Research in Action: Insights about Loyalty and Governance in Farmer-Based Organizations

Audio Transcript

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Moderator

Thomas Carter, USAID

Thomas Carter: Welcome all of you. This is an overwhelming turnout. And in a way I hope there are a lot of people listening in because this discussion topic is an important one. It's important from two standpoints. If you look at the value diminishing networks that affect agricultural production coops can and should play a very important role in the countries where we work just as they do here and in some countries where there are some emerging economies where they are very successful.

And understanding what leads farmers to either patronize or not patronize a cooperative, which in turn is related directly to their success or failure, is very important. Overriding that or overarching that is the question of relating research to the work we do. I am with the E3 Bureau, the local sustainability office. And for the last several years have been responsible for the co-op development program.

And we've tried to focus that program on research because with coops – and I would say this extends to much else that we do – understanding the obstacles, understanding the challenges to organizational groups, working together for mutual self-benefit of various kinds can and should be an incredibly important part of our work. But there are a lot of unanswered questions. And this type of research – the research that will be discussed today which the Ag Council supports and which the Bureau for Food Security funds – is extremely important.

I would like to express my thanks to the Bureau for Food Security for hosting this. I do hope the proceedings are shared widely beyond this particular group. Let me now give you an unpaid commercial announcement for Agrilinks which is the platform that the Bureau for Food Security uses to encourage the development of ideas and their sharing, the research into the work we do and its dissemination.

This is incredibly important. We're too busy as an agency sometimes to learn. And there's nothing more important to the value of our work than the learning that's done in forums like this. If you want to use Agrilinks you can get information on it by e-mailing Agrilinks at agrilinks.org. That should be too difficult to remember.

I would now like to introduce our three participants. The first is Lorenzo Casaburi who is with the Stanford Institute for Economic Policy Research. He's a post-doctoral fellow and somebody who has done quite a bit of work with USAID and with other donors that are relevant to the research that will be discussed today.

Greg Grothe is an old colleague of mine. He works with Land O' Lakes, one of the participants in our cooperative development program. I think Greg has brought an unusual combination of practical experience, skill, ability to work in the developing world, and a commitment to using research as a tool to do what Land O'Lakes does better.

Rocco Macchavello is a professor of economics at the University of Warwick. He works at the intersection of development economics, international trade, organizational economics which is particularly relevant to what we're talking about today. And he looks at institutional constraints and the challenges that face industrial development. He's a Ph.D. in economics from the London School of Economics.

As this point I'd again stress that I think this is a very important subject, both because of the content and because it illustrates the ways in which research can inform practice. At this point, Greg, take over.

Greg Grothe: Thank you Tom for that very nice, warm introduction and background here. Before I get started I wanted to take a moment and give some special acknowledgement. In addition to the great collaboration that we've had with Lorenzo and Rocco I wanted to recognize the contribution of a few others who have done extensive work with us and have helped inform a lot of the things I'll be presenting today.

So in particular professors Mike Cook and David O'Brien from the University of Missouri, the TANGO International Team including Lloyd Banwart and Mark Langworthy, and also Alfred Orora from the Kenya Cooperative Bank. With their support and work we've been able to learn a lot about cooperatives and in particular this topic around loyalty and governance and producer organizations.

As Tom mentioned Land O'Lakes is one of the implementers of USAID funded Cooperative Development Program. I've been managing Land O'Lakes' program over the last three and one-half years. And much of what I'll be presenting today is based on our research and insights gathered from working with vertically integrated dairy cooperatives in the Kenya dairy industry.

As I reflecting on some of the things that I've learned over the past three and one-half years working with dairy cooperatives, and some of the things I'm hoping we can take away from today's Ag Sector Council, I was thinking of the importance of understanding loyalty and what that means for improvement cooperative performance. So I hope after today we'll have an increased appreciation for some of the complexity around loyalty and certainly some of the key drivers from loyalty, especially things that we've gathered from some of the research we've done.

I hope that we'll also have a better appreciation for using data, insights, research to improve management decision making, to improve the ways that managers are able to run cooperatives. And finally I hope there's appreciation with a combination of folks here to recognize the importance of collaboration, in particular collaboration with cooperatives, collaboration with academics, and with development implementing organizations.

So why are we talking about loyalty in the first place? Why does loyalty matter? I think that's a fundamental question. Well loyalty to me – and I believe that loyalty is one of the main drivers of cooperative performance, cooperative financial performance, liability, and sustainability. Cooperatives around the world have developed many different mechanisms to deal with the issue of loyalty. Certainly we see cooperatives and marketing cooperatives and multipurpose cooperatives in the United States and other places enter into exclusive contracts with their suppliers and farmers in order to enforce loyalty.

In other cases cooperatives may use more of a form of a graduated sanction where members are penalized over time when they do not obey by the rules or the bylaws of the cooperative. In other cases we've seen more flexible arrangements. So experience from the dairy industry in India for example where cooperatives have set up flexible structures by creating a ratio of required delivery based on differences between then flush season and when milk is abundant and the dry season when milk is less abundant so that farmers –

They're required to give a certain amount but there is some flexibility built in with that arrangement. But the question arises: what if those types of structures aren't suitable? Either there's not interest from the members and management in the cooperatives to do this. Or there's not political will. There are other circumstances that are not allowing cooperatives to use more formal means such as contracts. And so what can we learn about that?

Well this is clearly the case that we've seen in many developing countries we've worked in. And the Kenya dairy industry is a good example. We've ween membership grow in a number of these dairy cooperatives. We've seen that member's value being part of the cooperatives. And members can be loyal to these cooperatives even though there's not some of these formal mechanisms do so. So that's what I'd like to discuss a little bit more today and particularly focus on several key drivers for cooperative membership.

So one of these is good services, and in particular I'm talking about services that are good value for their money. That's one thing we'll talk about. The second – probably one of the intuitive to me – is access to markets. I mean this seems like you know a fundamental reason for the existence of cooperatives and why someone would belong to a cooperative but I don't want to miss that one.

