Perspectives on improving financial access for livestock value chain development: addressing the ‘missing middle’

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Abstract

Access to credit often constrains the participation of smallholders in high-value agricultural and livestock value chains. While microfinance has been promoted as a way of alleviating the credit constraints faced by the poor, it is often unsuitable for the development of small-scale value chains, particularly for more medium-scale investments in storage, machinery, transport, and processing. This paper reviews the different financial mechanisms available to promote value chains, analysing whether such forms address the capital constraints faced by value chain actors. It also looks at the challenges faced by specific sectors, such as the livestock sector, in securing appropriate forms of capital.

Keywords: Value chain; microfinance; livestock; market access

Introduction

Access to credit is an important constraint on the participation of smallholders in high-value agricultural and livestock value chains. For example, a recent study by Swinnen and Maertens (2014) revealed that 81% of cotton farmers in Kazakhstan cited access to credit as a motivation to engage in contract farming arrangements, with 75% reporting this as their main reason. At the same time, significant gaps exist to finance agriculture in developing countries. Doran et al. (2009) report that less than 1% of all commercial lending in Africa goes to agriculture despite the importance of this sector as a share of GDP (30–50% in some countries; see Rich and Niemi, forthcoming). Rural areas are typically disadvantaged further in terms of commercial lending, with the International Labour Organization (2015) noting that access to finance is 12 percentage points lower in rural areas than in urban areas (46% vs. 58%).

The reasons for these gaps in agricultural lending are numerous. On the supply side, there is often a lack of interest by commercial lenders, given high transaction costs, particularly on the information side. In rural areas, farmers can be
widely dispersed over space, making the appropriate screening and monitoring of risk costly for lenders (Kloepinger-Todd and Sharma 2010). Expanding infrastructure and developing specialized lending products for rural areas is costly, given much lower population densities in rural areas and greater per-loan costs (Pica-Ciamarra et al. 2010). There are perceptions that rural finance is not profitable or lacks appropriate scale to generate wider interest, generating lower returns relative to urban and more commercialized activities (Doran et al. 2009). Risks in agricultural areas themselves also prevent appropriate diversification for lenders. For instance, where climate risks are correlated geographically, lending in such regions is costly and prevents lenders from diversifying their risk exposure (Kloepinger-Todd and Sharma 2010). Likewise, for more commercialized farmers or small and medium enterprises (SMEs), borrowers themselves are poorly diversified in terms of their own income sources (Schreiner and Colombet 2001). Finally, a host of regulatory, marketing and technological constraints can impede investment by the private sector (Doran et al. 2009). The net effect of these supply-side gaps is to reduce the availability of credit for smallholders, increasing its costs and making scaling-out or upgrading within value chains more difficult.

On the demand side, a major gap for customers of financial instruments is limited access to collateral for loans (Fleisig 1996; Fund for Agricultural Development (IFAD) 2015). This is compounded in areas where land tenure rights are also weak for livestock producers. Pica-Ciamarra et al. (2010) note that in many developing countries, it is nearly impossible for farmers to use their stocks as collateral for loans, while this is commonplace for developed countries (e.g. the United States, New Zealand). Doran et al. (2009) note that a lack of farm recordkeeping makes it difficult for smallholders to provide the requisite documentation to secure loans. Poor organization at the individual farm level, as well as of farmers collectively, impedes the ability of smallholders to effectively negotiate for already scarce rural capital.

Microfinance has been promulgated as a possible solution to remedy some of the gaps that the poor face in accessing formal credit (Buckley 1997). Microfinance typically takes the form of small loans for poor consumers, often lent to groups or rural savings associations to ensure collective responsibility for repayment. As Karnani (2007) notes, microfinance organizations often provide more than credit to clients, including a host of services to improve livelihoods and borrower capacity to use finance. However, microfinance has historically remained a relatively targeted and primarily an urban phenomenon (Schreiner and Colombet 2001; Milder 2008). The lack of microfinance in rural areas can be attributed to many of the supply and demand constraints noted above. Even where microfinance has targeted poor stakeholders, its record has been relatively mixed in terms of SME development (Buckley 1997), its ability to generate needed employment opportunities (Karnani 2007) or in its profitability and sustainability in the absence of government or donor support (Morduch 2000).

