



From Value Chains to Financial Products
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January 2007

Background:

The USAID/Uganda's 2002-2008 Strategy calls for expanded sustainable economic opportunities for rural sector growth, promoting a connection between productive strategies by the private sector in rural areas and expansion of financial services sector. Rural Savings Promotion & Enhancement of Enterprise Development (Rural SPEED) was designed to help meet this goal.

The objective of USAID/Rural SPEED is to deepen and strengthen Uganda's financial sector in response to this rural sector demand for financial services. Increased provision of financial services should leverage economic activity to complement other Mission's programs in rural areas. The resulting increase in economic activity should help Uganda achieve the economic growth rates proposed in Uganda's Poverty Eradication Action Plan (PEAP). The project is supporting and executing activities in the key areas of:

1. Institutional Capacity Building, including:
 - a. Savings Mobilization;
 - b. Agriculture Finance;
 - c. Non-agriculture Finance;
 - d. Bank/MDI/MFI/SACCO Linkages; and,
2. New Product Development and Service Delivery.

In order to best support the objective of building financial institutions' capacity for delivering Agricultural Finance and the objective of developing New Financial Products and Service Delivery Systems, USAID/Rural SPEED sought first to better understand the market opportunities in financing agriculture. Secondly the project sought to address financing opportunities with specific products that directly addressed maximizing profit and minimizing the various risks. The chosen methodology to better understand the financing opportunities and to serve as a foundation for financial product design was value chain mapping.

Methodology:

USAID/Rural SPEED initially chose three key commodities to investigate that were produced within geographies that were thought to be promising with respect to production and productivity but were receiving minimal formal financing. The three chosen commodities for the first value chain analyses were:

1. Sunflower produced under forward contract in Lira and Apac regions

2. Cotton produced for export through major ginneries in Pallisa and Kasese Regions, and
3. Maize produced for regional and relief markets in Kapchorwa and Mbale Regions.

To execute the analysis, over a period of weeks, data was collected from input suppliers, transporters, farmers, processors, and traders. Working with a local, well-trusted and well-connected researcher, Rural SPEED was able to penetrate some of the murky transactions of various players by winning their trust and refraining from exposing their business practices in our final reporting. After collecting this data, all costs of goods, services and financing were allocated on a single unit of production basis. The data was scrutinized carefully and all calculations of value added by various activities along the value chain were done multiple times on an excel spreadsheet to assure the highest quality, error free analysis possible.

The analyses themselves addressed each transaction point from input supply to terminal market for the commodities considered, determined a unit volume for each commodity (for example 1 kg of clean, dry maize grain), recorded the revenues and costs at each of these transaction points on the basis of the unit volume, recorded the time required for each transaction to take place, estimated the profit at the time of the transaction, and finally annualized that profit figure. The resulting data objectively identified high revenue points in the value chains for each of the commodities and also provided insight in terms of the time exposure for each transaction. The ultimate output identified low risk, short duration, high revenue transactions along the value chains that were currently un-financed.

The example below illustrates that to produce one KG of maize output; an input retailer will purchase wholesale inputs for resale to a farmer at a cost price of UGX 38.4 (including handling and finance). These inputs will be retailed to the farmer for UGX 40.7 leading to a net gain *to the retailer* of UGX 2.3 per KG of the eventual maize output. This is a 6% return on investment realized in a one month product cycle. Annualizing the 6% in one month gives an annual return of 72% (for illustration purposes only as the trade for maize inputs is seasonal).

Category of transaction	Value (UGX/kg)	Value Added (UGX/KG)	Return on Investment	Months	Annual Return on Investment
1. Input Retail					
Maize Seed (transport included)	(8.0)				
DAP	(13.0)				
Urea	(12.0)				
Transport	(4.0)				
Handling	(0.1)				
Overhead (rent and utilities)	(0.5)				
Commercial Finance (1.83%/month + 2% Commitment Fee)	(0.8)				
Total Cost of Inventory	(38.4)				
Input Price	40.7	2.3	6%	1	72%

Following the input retail analysis, similar analyses are then developed for the production itself (which begins by accounting for the producer paying the input retailer UGX 40.7 for the cost of inputs and adds costs of labor, land, etc.), the transport, the bulking and the marketing. It is essential to remember that all of the transactions are based on one KG of maize that will



eventually be sold on a terminal market so that value addition can be compared between points in the value chain.

Purpose of Value Chain Analyses:

It was realized very early on in Rural SPEED that the greatest constraint to financing agriculture was a knowledge gap on the part of lenders. Lenders often broadly categorize all agricultural finance as *production finance* and associate the same high risk to all aspects of agricultural lending as could be reasonably expected when financing rain fed agriculture. Using the practical approach of separating the value chain into distinct transactions and businesses, Rural SPEED was able to show lenders that outside of production lending, many other activities were short duration and high profit. Such things as input retailing, output processing, output transporting and output marketing are often very lucrative for both business people and the lenders who support them. Further, by increasing input supply early in the value chain and increasing opportunities for marketing later in the value chain, agricultural production is also encouraged though it may not be loaned to.