The third one, which is a little bit more complex in my mine, is these emotional benefits let's call them or associations that individuals have with cooperatives. And so I'll explore that a little bit further with some of the qualitative research we've done there. And then the final is trust in the cooperative and in particular trust in the cooperative leadership.

So the first thing we did is we wanted to understand why farmers are members of these cooperatives. So we asked over 1,000 farmers in Kenya. We focused on two different – what I'll refer to from here on out as clusters – basically cooperatives operating under one structure and different geographies. We work in two different regions in the country. And I'll refer to them as Cluster A and Cluster B. We asked these dairy farmers why they were members or what the value of the membership was.

And the first thing that came out was that they valued payment delivery – both the timeliness and the convenience of payment. These were the top factors. Services, which I'll lump in several things including different types of extension, training, access to inputs on credit, exchange visits, these types of things that the cooperative are doing that are service-oriented for the members was a close second. And interestingly price was dead last.

So this was very interesting to me because I think there is often a misconception that farmers are only price sensitive and if we just over the price a little bit it's going to change the way that farmers behave or whether they're loyal or not to a cooperative. And I know Lorenzo and Rocco will talk in more detail about some of their research and findings on this. But I think that's important for us to keep in mind, especially now that we look at non-members. So in the same geographies – some of them are neighbors with each other – were not members.

We asked them these same questions and we saw quite a different picture as you can see. Guess what ranked highest? The reason why they're not members is because of low prices. So the non-members clearly viewed the cooperative in a very different way. They were looking at alternative markets, alternative buyers, and they really put a premium – as you can see – on price. This was by far above the most important thing in their mind compared to other important factors like payments and services also referenced here.

We wanted to understand in a little bit more detail. Okay so famers who are members value services. We get that okay? But what is that doing for them? What is the benefit that's creating? So we took a look at the relationship between services used for farmers and the value that was creating. And we did this in both clusters. And we actually saw a pretty similar story emerge for both. This is an example from Cluster A. We took data in 2011 and then we surveyed the farmers later in 2015.

And we saw interestingly for those who were using few services _____ they actually had decrease in productivity. But those who used more services had significant increases. And we saw a very similar story come out in the Cluster B. And we're looking at the value of milk production per cow based on the services used. Now I want to be careful here not to imply causality because clearly farmers who are using more services may be gaining productivity.

But likewise farmers who were maybe some of the less dedicated or less sophisticated farmers may also be using fewer services and so there could be some other reasons behind that. But the point I'm trying to make here is that farmer who are members valued services. And farmers who are using more services were making significant gains in productivity based on the cooperatives that we were. So to me that's value. That's creating of value for the cooperative and the reasons why one would be loyal.

The second driver of loyalty that I want to talk about is access to markets. Here we also did a little bit of surveying of the cooperatives to take a look at what their different channels were in markets. And the cooperatives here are operating in markets where there's a decent amount of competition. So there were actually a number of other means by which members could deliver milk. It wasn't just the cooperative. You had traders and you also had private dairy companies who were not cooperatives.

And you had direct deliver to organizations – companies like a hotel. We kind of lumped hotel and other businesses just into one category for the purpose of this graph. So not surprisingly the co-op members are delivering primarily to the co-op. I actually was surprised how high loyalty was here. Eighty percent of deliveries were going to the co-op. And I think there's some nuance there and Rocco and Lorenzo will get into that in a little more detail. There are some seasonality fluctuations.

There are actually some significant differences between loyalty when it comes to morning deliveries of milk versus afternoon deliveries of milk. And it's really important to understand some of those nuances. That will come out a little bit later in these presentations. But the point is there are different ways to access the market. The cooperative members are using the cooperative to do that primarily throughout the course of the year.

But I also wanted to supplement this with a little bit of qualitative information to just get at more of like what's really driving members in the cooperative. We did a number of focus groups and talked to dozens and dozens of farmers. And I just captured one comment here. I think it was representative of sentiments that we heard throughout these focus groups from a number of different farmers. This one in particular was a woman who is a dairy farmer in Central Kenya.

And her quote was, "Me, I can never sell my milk to another buyer other than the dairy. I do not have the strength to chase the brokers to pay. I also would like to see our dairy remain with us so that we can have a stable milk market." And to me it's those last three words that really struck me: stable milk market. So it's not just about a milk market for today. Clearly there are several different choices of market today. But a stable milk market.

So to this person the cooperative's benefit was that they were offering that stability over time to have access to the market. And we categorize and looked at a number of different things which I present in bullet points here as far as the general themes that were coming out of these focus groups. So I already talked a little bit about some of these services, the knowledge, the trainings that the cooperatives are giving are highly important, and the benefits of increasing productivity through the access to inputs.

The third thing was the reliable milk market and reliable payments. This definitely came out very strongly when we looked at some of the focus group and qualitative information. The third driver I'd like to talk a little bit more about is emotional benefits. And this is really about the association one has with the cooperative. This might not be very strange in other worlds. And certainly with branded products companies will talk about the transference of that brand from generation to generation.

You bought this product because your dad or you mom did right? So it's really not surprising that cooperative members may also have very similar types of associations with their experiences with the cooperatives. And so this has been stated in the literature but we wanted to just understand this a little bit more in the context of the work we were doing with dairy cooperatives. We first just wanted to assess does membership actually look like?

And interesting members of these dairy cooperatives have been members for a long time. You can see the average here is 16 to 17 years of tenure with the cooperatives. We're talking about individuals who have been with the cooperative quite a long time on average. And this didn't vary depending on the services that they were using. Some members have been there 16 years who were using just one service. And others were using multiple services there for many years.

We took another angle at this through the focus groups sand asked members about their sentiments as being part of the cooperative. And so I've just chosen a few of these to highlight just as examples but we saw these throughout. To me I'm picking up on some key words throughout here. In one case an individual stated, "For over 30 years I've sold milk to the dairy." That tells me a long time – really a longstanding relationship and work with the cooperative. The other used the words "exciting experience."