An even more salient question is whether microfinance itself is suitable for value chain development activities. Most microcredit loans tend to be small (in the hundreds of dollars) for the purchase of consumption goods or small-scale equipment. However, the development of burgeoning small-scale enterprises requires capital well in excess of what microfinance can provide – investments in storage, machinery, transport etc. all require much larger outlays of money. At the same time, the absence of formal bank lending for “meso” amounts of lending (for reasons stated earlier) creates a gap that Milder (2008) dubs “the missing middle”. Figure 1 illustrates this gap, distinguishing between the financial gap between microfinance and commercial finance and the gap that exists between urban and rural areas.
In recent years, various value chain financial instruments have been developed to overcome the financial constraints associated with smallholder and SME access to markets. While different in their scope, as will be detailed in this paper, these financial instruments all aim to improve linkages between smallholders and other value chain actors. However, a couple of research questions remain. First, given the proliferation of value chain finance and forms, does this in effect solve the “missing middle” problem or do various gaps still remain? Second, do certain types of rural farming have attributes that make value chain finance more or less suitable or, conversely, are there certain types of value chain finance that are more appropriate for certain sectors? In particular, do the characteristics of the livestock sector present any unique challenges for the use of value chain finance?

Value chain finance—forms and modalities

Value chain finance can be defined as the provision of finance that takes into account the broader financial needs of the value chain (Miller and Jones 2010). Coon et al. (2010) distinguish between value chain finance that comes from within the value chain itself (direct value chain finance) and that which is sourced from outside the value chain (indirect value chain finance). An important attribute of value chain finance is in its ability to mitigate risk through improving information flows and marketing linkages amongst value chain actors. In turn, this lowers the cost of credit provision both within the chain and from outside financial sources (Miller and Jones 2010).

How value chain finance is provided depends greatly on the means by which the value chain is organized. Miller and Jones (2010) distinguish between four different modes of organizing value chains, which are summarized in Table 1. Three of the four forms (buyer-driven, facilitator-driven and integrated) are “top-down” approaches in which a chain “champion” (either from within the value chain or external to it) organizes and facilitates market linkages, including the provision of credit. The motivations for these champions can vary. For buyer-driven and integrated chains, an important consideration is to guarantee quality, quantity or other forms of assurance for customers (Lee et al. 2012). The use of contracts is one-way, to coordinate production between farmers and buyers, with the provision of credit and/or inputs made in exchange for the sale of standardized outputs from farmers to buyers. The level of quality assurance needed and transaction costs associated with coordination determine whether contracts or more hierarchical forms of integration are needed. While greater coordination provides smallholders with needed access to markets, it also makes them over-dependent on one or a small subset of buyers. In rapidly evolving value chains, where changing consumer demands place increasing pressure on upstream actors for innovation and compliance with increasing standards, this exposes some participants to exclusion from the value chain if they cannot keep up with these changes (Dolan and Humphrey 2000).
Facilitated and producer-driven chains rely on the development of horizontal linkages amongst smallholders or other value chain nodes to achieve scale and greater organization. Both are similar in scope and aim – namely, to improve the leverage that farmers have with markets through increased scale and bargaining power. The former is achieved through external means, i.e. via the facilitation of non-governmental organizations (NGOs), government or donors, while the latter depends on the internal motivations of the group itself. While facilitated value chains tend to have stronger linkages to other sources of value chain finance due to deeper networks with public and private sector financial actors, an important concern of such organizations revolves around their broader sustainability once projects or donor funds have been exhausted.

