requiring 50% upfront deposit by farmers with TAF guaranteeing 75% of losses.</td>
<td>$1,600</td>
</tr>
<tr>
<td></td>
<td>• 1 Input Finance scheme with NWK Agri-services (NWK) (grain trader) in Zambia to increase access to certified soya seed for 3,000+ smallholder farmers, with a 25% TAF risk-share in Year 1 and 10% risk share in Year 2.</td>
<td>$42,000</td>
</tr>
<tr>
<td></td>
<td>• 1 Growth Facility set up with the Cooperative Bank of Oromia and the Bako Bore farmers’ union in Ethiopia to increase access to working capital for maize and soya aggregation, using a 50% TAF risk-share.</td>
<td>$20,200</td>
</tr>
</tbody>
</table>

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WHY DO THEM: ANALYSIS OF RESULTS AGAINST OBJECTIVES

Interest rates from financial institutions across the AAF TAF projects remain unaffordable and inaccessible for most smallholder farmers. Value chain financing is one of the few viable alternatives where significant market failures and distortions prevent the supply of inputs and affordable finance. With this in mind, AAF TAF had three fundamental objectives in using smart subsidies:

1) increase farmer access to inputs and thereby increase productivity and incomes;
2) demonstrate farmer repayment potential to support future access to finance;
3) provide a proof of concept for pragmatic financing models that can be replicated and scaled for smallholders in Africa.

While each smart subsidy scheme had a specific set of objectives and indicators to measure progress, the following Table 2 captures the common aggregated outcome-level results:

**Table 2: TAF High-Level Summary of Results Across Projects**

<table>
<thead>
<tr>
<th>Objective</th>
<th>Indicators</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Smallholder Farmers (SHFs) in first instance / MSMEs financed accessing inputs</td>
<td>8,322</td>
</tr>
<tr>
<td></td>
<td>Total TAF Smart Subsidy Investment</td>
<td>USD 183k</td>
</tr>
<tr>
<td></td>
<td>Value of finance mobilised for SHFs/MSMEs by private project partners (during project)</td>
<td>USD 1.9M</td>
</tr>
<tr>
<td></td>
<td>Additional revenues generated for SHFs/MSMEs accessing finance</td>
<td>USD 3.6M</td>
</tr>
<tr>
<td></td>
<td>Average Increases in Yields across projects</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Total Return on Project Investment</td>
<td>20x/2000%</td>
</tr>
<tr>
<td></td>
<td>Overall leverage ratio</td>
<td>10.5x/1000%</td>
</tr>
</tbody>
</table>
It is important to note that while the figures above are aggregated, the individual smart subsidies were not necessarily conceived of as a suite of coherent interventions. Below, we assess the performance of TAF smart subsidies against these objectives, unpacking some of the specific examples.

**Objective 1: Increase farmer access to inputs and thereby increase productivity and incomes**

TAF’s smart subsidy pilots have demonstrated the potential of smart subsidies to catalyse high levels of private investment in smallholder lending with a relatively small grant contribution. For example, TAF invested a total of ~USD 183k in smart subsidies and mobilised over USD 1.9M in finance to 8,322 smallholder farmers (i.e. leveraging over 10x the money invested by the project).

The smart subsidies equipped farmers with the necessary inputs to significantly improve their productivity and output quality, thereby translating to higher incomes – yields increased an average 25% over a two-year period across schemes; and attributable incomes increased by at least 30%, with farmers evolving their ability to self-finance these inputs in future based on such improved returns. Overall, TAF’s interventions yielded a project return on investment almost 20 times the total project costs\(^1\) (against a target of 3-4; see Co-funding section for further information); and a 1.7x return on total investment.\(^2\) In practice, the developmental impact for some projects has been lower during the life of the project (e.g. two times the costs) given the short TAF lifespan to implement and monitor benefits (for example, in the Goldtree outgrower project in Sierra Leone, newly planted palm tree seedlings will only start to yield 3-4 years after replanting).