Wow exciting experience. So they described the relationship with the cooperative as an exciting experience. Well that to me is an emotional connection an individual has with the cooperative. The other one actually talks about an experience they had that wasn't so great where they actually left the cooperative because of some management issues and came back. Yet despite that they talk about how they want to be members forever and will not cease to be.

So clearly I'm looking at the choice of words and there are things that are coming out here that show that strong association and connection to the cooperative. And we think that is one of several things that is really driving loyalty in these situations. The final thing is around trust and cooperative leadership. So this is another area that's been studied quite a bit. There's been a lot of research on the role of social capital and trust and cooperative formation and collection action.

We wanted you to just understand this is a little bit better in the context of how is trust playing out in these dairy cooperatives that we're working with? Once again we had to look at two different clusters, two different regions, and collection some data on this. And it's striking to see the difference between members and trust they have in these institutions versus non-member trust. So across the board the trust levels remain relatively the same if you're talking about things like church, family, government.

There's not a big difference between member trust and non-member trust. I put a star next to the ones that were statistically significant. There's a huge difference in the perception that non-members have in trust in the cooperative and members have. And then you can compare that to traders who both – You know in particular the members have significantly lower trust than the non-members have a high trust in. And that correlates well with our data that we saw on where they're actually delivering the milk.

We sliced this a little bit different way and said well let's compare the levels of trust that farmers and these cooperatives have across several different buyers or ways that they could market their milk. And what was interesting here in both clusters the traders – Sorry the trader in Milk Shed B was actually higher than the cooperative. And the private dairy in Milk Shed A was higher than the cooperative. So this was actually saying that members trusted an alternative need better than the cooperative in each case.

But they also, at least in Milk Shed A trusted the cooperative more than they did in Milk Shed B. So what I haven't showed here is a layer on performance of these cooperatives. And so as you might expect one of these cooperatives is actually performing quite better than the other. And that was in Milk Shed A. So the cooperative that had the high levels of trust with the management and with the cooperative had significantly higher levels of performance. And we looked at the financial performance and other metrics.

So this just highlights again the difference between the satisfaction levels. Maybe another angle to trust between high performing and low performing cooperatives that we saw as we applied the financial metrics next to these. And you can see across the board that that is high performing had a much stronger appreciation for and satisfaction with the cooperative.

So before I turn it over to Rocco I know a lot of you are probably asking well so what? What does all of this really mean for me? So I'm maybe an implementer. I may be doing something directly working with a cooperative. What can I take away from this? I think a few things. And these are really things that we've been working on in partnership with the cooperatives that we work with not only in Kenya but in other countries around the world.

One is while I don't expect cooperatives in many developing countries to fund this type of research or data collection the importance of using data to drive management decisions is something we really, really emphasize. And you can do that in a fairly simplistic way. That was one key thing that we're focused on. The second is we talked about services and the importance of services to drive loyalty.

So services can be differentiated. You also have to understand from the farmer how are services adding value. We're spending a lot of time also focusing on how can services be a differentiator combined with some of these other factors that influence loyalty to really improve the performance of the cooperative. So with that I'll turn it over to Rocco who is calling in from the U.K. He will share some of his work from Kenya and other countries. Thank you.

Rocco Macchiavello: Thanks Greg. Welcome everybody. I'm sorry to be in the U.K. and so only join you online. Before I start let me just say that my main background is on sort of studying organizations at large and also just farmers organizations and corporate. So in that sense I'm really very much looking forward to this event to deepen my learning and my understanding of this particular type of organization. At the same time I think that sort of coming from a broader sort of perspective maybe my tale can bring in slightly different forms.

And before I start I also would like to say that there are many different people that I'd like to thank for the research that has sort of underlined what I'm going to describe. So what I'm planning to do is basically start by telling you a little bit – just a small story – that comes out of the dairy cooperatives we work with in the … region in Kenya. This is based on joint work we're doing. I think you see that the story I'm telling you from this cooperative is somewhat specific but certainly not atypical.

I'm sure that you have all very similar stories from cooperatives in other places, in other crops, and so forth. And what I want to do is to try to take away some lesson from this specific story which can maybe be applied to understand across organization variations in performance. Let's get to the story. So basically Lorenzo and I in partnership with Greg we set up a partnership to work in close collaboration with a large dairy cooperative in Central Kenya.

And when we first talked with the management of this cooperative the problem of low loyalty and systematic site-selling of afternoon milk was presented to us as one of the key challenges. At some point in February 2014 there was the general assembly where the members of the cooperative met. And again the board very forcefully restated the fact that there are a number of formal provisions that discourage or were meant to prevent site-selling of milk.

In particular the statute of the cooperative, the bylaws of the cooperative, say that you know if you're a member you have to sell all your milk to the cooperative apart from some milk that you keep for private consumption. And if you don't do that there will be financial penalties associated with it. The cooperative might refuse to buy your milk when you have excess milk. And eventually if you still do not comply you might face expulsion from the society – from the co-op.

So we were fortunate enough to work in partnership with the cooperative so that we could analyze the delivery of the farmers following these general assembly which the board restated again very, very loud and string these provisions. Basically it's just at the meeting the management of the co-op said, "Hey guys we have a problem with loyalty. Remember these are the penalties that are associated with not complying."

And what we see is basically that I'm going to plot essentially a daily average of daily deliveries to the cooperative between two different groups of farmers. The gray line is the farmers that were already delivering. So those were the loyal farmers before the general assembly. And the black line instead is the farmers that were not delivering. So those are the farmers that were in a way target of the announcement.

And the first lesson that we see is that after their assembly – which is the red line – slowly, slowly the deliveries from the farmers that were not being loyal before sort of improved over time. So the first lesson is that there seems to be a sense in which this announcement restating what people were supposed to already know sort of increased a little. At the same time this average positive effect – you can see a lot of it originating.

Some of the farmers that were not loyal before started delivering or increased their deliveries back to the cooperative. But a large number of farmers as well exited. They completely left the cooperative. We're interested in also pointing out the fact that restating these bylaws increased if you like loyalty but in a very heterogeneous - you know this average increase – you can see a lot of it originating. The cooperative also sent out letters to the farmers especially with the same message.