Table 1. Value chain organizational forms and financing issues

<table>
<thead>
<tr>
<th>Model</th>
<th>Organization mode</th>
<th>Rationale</th>
<th>Challenges for financing</th>
</tr>
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<tbody>
<tr>
<td>Producer-driven</td>
<td>Associations, cooperatives</td>
<td>Scale to improve negotiating power, market access, better prices</td>
<td>Knowledge of market needs</td>
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<td></td>
<td></td>
<td></td>
<td>Finance access depends on partners downstream, reputation</td>
</tr>
<tr>
<td>Buyer-driven</td>
<td>Contract farming</td>
<td>Improved quality and assurance of supply, meet consumer demands</td>
<td>Transactions costs in contract enforcement</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reliance on one buyer</td>
</tr>
<tr>
<td>Facilitator-driven</td>
<td>Associations or cooperatives driven by donor/NGO support</td>
<td>Equity considerations, improve smallholder market access</td>
<td>Power asymmetries</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dependence on facilitator during/post-project</td>
</tr>
<tr>
<td>Integrated</td>
<td>Lead firms, supermarkets, Falso organizing chain via direct ownership/contracts; integrated service models</td>
<td>Ensure quality and scale for high-value or high-volume markets</td>
<td>Sustainability over time – who champions after?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Complexity</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Power asymmetries, exclusion</td>
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A range of value chain financial instruments exists to link smallholder farmers to markets. Based on the analysis in Miller and Jones (2010) and Navás-Aleman et al. (2012), Figure 2 summarizes a range of these, organized graphically based on the degree of value chain coordination required and complexity of the instrument themselves. Product financing, through the provision of credit by traders or other value chain intermediaries, is one of the most common forms of value chain finance and is often facilitated through contracts. These contracts reduce the cash flow constraints at the production end, while providing buyers with assurance as to product supply and attributes. As noted in Figure 2, these forms of product financing (trade credit, input supplier credit, lead firm financing) typically require greater amounts of coordination in the value chain and cannot rely wholly on purely market governed transactions (Navás-Aleman et al. 2012).

By contrast, other forms of value chain finance can be made use of without the need for formal coordination with value chain actors; nonetheless, they still require the provision of good market information and enforceable contracts to ensure success (Navás-Aleman et al. 2012). The use of warehouse receipts, for instance, whereby product stored in inventory serves as collateral and guarantee for a loan, does not necessarily require formal value chain coordination as such but does require the presence of service providers and downstream actors with whom to engage. Similarly, factoring, whereby partial payment is advanced on the basis of sales contracts, allows arms-length links between farmers and buyers to be made in conditions where traditional forms of formal finance are not available (Miller and Jones 2010). Root Capital, a social investment fund, is an example of factoring, advancing farmers up to 60% of the value of the sales contract. Payment from the contract is made to Root Capital directly by the buyer; Root Capital then transfers final payment (less fees) to the seller (farmer) (Milder 2008). Leasing is another financial instrument whereby financial institutions lend physical assets to borrowers, reducing risks where finance for production infrastructure is required (Miller and Jones 2010; Navás-Aleman et al. 2012).
Other, more complex, forms of value chain finance, including futures markets, securitization and repurchase agreements, exist within the landscape of financial instruments although their wide use in developing country contexts is fairly limited (Miller and Jones 2010). Loan guarantees, where a private or public entity guarantees a loan, have a mixed history, with public sector loan guarantees often fraught with politization (Doran et al. 2009). At the same time, there are examples of public-private partnerships (e.g. Regional Agriculture Union of Producers of Yellow Corn and Other Grains and Seeds in Mexico, Bank for Agriculture and Agricultural Cooperatives in Thailand) that provide multiple layers of loan guarantees to reduce transaction risks (Miller and Jones 2010).

Figure 2. Value chain financial forms and their relation to value chain organization and complexity of use

![Diagram showing the relation between value chain organization, complexity of use, and level of value chain integration.]