**Objective 2: Demonstrate farmer repayment potential to support future access to finance**

Private sector is usually convinced to adopt and sustain behaviour changes (i.e. continue financing schemes) if they are profitable. Ability to repay has a direct impact on bottom-line. Repayment rates varied across schemes and over time within the smart subsidy schemes, ranging from 40% to 100%, with a weighted average repayment rate of 63%. Whilst it is important to acknowledge the variations between schemes and relatively small sample sizes, there were some common trends that supported increased repayment potential. Beyond fundamental drivers such as loan management capacity, strong relationships between financiers and borrowers, and stable market conditions, TAF’s schemes highlighted the need for:

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\(^1\) Return on project investment measures the value of farmer incomes generated relative to total project costs. In this case, the smallholder benefits (or returns) from crop sales were divided by the cost of the project investment (i.e. the smart subsidies).

\(^2\) Return on total investment measures the value farmer incomes generated relative to total investment costs. In this case, the smallholder benefits (or returns) from crop sales were divided by the cost of the project, lender and farmer investments (i.e. including loans and subsidies).
• **Upfront ‘skin in the game’** (e.g. requesting a minimal down-payment that filters for farmers with greater repayment potential). Generally, schemes that required farmer down-payments tended to have better repayment rates. Beyond being a proxy for repayment potential, the thresher match-grant scheme in Ethiopia also demonstrated the value of co-investment in driving an increased sense of ownership and responsibility; with evidence of enhanced record-keeping to account for income and expenses and increased investment in repairs and maintenance by the cooperatives who co-invested.

• **Aligned incentives** for in-kind ‘crop-based’ repayments (e.g. a better price for crop output, commission for volume of supply, reliable buyer who consistently buys year on year, reliable supplier who produces and sells substantial volumes year on year etc.).

• **Consistent contract terms and incentives**; and clear consequences in relation to default (e.g. peer credit guarantors, withholding of services, arbitration measures). This supports the development of trust-based relationships and accountability that builds repayment.

In Ethiopia, the repayment rate was **100% across all schemes**, success attributable to strong institutional arrangements (e.g. farmer peers acting as credit guarantors on loans, encouraging positive peer pressure; and a strong existing relationship of farmers to the anchor partner, the BBCU–Bako Bore Cooperative Farmers’ Union). The BBCU also has strict consequences in relation to default and withholds key services provided from member farmers who do not honour their repayment obligations. Failing that, there is a village-level social court that can mediate / arbitrate between parties and resolve repayment. **In Zambia**, in contrast, TAF’s partner, NWK, provided aggregators with a commission-based incentive to encourage repayment and offered farmers an above market price in the first year (**repayment rates averaging 87%**); however, in the second year, NWK both removed the aggregator incentive scheme and offered below market value prices (when soya prices crashed), resulting in side-selling and repayment rates as low as 43%. The cost of increasing the price for a small fraction and offering some incentive for repayment may likely have been less than the losses incurred from side selling.

The next important step to schemes such as this is ensuring that farmer repayment track records are documented well; to be further used by financial institutions which are challenged by lack of information on farmer credit worthiness. Efforts to host this data on management information systems (MIS) introduced at outgrower companies such as Goldtree in Sierra Leone (see technologies learning paper), for example, contribute to the potential for financial institutions to improve lending strategies and channels; and high performing farmers to access alternative finance in future.

**Objective 3: Proof of Concept and Sustainability**

There are two ways to answer this question: (i) whether partners receiving subsidy are continuing the changes tested following TAF exit; and (ii) whether other non-scheme partners are adopting, replicating, or scaling the models tested.

In the NWK scheme in Zambia, low repayment rates unfortunately reinforced NWK’s belief in the model being too risky to continue investment in lending. It could be argued that if NWK had not eroded incentives of aggregators, had offered at least market-par soya prices to farmers for the sake of the relationship, and better managed external risks, the repayment might have been higher. On the other hand, one could argue that
NWK was not a suitable partner in the first instance (i.e. a cotton-focused contract farming business with a limited commercial return gained from aggregating, storing and on-selling soya had limited room to take on the risk of lending for a highly tradable crop like soya). Without other appropriate market options, knowing this was not NWK’s core business, the AAF TAF went ahead in the interests of prioritising smallholder investments in soya and productivity increases (i.e. Objective 1) – with the idea that, in future, with improved incomes, farmers could self-finance or access finance from others. Whilst NWK has not continued the lending scheme, the first objective around productivity was met – with yields rapidly increasing.

In addition, there was an important (albeit small) replication effect with the piloted scheme attracting MRI-Syngenta (a Zambian input supplier) to test a similar model financing 100 smallholder farmers in the Copperbelt. The initial pilot has been a useful learning experience for MRI-Syngenta and there is interest in refining and scaling the model; targeting local aggregators to benefit from continued input finance.