And we see a little bit of it crowding over these two things. If you think of the members that attended the general assembly are maybe more engaged among those that were targeted and then also received the letter, the letter seems to have had a slightly negative effect on the delivery. So it seems like maybe you have some kind of intrinsic motivation. This is what takes you to the assembly in the first place. And then if you really come – management comes out in a very strong manner also with the letter you might alienate some of the members.

Okay there was this kind of initiative to bring back loyalty and that initiative had some positive effect. There was a lot of heterogeneity. This is actually another part of the story that I find interesting more interesting. The part of the story that I find more is that of course many farmers still didn't comply. And so it's not that loyalty was completely sort of rebuilt after this. What did the cooperative do? Did the cooperative implement the punishment and then threaten of the assembly and through the letter?

Of course they didn't. So in other words we have a case – and this is the part of the story which I think is common across many other organizations – there's a problem with loyalty. There's a letter. There are cooperative bylaws. Both of these offended and somehow it's just very hard to enforce punishment and enforce the formal rules of the cooperative. So what we did with Lorenzo is that we went to the non-complying farmers. But these walls that were still not – still did not improve their loyalty after the general assembly and the letter.

And tried to understand a little bit their views and tried to gain some insight for why it might be difficult for the organization, for the cooperative, to essentially enforce the bylaws. And what we see in this survey that there is a lot of heterogeneity among these farmers on what they perceive to be legitimate policies that the cooperative could implement in order to gain their loyalty back. And I think what we learned and we sort of walk away from that … like say, look this is certainly a well-intended organization, maybe not the best functioning cooperative you will find in Kenya or East Africa.

I think the general message here is if the heterogeneity and the perception that the members have about what the cooperative is supposed to do is what created the challenge in implementing or in sort of carrying forward – sort of implementing the policies. And so it almost makes me feel like saying that a well-functioning cooperative is a cooperative or generally a well-functioning organization – and cooperative being a special case – is one in which the management has succeeded in building relationships with the common understanding what the organization is about.

So it's through this lens of sort of common understanding and building relationships that I want to think a little bit about across organizational differences or differences across cooperatives in performance. The lesson I take away from that simple story is the idea that what we want to look for to understand what differentiates organizations that work well from those that do not work well is the underlying idea that a lot of what the management of the organization should be focusing on is building, sustaining, and nurturing relationships with the members of the organization.

In our case since we are talking about cooperatives this would be the farmers. And creating a common understanding about what the organization is about. And somehow we felt that in the specific Kenyan context we were working in with Lorenzo we had some evidence that that particular organization had not succeeded in creating a common understanding about what was legitimate from the point of the organization in terms of policies to deter… known … site selling and to build a loyalty.

And so now I'm going to go in a context which is going to be the coffee sector in Rwanda where we have survey about 200 organizations. And so I can compare across organizations the characteristics that seem to correlate with good performance versus not good performance. So we have been surveying the coffee mills or coffee washing stations. These are essentially firms – either private sector firms or cooperatives – that process coffee from the farmers, essentially wash and dry the coffee that is produced by the farmers, and then sell it to exporters and to other intermediaries.

And linking up with what Greg said what we were kind of trying to measure in this experiment is the extent to which these different mills or these different washing stations use services or provide services to the farmers. In particular, whether they provide input before harvest, whether they buy on credit, whether they make second payment, whether they have farmers accessing loans or possibly help farmers when farmers need help even away from the harvest season.

And although the figures are a little bit fuzzy they measure this difference – the mention of services. And one thing that we see is that all the different types of services, the extent to which these different organizations provider services, is strongly positively correlated with each other. So in other words it's not that we see an organization that offered one service and an organization that offered another service. We tend to see instead that these good practices offering services come clustered with one another.

So there's something … with that organization but they were functioning. And all the services are provided. Another organization with a not so well functioning and no services provided. And the extent to which these services are provided very strongly correlate with one, the trust that the farmers report with respect to this organization they supply their coffee to. And two, the performance of the organizations.

Okay so it seems that organizations that do well are those that provide a lot of these services and provide all these different services, not just some and not just others. Suddenly we are an environment in which it is costly to provide the services and you know is an environment where all of these services have to be provided through what I would say relationships by which I mean that if I give a credit to the farmer and then the farmer is not loyal I'm not going to take this farmer to a court.

So the farmer must be willing to deliver the coffee and to repay the loan out of the value of the relationships that the farmer assigns to the organization. And so one implication of such finding is that when we – You know if the scope of an organization should be to sort of build, sustain, and nurture a relationship with the farmers, competition from other organizations can make that job harder. So when there is more competition and we had good variation across these organizations in the extent of competition that they face we see that the use of this relationship is significantly lower in places where there are more mills.

That also means that where there is more competition trust will be lower, loyalty will be lower, and organizational performance will also be lower. Now these graphs that I put are about average relationship in an industry in which we have out of these 200 organizations approximately half of them are cooperatives and half of them are private mills. So I'm also interested in thinking a little bit about the comparison between private organizations and cooperative organizations.

What I just told you: they need to build the relationship, the fact that this relationship takes the form of services, the fact that these services are clustered with each other, and the fact that the desire to build these relationships where there is more competition, this holds true. It's true both for cooperatives and for private organizations. However what I think is distinctive about cooperatives is that cooperatives are relative to private organizations much more fragile.

They are a more fragile institution which means that they can bring more value but they can also do worse. And so this last figure, what it plots, is some measure of performance which essentially is a measure of unit processing cost. And I plot the distribution in red for the cooperatives and in blue for the private mills. Although the average performance is similar between private and cooperatives in this industry the red line shows much more dispersion in performance among cooperatives than among private mills.

We see a bunch of cooperatives that really do very, very well but we also see cooperatives that do fairly poorly. While we do not see private firms do either very, very well or do very, very poorly. So there is potentially more dispersion among cooperatives than among private firms. And then this I think begs the question as to why that might be the case. I think the answer is that cooperatives relative to private firms are more fragile institutions. They're more fragile precisely from the point of view of building relationships with the farmers.