After conducting the initial three analyses of sunflower, cotton and maize, Rural SPEED constructed matrices to evaluate the risks involved in each potential lending transaction and developed risk mitigation strategies addressing each risk. The ultimate objective was to develop attractive financial products to address financing opportunities. As is conventional wisdom, every financial product is meant to perform two functions: maximizing profit and minimizing risks to the lender. It was exactly this logic that was applied in our analysis.

Financial Products:

Using the first three value chains to illuminate the business realities of the various transaction points for maize, sunflower and cotton, Rural SPEED endeavored to outline products that could be used to finance the most promising transactions. Below are three examples resulting from this analysis:

Maize:

It was observed that in maize marketing, little of the value added was being captured by producers. Marketing finance was largely unavailable and only well capitalized traders could participate in bulking, processing and marketing of maize. In order to address this, Rural SPEED developed a warehouse receipts concept. Farmers would deposit their maize in a warehouse facility, the facility would be managed by a bonded collateral management firm, the farmers would receive a receipt for their maize and then a bank could finance the farmers against their receipts. The maize could be sold after bulking and the buyer would pay the bank. The bank would deduct the outstanding loan to the farmer from the payment by the buyer and rebate the balance.

This system, after design, was launched with the Kapchorwa Commercial Farmers Association (KACOFA) and Stanbic Bank. The loan facility was approximately \$1M USD and the farmers delivered 3,000 MT of maize through the warehouse. The maize was sold to World Food Programme at a real premium to the farmers and the loans were paid back 100% on time. Rural SPEED initially subsidized the collateral management of the warehouse to prove the warehouse receipts concept at low cost to the farmers. Now, after Rural SPEED's



subsidy proved the value of the system, KACOFA has taken over ongoing payments for professional collateral management. Without value chain analysis, this financial product would have remained illusive and finding a lender would have been difficult.

Sunflower:

Sunflower was a unique situation in Uganda because the largest buyer, Mukwano Industries, actually forward contracts the farmers' production of this crop. Thus, in advance of the season the price is known and guaranteed. Forward contracts are used in many parts of the world to leverage credit as they can be assigned to the lender so that the lender deducts the loan from the payment and rebates the balance to the borrower. While lenders in Uganda also seemed interested to consider lending against forward sales, Mukwano itself was not eager for its outgrowers to begin borrowing, particularly when interest rates on agricultural loans range from 48% to 75% per annum. Mukwano viewed this as taking investment away from increasing sunflower output which was bad both for them and for their outgrowers.

As an alternative, Rural SPEED worked with local farmers to establish their own Savings and Credit Cooperative (SACCO) whereby they could save up for expanding their production and lend to themselves. The low cost of saving, versus the high cost of borrowing, for inputs and land are clear. Lending within a SACCO has the added benefit that the members pay interest to themselves and thus there is little capital flight from the SACCO membership away from the community. Rural SPEED initially established one SACCO (three others followed) which within a period of two months mobilized 1,700 members and UGX 7M in savings toward inputs. Again, without the value chain analysis, the high value added, the outgrowers' capacity to save, borrow and repay, and the size of the market would not have been understood and this new financing mechanism could not have been introduced.

Cotton:

Our initial impressions of the cotton value chain were very pessimistic. It seemed on the surface that producers were earning negative or close to negative returns and that ginners were earning extraordinary profits. Further research verified that producers were basically earning losses but that the ginners were in a situation where they were gambling on international cotton prices. That is, the ginners had not locked in a forward price for their cotton and were therefore always speculating. When a market player speculates, that player must buy at the lowest possible price because they don't know what price they can resell for. This was precisely the phenomenon Rural SPEED observed. This, of course, was bad for the producers, as they were earning losses, and bad for the ginners as they were not receiving adequate volumes (though their profit per unit was high, the volumes they processed and sold were low).

After some discussions, it was realized that the ginners would be ready and able to guarantee a reasonable forward price to producers if they themselves could also lock in a reasonable forward price for their cotton. Rural SPEED researched, with some specialized help, if it was possible and what it would require for the cotton ginners to hedge their price. In the process of researching this possibility Standard Chartered Bank came forward and offered a collar hedge (where the ginners buy a put option and sell a call option for equal premiums and therefore guarantee their floor price by trading away their ceiling price at no additional costs to themselves). The ginners have embraced this offer and will negotiate such an instrument



in March of 2007. This will, in turn, allow the ginners association to announce a profitable forward price to producers which will, in turn, make the producers' operations bankable as well. Once again, it was the value chain analysis that allowed light to be shed on the nature of this business and resulted in this new financial product.

Other Value Chains:

In addition to the value chains for maize, sunflower and cotton, Rural SPEED later conducted analyses for tea and upland rice. The tea value chain also revealed a low risk, short duration, high return financing opportunity whereby inputs can be provided in kind on credit and repayments can be deducted from regular payments to the borrower/outgrower. Rural SPEED is currently pursuing this product with local banking partners in Western Uganda.

Upland rice was also recently completed though the project has not yet come to the point of product development to support this under banked sector.