In Sierra Leone, Goldtree is continuing the six-year scheme despite low collection of farmer down-payments and low repayment rates. The scheme was importantly able to design and test a concept where there was a “solutions gap”. There is early evidence of expansion of the scheme, crowding in Solidaridad funding (~USD600k) to support continued investment in smallholder planting with improved seedlings. Sustainable financing will depend on the company improving its capacity for managing loans and building a repayment culture among farmers (both of which will take more time than a one-year pilot).

Finally, in Ethiopia, the smart subsidy for a Growth Facility unlocked important working capital ($230,000) (for the BBCU to buy crop from farmers); but more significantly brokered a longer term relationship between the union and bank which both expanded the amount of financing they would have received independently of the TAF (only ~$10,000); and catalysed access to other loans (e.g. capex for vehicles to buy back crop). The partner Cooperative Bank of Oromia has expressed interest in using the smart subsidy concept to invest in lending inputs to smallholders (given market challenges around limited seed supply) and sees value in adopting a similar risk share grant to incentivise smallholder input financing nationally.

In spite of the short timelines to measure sustained adoption and behaviour change among market actors, there is early evidence of smart subsidies catalysing additional financing; with opportunity to expand this impact and encourage replication and scale by sharing results, blueprint models and lessons learned. The below sections aim to share some of TAF’s processes and learnings to support others looking to replicate similar models.

# HOW TO DO THEM: LESSONS FROM TAF’S EXPERIENCE

6 key steps (not necessarily sequential) were followed by TAF to design smart subsidies that aimed to avoid market distortion, influence replication and scale; and support successful operationalisation and uptake by anchor partners.

1. Establish Business Case through Rigorous Scoping
2. Identify and Select Appropriate Partner(s)
3. Determine Appropriate Financing Vehicle
4. Determine Optimal Co-Funding Strategy and Operating Model
5. Establish Performance, Governance, and Contract Arrangements
6. Build Partner Capacity to Implement
Step 1: Establish the Business Case

TAF Smart Subsidy projects began with a rigorous “scoping” assessment to establish the business case for investment in terms of the following evaluation principles (subject to the approval of TAF’s advisory committee3):

- **Need** – all smart-subsidy interventions must have a clearly defined need and address a gap or failure in the market.

- **Additionality** – a smart subsidy should not be provided where other market actors would be able to fund and/or fund to the same scale or degree in the absence of a smart-subsidy. TAF scoped markets for existing solutions to avoid funding activities being performed by others or that are central to a potential partner’s operations.

- **Sustainability** – smart subsidies must not distort the market nor provide support to a partner that gives them an unfair advantage. A sustainability exit strategy was thus the starting point for TAF smart subsidies (e.g. a reducing subsidy over time, a short proof of concept to demonstrate the effect and then hand over, and minimum co-investment expectations from partners).

Similarly, TAF also considered the case for potential impact of the smart subsidy (in line with the three objectives described above) by assessing the following:

- **Immediate Reach** – Example indicators include the number of new farmers accessing inputs, ($) value in additional income generated, (%)increase in yields projected.

- **Potential for replication and scale** – ability to demonstrate models and crowd in other value chain actors to replicate and scale proven models.

- **Innovation** – demonstration of a new financing solution where there has been a gap, providing proof of concept for viable business models resulting in adoption by others (e.g. donors, business).

The relative importance of these considerations must be weighed up. In some cases, it may be more important for projects to demonstrate potential for replication (i.e. testing the model to get it right first) rather than to reach large numbers of farmers or access a certain amount of funding. This scoping process informed a more detailed design captured in Steps 2-6.

Step 2: Identify and Select Appropriate Partner(s)

Results from the AAF TAF’s pilots have shown that the major successes / failures have centred around either the partners selected (including their capacities and incentives) or their institutional arrangements (both internally and across partners). The assessment of partners largely focused on three key areas:

- **Suitability to Scheme (market functions)** – outlining the roles / functions required for success and ensuring these are assigned to suitable partners.