Why are they more fragile which means that they can do worse but potentially can also do better? Because the organization can build a much deeper relationship with the farmer and the farmer feel much more engaged by the organization. That means that potentially the relationship that can be built has much more legitimacy along the lines of what sort of Greg was discussing. On the other hand the management is possibly more opaque.

There's a problem of the cooperative being a public good. So there's a problem of monitoring that public good. There's a problem of potentially run so that if other farmers abandon the organization my incentive to abandon the organization are stronger. And therefore is the management fails to create the common understanding then things can really go badly – potentially worse than what would happen for a private company.

With this kind of general thought let me hand it over to Lorenzo who I think will speak about very specific elements or very specific services that can be provided to the farmers by these cooperatives. So Lorenzo the floor is yours.

Lorenzo Casabur: Yeah thanks very much Rocco, great. So both Greg and Rocco have proposed in different ways a comparative approach which they were providing evidence on different types of services and were comparing different types of organizations. In this last presentation we'll go very much in depth in one particular domain which is the provisional financial services in which co-ops may play a big role. Before doing that let me just say that working with Greg and working with partner cooperative … staff and management has been a big privilege for us who learned a lot.

And what I think we probably brought is some methodological contribution out of the research and out of the insights stem directly from the inputs that our partners have provided throughout the process. There has been a lot of work on the role of cooperatives in providing financial services when financial markets are imperfect, when access to banks is complicated, when access to insurance for rural farmers is hard to achieve.

And most of this longstanding work has focused on two types of financial services: credit – getting loans in kind or in cash – and risk protection like price stabilization … guarantee, and so on and so forth. In this research that we have conducted over the past two and one-half or two years we focused on a dimension of financial access that is somewhat less understood or less studied, which is access to savings.

Over the last few years there's been growing evidence that difficulties in savings are as important as difficulty in accessing credit to sort of generate investment, growth, and entire development broadly defined. In our initial work when we started working one thing that came up a lot was that one service or implicit service that farmers value concerned the frequency of the payments that the co-op provides. This is a dairy cooperative of course.

In this type of arrangement the farmers are paid on a monthly basis. So they send milk to the co-op every day – actually twice a day – in the morning and the afternoon. But the co-op unlike other layers like these other trades that Greg was hinting at is basically the only agent that pays on a monthly basis. So initially we weren't sure if this was a good or a bad thing from the perspective of the farmer.

And then from the very initial focus groups that we ran, consistent with some other previous work that was done, we found overwhelmingly that a lot of the farmers that sent to the co-op valued the fact that the co-op can hold the money for a month and credit will pay at the end of the 30 days. And why is this? Because these payments have to achieve what we call saving goals which is the farmer needs to have a lump sum in their hands to make purchases, for instance to feed the …, their dairy fields and school fees.

While being a small amount every day implies that it's a risk that this money will be wasted, that it will not be able to save it on this…. So crucially the co-op has what we could say a competitive advantage in this setting. For the most part the … and he … are working. Farmers trust the co-op even more than traders. And in particular they do not trust the … traders to hold the money until the end of the month. They are worried that if they leave the money with the trader they will run away and never come back.

And this relates to some of the points that Greg was mentioning about, "I don't have the strength to chase this payment." And so the interesting insight that we put aside is that farmers achieve a financial portfolio by a portfolio of traders. And in particular a lot of the farmers in this area sell both to the co-op, and in this way they achieve what we call saving or the … setting goals. But they also obviously need liquidity to buy food every day. And this is what the trader's daily payment provides.

So the insight here is that the output market, a buyer-seller relationship, provides an indirect way to achieve our balance in financial portfolios for these farmers. So as a second step after these initial focuses groups we ran a survey with about 600 farmers that sell both to the traders and the to the cooperatives. And what we find – maybe I won't go into detail in each of these points – is a lot of farmers say – About 80 percent say that they have saving growth that they are trying to achieve. Again the kind of thing I want you to think about is for instance buying a bag of feed that is worth a couple of weeks of revenues from each cow. And then they mention overwhelmingly that the co-op helps me reach these saving goals and that they will reach the goals less if the co-op for instance were to pay the weekly rather than every month.

Okay so the frequency or the low frequency of the co-op payment is reported by the farmers to help them achieve these savings. Why they could be valuable – these monthly payments but sort of the underlying report is what farmers have lump expenses and so they will need to get a lump sum to make these expenses. The second is that in this form of delayed payment or in frequent payment money is not accessible. So there is growing evidence from behavioral literature that the set of agents, not just farmers but small business owners and households have a demand for commitment devices.

They worry that if they have money in their hands they will waste it maybe my brother will come and will ask me to spend the money on something else. And they value the option to tie their hands, to diminish access on a daily basis until this target is reached. And this commitment is something that banks are not necessarily in a good position to provide very often. We're finding local financial institutions that do not provide financial products with these commitment characteristics.

And also in general banks have very high entry costs for small players. For instance a lot of the saving accounts that are available in the region a very high deposit requirements that they may not be a good fit for small and medium farmers. Okay so the second step of our study was …. And now I want to also discuss briefly a contribution that I think is growing and that we're very excited to bring to this setting which is the use of actual experiments to test hypotheses.

So there's been a growth in randomized control trials to evaluate what can really work and what cannot work in broadening the development aid context. So in theory how would we want to test the hypotheses that follow the farmer's … frequent things? We would want to change the payment frequencies while keeping costs and … and making and hypothesizing that farmers value the co-op in frequency payments. But there are other services that the cooperative can maybe provide.

So I need to be able to disentangle the specific value that farmers attach to these monthly payments from these other benefits that the co-op may be providing. And so in partnership with the management and the staff of the cooperative and … we designed two experiments to … to this preference for infrequent payments. And in the first experiments 100 farmers that sell to this cooperative were offered the opportunity to choose between monthly payments and daily payments.