Source: Adapted from information in Miller and Jones (2010) and Navis-Aleman et al. (2012)

## Value chain finance and livestock markets

In this section, we address the second of the two research questions posed earlier, namely, to what extent value chain finance instruments are suitable in the livestock sector. An important distinction between livestock and crops concerns the ability of livestock farmers to use the various types of financial innovations and hedging tools available to crop farmers, particularly in the developing world. At present, there appears to be little empirical evidence of more complex forms of financing, such as the use of futures markets or securitization. Warehouse receipts or inventory storage mechanisms, increasingly used for crops, are likewise limited in their scope; Bote et al. (2014) provide an example from Zimbabwe, while IFAD (2015) discusses a case study of grain banks as a means of smoothing out consumption shocks that cause farmers to liquidate their stocks of livestock. Pica-Ciamarra et al. (2010) note that the requisite physical and regulatory infrastructure is missing to support warehouse receipts, including the need for strong information systems, inspection services, contract enforcement and processing, where end products are used as collateral.

A second distinction between livestock and crops is the multifaceted use of livestock in farm livelihoods, where animals represent a source of animal protein (meat and milk), draught labour, a store of wealth and a source of social status. Where financial markets themselves are underdeveloped, livestock serves as an important source of easily convertible assets to money that can be used to meet various livelihood needs. Indeed, where financial markets are lacking or rudimentary, the fact that livestock serves such multifaceted roles makes it difficult to commercialize traditional production systems (Naziri et al. 2015). Moreover, given the risks faced by livestock producers (drought, disease etc.) this suggests not only a need for greater financial service development, but the use of financial instruments other than credit, such as savings or insurance (Doran et al. 2009). Index-based insurance holds promise in pastoral settings (Chantarat et al. 2013), with empirical evidence showing important behavioural changes towards risks among those that have adopted such services (Carter and Janzen 2012). Fakudze and Machete (2015) further
highlight the role of public-private partnerships between government and smallholder-focused trade associations in the provision of credit for livestock in South Africa.

Has the ‘missing middle’ been found?

A more difficult question is whether the financial innovations and market linkages developed over the past couple of decades have solved the rural and meso-finance gap discussed earlier. Linking farmers to markets through value chains solves many of the problems that smallholders face in obtaining sufficient capital for operations and expansion. Moreover, it is certainly the case that technological and institutional innovations have played a major role in broadening and cheapening access to finance for more stakeholders. However, three important points still need to be considered.

First, an important gap in the literature concerns issues of access to financial services. While much attention has been given to the process of linking farmers to markets through finance, its impacts and determinants of success, less attention has been paid to the dynamics of access, in terms of how these links have changed or been sustained over time. Abate et al. (2016) find, for example, that levels of technological adoption engendered by access to finance can vary depending on the source of that capital, suggesting that how finance is provided can yield insights into some of these governance and upgrading issues.

Second, and related to this, there are concerns around issues of governance and power dynamics within the value chain. As noted earlier, much of the provision of value chain finance comes from top-down linkages from buyers and lead firms with significant power over transactional attributes of exchange. Changes in value chain coordination change governance patterns in value chains, which can have both positive and negative impacts. While this can afford smallholder farmers better, more reliable incomes, it can also lead to exclusion (Laven 2009). An important area for inquiry concerns whether there has been exclusion or not, and what the attributes of this might be.

Finally, much of the focus on value chain development has been led by lead firms or NGOs organizing supply bases rather than facilitating the entrepreneurial capacity of stakeholders themselves. Indeed, as IFAD (2015) notes, there is significant potential in the livestock sector for value-adding opportunities in processing and other downstream activities. These could potentially serve new market niches that leverage consumer attributes for traditional products but which are outside the remit of modern value chains and those with wider networks of capital and finance. In such cases, the question remains as to what sources of funds exist for such opportunities. Doran et al. (2009) cite the growth of social investment funds and equity capital in the developing world (e.g. GroFin in South Africa) but agriculture has been noticeably absent from such portfolios. Are there ways the financial and capacity-strengthening needs for these new markets can be addressed? And what role can NGOs and other facilitators play to help smallholders navigate the social investment landscape? (Achleitner et al. 2011).

References