- **Willingness and Commitment to Participate (incentives)** – actors should understand and be directly incentivised by the objectives of the scheme to support sustainable adoption; and buy-in from the

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3 The Technical Assistance Committee (TAC) monitors and provides policy and strategic guidance to the TAF Project. It consists of a representative from each of TAF’s funders and the AAF Fund Manager partners namely: European Commission, IFAD, Phatisa (AAF Main Fund Manager), Zebu Investment Partners (AAF SME Fund Manager), Other TAF donors (AGRA, Italian Cooperation and UNIDO), Representative of AAF Advisory Board Chairman, TAF Implementing Agency (TechnoServe, Observer and Secretariat)
highest levels of management. Beyond the financial risk-share, typical incentives influencing company buy-in have included linkages to established aggregators, TA provision and financial literacy training for farmers (particularly for input suppliers and banks); smallholder linkages to insurance; access to new markets and large scale farmer reach.

- **Ability to execute (capacity)** – all selection processes should assess the capacity of partners to execute their roles (particularly where these are new) and ensure these are well coordinated in cases where there are multiple partners required to fulfil objectives. If there are inadequate structures and capacity in place, it may be more appropriate to re-assess partner choice and/or delay implementation until some base level of capacity is established.

Based on TAF’s experience, the best partners demonstrate high ability to execute and willingness to commit; those with lower ability to execute must be capacitated, while those with lower willingness must be incentivised (see Figure 2).

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**Step 3: Select Appropriate Financing Vehicle**

TAF primarily tested two types of financing vehicles, namely *In-House Facilities* (funded by agribusiness firms) and pure *External Finance Facilities* (with direct linkages to a financial services provider). Table 3 highlights key considerations that TAF took into account before selecting the appropriate vehicle, based on project objectives, market conditions, costs and benefits, and success factors.

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### Table 3: Financing Vehicle Selection Guidelines

<table>
<thead>
<tr>
<th>Partner(s)</th>
<th>In-house facility</th>
<th>Link to external financier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market conditions</strong></td>
<td><strong>Outgrower company</strong></td>
<td><strong>Input Supplier</strong></td>
</tr>
<tr>
<td><strong>Outgrower Company:</strong></td>
<td>• Lower interest rates</td>
<td>• Core business of the partner, existing systems to leverage</td>
</tr>
<tr>
<td></td>
<td>• Shorter approval turnaround</td>
<td>• Higher sustainability probability</td>
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<tr>
<td></td>
<td>• Guaranteed output market for smallholder sales; &amp; return on investment (ROI)</td>
<td></td>
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<tr>
<td></td>
<td>• Opportunity to recover loans in-kind (e.g. in crop sales)</td>
<td></td>
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<tr>
<td></td>
<td>• SHFs have option to optimise/choose to sell widely</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Direct incentive for input supplier to increase sales to smallholder farmers (i.e. mutual benefit)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Pay-back usually limited to cash which can undermine repayment potential</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Risk of market monopoly with partner input supplier</td>
<td></td>
</tr>
<tr>
<td><strong>Input Suppliers:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Weak linkages to TA and buyers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Lack of appropriate products</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Higher interest rates</td>
<td></td>
</tr>
<tr>
<td><strong>Risks</strong></td>
<td><strong>Outgrower Company:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Farmer side selling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Potential for SHFs to be locked into one market that may not always be optimal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reliant on priorities/ cash position of the company - sustainability potential is low</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Risk of market monopoly with lender</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Low purchasing power of individual farmers conflicts with scale objectives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No guaranteed return on investment (ROI) for farmer</td>
<td></td>
</tr>
</tbody>
</table>

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In-house facility | Link to external financier
---|---
No existing/ functioning FI | Existing/functioning FI with appetite for SHF lending but limited existing knowledge/ linkages to market segment
No relevant finance available e.g. High interest rates unaffordable to target consumer market | Financial institution

**Typical anchor**

- Outgrower company
- Input Supplier

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| Key Conditions for Success | • Strong in-house loan management department (assigned to smallholder segment) |
|                          | • Strong, longstanding relationship with farmers |
|                          | • Extension/sales agents with capacity to build relationships/ monitor farmers on the ground (input suppliers) |
|                          | • Fairly controlled market/ context (particularly for outgrower companies) |
|                          | • Strong linkages to TA providers/ offtake partners |
|                          | • Strong aggregator in place to organise channel funding to SHFs |
|                          | • Strong partnership/alliance with input suppliers, TA providers and output market partners |

There are benefits and risks to different financing vehicles and these must be understood before selecting. For example, linkages to external funders relies on being closely linked to input and output market actors as well as TA providers who can ensure farmers have the capacity to repay loans and act on behalf of farmers to negotiate appropriate loan terms. In-house facility models (particularly led by output buyers not operating within controlled marketing contexts) have tended to generate quick results but have less potential to continue in the long run – with volatile agricultural markets, high risks of side selling and unpredictable company strategy shifts. In both input and output market-led financing, there are key risks around market monopoly and recipients can be at the mercy of these companies to buy and sell products at the price offered, since they are tied to a loan.