Okay so at the beginning of the month we say for the next month which kind of payment do you want? Do you want to be paid every day or do you want to be paid at the end of the month? And also for farmers that choose to be paid every single day they add a 15 percent price increase in the price per liter of milk. Okay so we made the option to take daily payment very appealing from a purely price perspective. And this goes back to Greg's initial point which is maybe prices are not the first order thing or the only thing that farmers want.

So this is experiment one. And in experiment two we design a slightly more sophisticated contract which we call a flexibility option. So in the flexibility option that we offered to another sample of farmers the farmers in any single day can decide if they want to cash the amount for that specific day. And they can do it as many times as they want. They can do that every single day or they can do that one day or they can do that never.

So in this flexibility option basically the farmers if they yes for the next month I want to have this flexibility option they are not committing to anything. They are not saying I want to be paid daily. They are just leaving the option open. Okay so in economics we say this is a dominating contract. You should basically always choose this contract unless what you are looking at is exactly – sorry what you are looking for is exactly a commitment device.

By turning down this flexibility option the farmers are saying look in the next month I do not want to have the option to get payment on a daily basis because I value tying my hands. I value the fact that if my brother comes to me and says, "Hey why don't you get the money today so that I can use it for something else," I can say no, I don't have that option. So there are two results that I want to emphasize.

The first one is that in both experiments the daily versus monthly and the flexibility versus monthly options – a lot of farmers, between 80 and 90 percent; say I don't want to have these daily payments. Or I don't want to have this flexibility …. I prefer to have the monthly payments. And if there is one figure that I want you to remember it's that this bar shows that 84 percent of the targeted farmers say that they prefer to have the monthly payment as opposed to getting the daily payment with at 15 percent price increase.

So they forego a substantial price increase to have the monthly payment okay? And the second we are sort of in a follow up survey asking opening why do you make this choice? And what we find – obviously these are answers that I've coded …. But what we find is that about 45 percent of the farmers say that there are savings goals that they are trying to reach. And about 25 to 35 percent of the farmers say that they don't trust themselves in handling the cash.

So if they had money on a daily basis they would be worried that they will not get to this lump sum that is required to make this … purchase for feed or for …. There were some other interesting answers which is about 15 percent of cases – so small but non-trivial share – we interviewed the person that manages the daily business which is in many cases the wife and she said look I don't want the daily payment because the bank account where the money goes at the end of the month is my husband’s.

And so I cannot say to my husband, "You're not going to get this money at the end of the month." So the wife says my husband wants the money in the bank account at the end of the month so I cannot take the daily payment. Okay that's a different explanation. It's a bit outside of our main mechanism but nevertheless is relevant for about 15 percent of the farmers. So these results – these experimental results – show consistent with the survey evidence that farmers have a strong reference for infrequent payments.

And that this preference is on the top of benefits – other benefits that the co-op may be providing. And indeed once we decide we will also ask questions about traders. One thing that we find is that the majority of farmers say that they trust traders less than the co-op and that they will never want the traders to pay on a lower frequency basis – like to pay monthly rather than daily – because they are worried that the traders would escape if they were holding money of the farmers for a long period of time.

So in general farmers do not trust traders and do not want them to pay monthly. And this heterogeneity credibility and trust generates a competitive advantage in the co-op in this financial service provision. One figure I don't have here is also that we also interviewed some farmers that do not sell to the co-op. And what we find is that farmers that say that they sell to the co-op are more likely to state that they are trying to save. And they are more likely to say that they reach their saving goals.

Consistent with the idea that the co-op does play a role in dissecting and achieving financial goals. Now the last figure that I want to mention before wrapping up goes back to this idea that a lot of farmers sell every single day both to the co-op and to the traders. In particular a lot of farmers sell the morning milk to the co-op and the afternoon milk to the traders. Why we hypothesize that one – maybe not the only but one reason why this happens is that they are trying to achieve a balance between saving and liquidity by selling to buyers that pay a different frequency.

And so what we did in the survey was we asked to this sample of farmers how do they spend money that comes from different sources? In particular how do they spend money from monthly payments versus money from daily payments that the traders make? And what we find without going into too much detail is that the share of money coming from traders that is spent on food consumption – this gray bar – is very high.

This daily payment we primarily use them for buying food on a daily basis or other goods that they need to buy at a high frequency. While a disproportionate share of money coming from the cooperatives – so this dark bar – are spent on daily inputs. And these daily inputs have a lump component. I cannot buy a bit of feed every day because these are sold in big bags. And so this lumpiness of consumption or investment is important to explain our proposed mechanism.

Okay so just to sum up the traders funds the daily consumption while the co-op primarily lump expenses. Daily inputs are also school fees. With this you know focused on one specific financial service which I think was a nice contribution building on other types of financial services that have been studied before. So let me wrap up and propose five takeaway lessons and then open the floor to Q&A.

One message that I want to give you is this is a market where there a lot of imperfections. There are imperfections in financial markets and imperfections in output markets. Access to services is complex. And so what obviously rises is an important determinant of competitiveness is not necessarily the primary driver of loyalty in these settings. Other types of services like this financial service I discussed ….

The co-ops provide a range of different services and understanding which ones are more … to the farmers and which ones are understood as being more important is an important question that any organization and researchers have to figure out. Building trust is an important driver of loyalty. And it's not an easy thing to achieve. We've seen it in this setting the co-op can compete because farmers trust that they will make payment at the end of the month as opposed to running away.

But for other types of services you may require different types of trust that are not necessarily easily built. And now specific research what we find out is that loyalty maybe is we mean how much milk I sell to the co-op and how many members sell to the co-op is influenced by specific financial needs that the co-op has. And in particular there is a very stark co-existence in which many farmers sell both to the co-op and to the traders is influenced by the fact that these farmers have a need both for a frequent cash flow and of achieving saving needs in the meantime.

And then finally – and this goes back a bit to Rocco's ending point – we see a wide heterogeneity in co-op …. And so understanding what drives this heterogeneity that may be larger than what we see in private companies is important. We've talked about loyalty, competition, and managerial ability is important drivers of the dispersion in co-op performance while this is just the first step. There is much to learn.