Despite the risks, in-house agribusiness-led facilities have been common in the TAF smart subsidy portfolio. This acknowledges that financing is not their core business, and that this is a stepping stone for beneficiaries to access external financing in future. Proof of concept and demonstration of results is thus the next best alternative path towards achieving this goal. Smart subsidy investments in ‘in-house’ facilities have thus helped these companies to provide a short to medium term “fix” for farmers/micro-enterprises to invest in quality inputs and technologies that can accelerate their productivity and potentially build credit records, with which it, and other financiers, will theoretically be willing to provide loans to the farmers without a subsidy in future. To crowd in FIs is therefore desirable from a market systems perspective. It is important that farmers can build a track record that would allow them to access funding in the future on their own merit. The latter, in reality, has not always been a smooth transition and usually associated with only a small proportion of total farmers reached. More apparent has been the case that, with increased productivity, these farmers and enterprises are able to use returns gained from increased productivity to self-finance in future.

Step 4: Determine Optimal Co-Funding and Operating Model

Determining the optimal co-funding is fundamentally about understanding (i) the value that can be derived from a scheme both for the company and beneficiaries, (ii) costs associated with lending to smallholder farmers, and (iii) partner-specific and market risks. Figure 4 below provides guiding questions that can assist in determining an optimal co-funding strategy:
Based on the above AAF TAF analysis, co-
funding strategies were right sized: Too much support undermines sustainability by eroding a partner’s ownership and distorting their valuation of the true cost of the initiative. Conversely, too little support could result in a partnership failing to change behaviour. As a rule of thumb, TAF estimated that the development impact (e.g. increased incomes) of an intervention should exceed its total cost by a factor of at least 3 or 4. In practice, TAF has applied flexibility in regards to i) what proportion is invested by TAF, ii) whether private investment is cash/in-kind and iii) whether smart subsidy payment should be upfront or delayed. Ultimately, the amount of support contributed to a partnership must be judged and compared to (a) the partners’ contribution and predicted return on investment (b) size of investment need, the partner’s cash position and capacity, (c) the risk being taken by the partner, and (d) the anticipated developmental impact.

Similarly, farmer skin in the game (e.g. in the form of downpayments) should also be assessed i.e. based on potential economic returns from investing in a particular input or technology, the financing need and risk being taken. **Down-payments should be right-sized to avoid excluding otherwise suitable farmers**; that is, strict upfront terms may have a down-side effect on the number of consumers you can reach where an entity is aiming for scale. In the Goldtree example, a 10% down-payment originally defined was ultimately too high for farmers and down-payments collected were far lower than expected. In this case, farmers may have benefitted from longer advance payment terms, allowing them more time to gather much-needed funds. In addition, more emphasis on collection of these down-payments in the peak sales period (recovering payment from sale of fresh fruit bunches (FFB)) was critical.

**OPERATING MODEL**

TAF schemes typically have simplified and lean operating models that reduce the total cost of interventions; but importantly are context dependent and, as such, variable across markets and project types. Figure 5 below illustrates a TAF developed operating model that helped the stakeholders in a scheme determine and track how money and inputs/equipment would flow between players involved, how the scheme should be governed, key roles and responsibilities and decision-making milestones and authorities outlined.

Figure 4: Co-Funding Assessment Factors

**Co-Funding Assessment Factors**

<table>
<thead>
<tr>
<th>Value</th>
<th></th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>• How many farmers can the investment (reach)?</td>
<td>• What is the financing need?</td>
<td></td>
</tr>
<tr>
<td>• What potential produce output (Mt/$) will the investment generate?</td>
<td>• What are the costs of disbursing and managing loans (e.g. human resources, accounting systems, logistics, possible default etc)?</td>
<td></td>
</tr>
<tr>
<td>• What will the company gain? What is its ROI?</td>
<td>• What is the cash position of the financing company and what costs can it absorb?</td>
<td></td>
</tr>
<tr>
<td>• What will beneficiaries gain? What is their ROI?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Risk**

<table>
<thead>
<tr>
<th>Value</th>
<th></th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>• What are historical trends in default / side-selling?</td>
<td>• What is the farmer production history and capacity?</td>
<td></td>
</tr>
<tr>
<td>• What are the agricultural and enabling environment conditions?</td>
<td>• What is the maturity of the supply chain and value chain actor. Does the aggregator/buyer know its outgrowers well? Or is it a first time scheme?</td>
<td></td>
</tr>
<tr>
<td>• What is the farmer production history and capacity?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 5: Zambia MRI-Syngenta Smart Subsidy Schematic

Step 5: Establish Performance, Governance, and Contract Management Arrangements

Performance and Results Management

Under TAF, key performance indicators were linked to objectives to (i) catalyse investment to increase farmer productivity and incomes; (ii) demonstrate repayment potential and build credit records, and (iii) demonstrate proof of concept for others to replicate / scale proven models as illustrated on Table 2. All schemes created a results measurement plan and tool to capture, evaluate, and verify results. Reporting and ongoing M&E was a crucial part of the responsibilities of all key partners; and TAF played a key role in supervision to coordinate results reviews and strategy discussions and ensure all commitments were fulfilled.

In hindsight, in addition to clear, and measurable short-term indicators, longer term, systemic impact indicators (e.g. sustainability of the scheme partnership, market growth) should have been more explicitly tracked. Other key lessons include:

1) When trying to convince a non-financing entity to take risk in lending to a new/unknown market, a deeper evidence base for farmer behaviour and repayment potential should be collected upfront. In hindsight, more company-specific data should have been used to articulate to companies the benefits of lending, the benefits of investment in incentives and upholding loan management procedures.

2) All projects should have a clear post-project monitoring plan. Smart subsidies are effectively designed to incentivise behaviour change, which takes time. In some cases, early year adoption can be followed by high rates of dis-adoptions, offsetting initial positive results. In other cases, longer-term monitoring is required because it may not possible to assess performance within the project lifetime (e.g. in the Goldtree example, the loan scheme was structured with a 6 year payback period reflecting the time it takes for oil palm trees to reach peak production).
Governance and Oversight

In TAF schemes, projects had a governance committee responsible for overall scheme oversight, including managing risks, tracking performance, and adjusting the overall strategy as required. Figure 6 illustrates the typical composition and responsibilities of this committee.

Figure 6: Governance Committee and Responsibilities

A key learning has been that roles and responsibilities, as well as contract terms, deserve intensive sensitisation and training sessions upfront and should be clear, with duplication of roles proactively avoided. A few AAF TAF examples have shown that lack of clarity around roles and responsibilities undermined desired success; led to confusion and inefficiencies. Each stakeholder needs to be guided in their respective responsibilities upfront. And, there is opportunity for improved communication and coordination through tighter contract language and steering committee meetings. Some projects also experienced internal inconsistency within the anchor partner company (for example with changes in delegated ‘signatory authorities’, staff turnover and loss of ‘champions’) that jeopardised the effectiveness and sustainability of the scheme. This reinforces the need for senior management buy-in.

CONTRACTING CONSIDERATIONS

The contracting phase is important in bringing all elements of the scheme design together in an enforceable agreement between implementing partners. TAF developed “payment by results” grants contracts with primary lenders and smart subsidy recipients to incentivise partners to manage risks and prioritise high quality results. Contracts had payment triggers based on the Governance Committee’s approval of verifiable results or performance (e.g. loans disbursed, default rates, numbers of farmers reached etc.). These grant agreements outlined the common objective along with documented roles, responsibilities and obligations of all parties, as well as clear consequences for breach.

Multi-partite memoranda of understanding were also used to align and coordinate partners
where there were multiple partners involved. These templates were particularly helpful to manage partners; and help partners to pass on related terms to all other partners in the scheme. However, these were not always enforceable or legally binding. It is important that every partner, right down to the farmer, understands the loan terms and institutional arrangements clearly; and that all related agreements mirror each other. For example, aggregators - who often play a critical role in collecting repayment on the ground—should be assisted to document simple contract terms with farmers to ensure they are not put at risk and suffer the consequences of farmer default. This was not always operationalised in TAF schemes and, in some cases, resulted in misunderstanding and challenges for aggregators in recovering repayment from farmers.