So with this let me conclude. Thank you again for your time and open …. Thank you.

Questions & Answers Transcript

Thomas Carter: So we're now open for questions and answers.

Lorenzo Casaburi: So the daily payments are mostly done in cash or through mobile money like MPeso.

Audience: ... make a difference?

Lorenzo Casaburi: So definitely the fact that the co-ops makes direct deposits into the bank helps. That's one element to the infrequency of payments that matters. But to some extent the second experiment also shows that the fact that the money would help. So the commitment component also plays a role. It's not just the transaction cost side but also this commitment component.

Audience: I just wanted to make sure I understood. So it does influence the preference if the daily payments … because the money isn't available that it's easier to save. But there's still a strong preference with infrequency.

Lorenzo Casaburi: Exactly, exactly.

Audience: Thank you.

Moderator: This is a question that came up during Rocco's presentation so perhaps Rocco will want to chime in but you can chime in as well. Kind of a start question about private service providers: if cooperatives are struggling why not simply put the emphasis on private service providers. If a cooperative collapses won't the private service providers take over?

Rocco Macchiavello: Yeah absolutely. I think that's perfectly fine. And in fact in the specific sector from which the figure is coming – for coffee – it is indeed the case that a lot of the struggling cooperatives have been – The mills owned by a lot of the struggling cooperatives have been kind of rented out by private sector providers. So it's totally fine. I guess the market in a way sort of allows – The heterogeneity figure showed that. There are also some co-ops that do well and that there are some co-ops that do not do very well.

And then the question is one way to improve the working of a co-op is indeed for private guys to come in if they are better managers. Another way is to try to improve the performance of the co-op. In some of these agricultural chains again it depends on context. I think that the concern is that the cooperative might be …

in a better position to maximize the welfare of the farmers because the … downstream processor said they might – It was likely different incentive.

But it might be an argument for why well-functioning co-ops might be preferred. But hey if the co-op is not functioning well it's totally fine for private guys to step in. I mean at least that's my view. There are I think – But the reason why sometimes cooperatives are kind of helped or subsidized in that is because they give a lot of political control. These I think are not the good reasons to help the co-ops. But there might be very good reasons to have co-ops and some which I've mentioned before.

I don't know whether that answered your question.

Greg Grothe: I mean I guess the thing I would add to what Rocco has said and what came out from his research is the fact that in this particular industry there's a mix. So it's a combination and we talk about the nature of competition even looking at the dairy industry. Farmers have options in these cases. They're making different choices and that's okay. Farmers have a choice. Some are belonging to cooperatives. They see value in doing that.

Some are selling to private dairy. Some are selling directly to traders. So we're seeing various different models working and being applied. But what we're trying to show is that there are some reasons possibly behind what's driving this. And so understanding that how does that help us in working with these types of organizations and in working with farmers and farmers groups?

Rocco Macchiavello: Yes and sorry Greg just to remake the point that in a way what that particular context around the firms was that the best performing cooperatives perform better than the best performing private firms. So a well-run cooperative might be at an advantage, maybe precisely because it establishes a stronger partnership with the farmer.

Audience: As the woman said in the quote making sure that there is a future market for the … is important as well. So did your study look at those types of things?

Lorenzo Casaburi: Not explicitly in these studies that were represented. But obviously we completely agree that historically the market … the cost has been and today is still very important. Though I think that in understanding the relevance at least for Kenya dairy sector one also has to take into account that the sector is probably more competitive than it used to be. And so maybe this marketing role does not necessarily play such a role as 10 or 15 years ago. But it's not something we addressed directly in this.

Greg Grothe: We didn't directly ask the question either but I think it's an interesting nuance to the access to market piece. And you know some reasons behind that I think … and anecdotally that's what we're seeing. And maybe there's an opportunity to dive into that a little bit more. That's a very good point.

Moderator: All right we have another question from Moderator. A question from Stephen Mink who says in numerous countries such as Indonesia, Vietnam, and Cambodia true farm member-driven co-ops are struggling to emerge from long periods of political meddling by political processes. And trust has to do with overcoming the resulting memories of farmers that political forces have distorted many decisions in the cooperatives.

Your research base does not really speak to this context but do you have any observations on countries that have done a better job of transitioning from periods of such political interference in cooperative governments to a healthier member-accountable cooperative leadership?

Greg Grothe: That's a question that we could spend a whole separate Ag Sector Council on so thanks for raising it. I'll just speak from our experience working in the dairy sector in Kenya for example. I think one of the interesting things about the cooperatives we've been working with is that they've been around for a very long time. I talked about the average tenure of membership that these cooperatives have gone through a number of different iterations over decades of time.

And so one of the important things that we work with them on is recognizing how to overcome these challenges. These challenges of political interference are not unique to the developing world. We've gone through them on our own soil as cooperatives have evolved. The confidence to be able to directly address those to be able to advocate is really crucial. And in many cases they've done this. I pulled up a quote from one of the co-op farmers in the focus group talking about how they actually exited the cooperative because of some of the governance and leadership challenges.

And yet remained and came back. And so there are examples of a dedicated membership, one that has some governance structure, can help overcome some of the different challenges they face.

Lorenzo Casaburi: So this is not something that we addressed actually in the research but I think that in terms of future research endeavors it would be very important to map and to collect data on political power turnover within the co-ops to which extent we see management changing to an extent. We see board members changing. Do members expect that they or somebody else in the family could take a lead role in the co-ops in a few years? We did a bit of this preliminary data collection in our survey though it wasn't a service.

But I think that especially as one moves towards a more compatible approach where many data for different organizations are collected these are data that should be varisized to quantify this …. And maybe Rocco and more in this one ….

Rocco Macchiavello: I just will chip in a couple of …. First of all I agree with the key question and I think it's a very important one. There is some work in the context of India and sugar cooperatives that suggest that inequality land holdings seems to correlate – among farmers seems to correlate with poorer performance of the cooperative. And this is basically because if you have a cooperative that is dominated by a few large farmers those guys might end up having an easier time essentially diverting resources away from the cooperatives towards their private benefit.