Ultimately, TAF contracts have attempted to strike a balance between simplicity and comprehensiveness – this is particularly important when working with partners that have limited financial literacy and/or exposure to formal lending processes.

**Step 6: Build Capacity of Partners to Implement**

Providing advisory and TA to agribusiness company and financial institution partners has been critical to develop in-house expertise and systems in value chain lending and risk management. From our experience, the following advisory has been typical and crucial:

- Upfront and repeat sensitisation sessions on contract terms and institutional arrangements, roles and responsibilities by each partner involved (from the most senior manager to loan recipient farmer);
- Design and set up of standard operating procedures (SoPs) for loan management;
- Development of simpler contract terms for aggregators/smallholders;
- Incorporation of local and/or value chain dynamics into loan structuring and selection criteria;
- Multiple training workshops and mentorship on loan SOPs, processes and contract terms with partners;
- Set up of tracking and approval systems (e.g. management information systems).

In broader projects or with more time and greater resources, it may be possible to provide more comprehensive TA to implementing partners. A smart subsidy could also be used to encourage further investment by a potential financier in the necessary resources and capacity building; sourcing TA from other existing institutions providing this more extensively.

**KEY TAKEAWAYS AND LESSONS LEARNED**

Based on TAF’s experience, a broker has been ‘a given’ and crucial for the following reasons:

- Provides soft funding for the R&D and scoping to develop a solid design; and cash incentives for partners
- Mobilises value chain participants who may have previously been unwilling to participate
- Negotiates objectively on behalf of stakeholders for a mutually beneficial vision and model
- Objectively helps to align stakeholders and manage relationships/conflicts
- Establishes standard operating procedures where these may be new

The value of an impartial, trustworthy, and competent broker can be substantial as demonstrated by the pilot schemes, where partners face several risks and challenges related to financing...
smallholder farmers. In Burkina Faso, for example, TAF was able to convince financial institutions to reduce interest rates for smallholder farmers from 22% to 14% even before receiving a subsidy (ultimately the grant was not needed) by linking a variety of partners together including the Bank, TAF supported extension provider, an output buyer and insurance provider; and helping to come up with an appropriate operating model and institutional arrangements to ensure maximum repayment. This has helped to catalyse over $1M in input financing invested by Saphyto (the input supplier) and external banks crowded in (Bank of Africa and Credit Mutuel du Burkina Faso) to 1,500 farmers; with maize yields increasing from 1.8M to 2.5Mt/ha; and banks committing to cover lending for 2,500 farmers and 5,000ha in the next season) (see extension learning paper).

Robust, tailored design: Smart subsidies are highly context specific and should be tailored to specific market, partner, and beneficiary needs to ensure impact and sustainable adoption.

Incentive-based, mutually beneficial arrangements increase probability of success. Evidence based and adaptive action: robust evidence is required (i) to convince partners to participate, particularly in schemes introducing new markets, farmers, and crops, and (ii) to regularly measure performance and adjust models accordingly, leveraging the results obtained to influence others to take up / adopt proven models.

CONCLUSION

The AAF TAF’s smart subsidy pilots have demonstrated the role of smart subsidies in unlocking value chain financing to increase smallholder yields, production, and income. Overall, the smart subsidies tested have proven attractive to various private sector partners offering a testing ground to assess farmer repayment behaviour and establish relationships between farmers and companies; leading to the mobilisation of continued and/or additional, external finance in some cases.

While approaches should always be tailored to the needs of a specific context, TAF experiences and developed tools for smart subsidy design, partner selection, institutional arrangements and performance management could be helpful for other practitioners seeking to use similar tools to unlock value chain finance.

TAF’s projects were not designed to transform agricultural market systems – a much broader and holistic set of interventions is required for this. Instead, they serve as important levers for private investments where there are market failures in the financing of smallholders. In our experience, smart subsidies have potential for the following value addition if implemented effectively:

- Short-term catalyst to increase farmer productivity and incomes; after which beneficiaries can either self-finance or access additional finance
- Rapidly mobilise high levels of private sector investment
- Demonstrate repayment potential and build credit records to support beneficiaries to access financing from other actors in future
- Proof of concept to support replication of similar lending models by business, donors, other development practitioners

Smart subsidies have had a valuable demonstration effect. As such, AAF TAF sees value in documenting and sharing the experience and tools with other actors to adopt/adapt models to suit their needs. This paper represents the start of such an effort.

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