And you know this can happen paradoxically through the provision of services that benefit disproportionally larger farmers. So this I think puts a – And you know to the extent that some historical legacy maps into this inequality I think that could be a determinant. But then again I think in the context of Rwanda is a promising one to look at. I mentioned that we see a big variation across cooperatives in their performance. And obviously their recent history of Rwanda has been … by very negative events that have potentially have very negative consequences on the general level of trust and the level of trust in those that hold power at the local level.

And yet we see that in that environment some cooperatives are really thriving and doing very well. Now maybe this is just in the micro an illustration of kind of the broader transformation of what is happening in the country. But it does also suggest that there might be scope for overcoming very negative legacies. But I wouldn't know how that can be achieved or who has achieved it and how the people that have achieved it are different from those who didn't. So I think it's a great question.

Moderator: And we have another in-room question.

Audience: Is there any correlation between the size of the farmers in terms of the amount of the milk delivery developed and who sells their milk to the cooperative and to the … traders? Is there any correlation between that?

Lorenzo Casaburi: That's something we looked at in one of the surveys. We collected a random sample of farmers regardless of who they were selling to. And from that we see that in our setting in … in Central Kenya farmers that are selling to the co-ops is slightly larger. These are all very small farmers. So the number of cows is between one and three. And I think farmers selling to the co-op are something like 2.7 versus 2.3 cows. So it's a small but significant distance. Now we don't have evidence for that but that's consistent with the fact that if the co-op's payments had to save you will build up your stock of cows.

Obviously I don't have any direct evidence to validate my example.

Moderator: All right this is a question from … - quite a mouthful. I hope I pronounced that correctly – who asks for some concrete suggestions on how cooperative management members can build strong relationships with cooperatives in addition to creating common understanding of the purpose of the cooperative. Is that quite a broad question or is that one that you can address?

Greg Grothe: No I think it's an important one and I think it falls under – In my view it falls under the trust equation. And so that's multi-dimensional but as I think about it it's two ways. One is cooperatives creating a mechanism to listen and to hear member grievances. And so what we've seen is that's easy when you're a smaller organization. Maybe you're a co-op with 50 people. If you're the manager or the leader of that cooperative it's easy for you to hear those voices.

And you become large, integrated thousands of members, that becomes tough. I've seen situations in other countries where there's a land of 100 farmers waiting to talk to the chairman of the cooperative of the board. And so figuring out a management structure to deal with those grievances and also listen is critically important. And then likewise the flip side of that is communicating out the purpose and vision of the cooperative and having common agreement and alignment.

We saw examples and perhaps Lorenzo and Rocco can comment more on this experiment about the bylaw changes and how that disseminated to the cooperative in two different ways. And so they did some interesting research comparing those two ways. I see it both as a listening mechanism and also as getting information out to the membership.

Audience: I have a very broad, big picture question. It doesn't directly correlate to your research but I'm just curious. A lot of us on the implementation side are tasked with very concrete indicators on capacity building of farmer-based organization and co-ops. How can we pitch or convince donors that it's important to also measure feelings of trust and loyalty and how that can be an indicator of success?

Thomas Carter: What you've focused on is critically important and it's something that I wish we could convince those responsible to look at the types of indicators that are correlated with the long term success rather than the short performance of these types of institutions. Our office separately is working with a program called LocalWorks. And we are going to be proposing indicators or using indicators actually that are quite different than the norm.

We'll be looking at something very similar to this research. We'll be looking at the net promotor score of organizations that serve constituents. We'll be looking at any movement in the hubs of networks from external to internal resources. And we'll be looking at changes in social capital indices over time. But we have the luxury of about a ten year program so it's something that these types of measures can be descended. But I think really the responsibility for this type of change rests in the people in this room and the people on the webinar.

And that is trying to explain to and convince decision makers within this agency and the broader development community that there are measures that are far more significant than the ones we use and ones that basically do correlate strongly with the long term success of these types of institutions.

Rocco Macchiavello: I also think for some reason it's always perceived that collecting information when … is like trust relationship and social capital is prohibitively costly or too hard. While I think that social scientists have developed and tested by now modules that are pretty standard and reasonably easy to implement. Obviously it's not a perfect measurement but it's a starting point. We've seen some examples in the work today. So it's … collecting … is something that's going to take one day per farmer.

Moderator: All right just a couple of quick clarifying questions about the research in Kenya. One was what criteria did you use to choose the farmers for the study? And also a clarification about what percentage of the beneficiary pool was members versus non-members in the dairy cooperatives in Kenya?

Lorenzo Casaburi: So there are multiple studies discussed throughout our presentation. The first one was the elector – the impact of the restating of the bylaws on deliveries, the one that Rocco talked about. And they were used in type of relation to see how targeting members responded after the meeting. There were non-targeted members. There were members that were already selling all of their milk. Therefore our studies were a random sample – basically random samples.

And depending on the specific component it was a random sample of all the members for the experiments, random sample of the members selling both to the co-op and to traders for some of the survey questions. And then for the brief survey in which we compared members and non-members it was just a random sample of the farmers in the area. And then the … is in some attrition for some of the studies but the … signing the papers I think are linked in the ….

Thomas Carter: Well since we're toward the end of the session I won't wrap up with many words, only to first thank the presenters. I've worked with co-ops since 1975 and I learned quite a bit today. I thank them for that. And I think it highlights – I think this type of presentation – the importance of not acting in terms of what we think is the case but actually using research to inform what we do. And I personally would like to express my appreciation to Greg, Lorenzo, and Rocco for a really fine piece of research and for sharing it with us.

I'd like to also thank those of you who came this morning as well as the 70-odd – I hope they're not really odd. But there are 70 participants on the webinar – for taking their time and sharing their questions. All the post-event products will be posted on Agrilinks. We hope that you will use Agrilinks frequently and contribute and benefit from it. I'd like to again thank the participants, the speakers, and particularly the Bureau for Food Security and Agrilinks for making this event possible.

Thanks very much.

[End of Audio]