



**MPEP** SEMINAR SERIES  
Exploring Frontiers in Inclusive Market Development

**Pushing the Limits: Lessons from CARE on  
Market Systems Approaches, Food Security, and  
Resilience**

**Presentation Transcript**

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*Joy Chen:*

Hi. Welcome, everyone. I'm Joy Chen from the KDMD project, and we're excited to kick off the new PEP seminar series, Exploring Frontiers in Inclusive Market Development, with a presentation from Christian Pennotti. This follows conversations started in December with the Evidence Summit from Microfinance to Inclusive Market Development.

And it's great to see so many familiar faces in person and also online. We already have 42 people joining from webinar from Brazil, Philippines, Germany. So looking forward to a very good seminar. And I'm going to turn it over to Jeanne Downing, Senior Enterprise Technical Advisor at USAID.

*Jeanne Downing:*

Thank you. Good morning, everyone. [*Microphone isn't working – audio missing*] –low-key morning, such a cold morning. But we have 196 people online and on the webinar from all over the world, so I also want to welcome them.

So this morning we have Christian Pennotti from CARE, as Joy said, and Christian is going to talk about CARE's work focused on food security and resilience. And I think one of the things that we've all been learning is how important it is to take a systems perspective in thinking about food security and resilience. And, you know, we've had our seminar series focused on value chains, but we really always understood that value chains are themselves a system. And as we've moved towards resilience we see that this system is more complex than just the value chain. And I think one of the issues that Christian will be bringing up today is this enabling environment, which we've always thought of, and that within that enabling environment it's not just policy, it's not just government, but it's also cultural norms, gender, etc., and really understanding how that affects decision-making, how it affects performance of the market system, and how it affects resilience.

Another key thing I think that we've all been trying to do is identify best practices – okay, maybe we can never say best practices – good practices, emerging good practices. And this is what we really need from our intellectual work; we need these good practices in order to design better programs. And so I'm really pleased that Christian today is going to focus on some of the key emerging good practices that CARE has learned from two of their major projects.

*Christian Pennotti:*

Thank you, Jean, and thank you to the MPEP office, a new acronym for me, for the invitation and the opportunity to be here and to talk a little bit about what we're learning at CARE and what we've been doing at CARE. It is an opportunity that we really appreciate and take quite seriously.

As we get started what I want to do is before we get into this just sort of put out there upfront, I think we all realize that resilience is – so I can-

*Female:* Yeah.

*Christian Pennotti:* Great. We all realize that resilience is an enormous issue and an enormous opportunity, but also an incredibly complex issue. And I'm not going to try to tackle all the dimensions of that opportunity and that challenge. We can certainly speak to it in Q&A and just based on the kinds of inquiries that we've gotten in response to this presentation, I know there are a lot of different questions out there around this issue. We will and can try to address what CARE does in various areas around that, and we actually have some other folks, both online, and we're joined by Tonya Rawe, who is a senior policy advocate with CARE USA, who works on food nutrition security. So there are – I'm sort of – I am standing up here, but there's a few more of us around that may be able to help field questions that people have.

So what we are going to try to focus on are really looking at two program examples, two examples from CARE's work. I actually sit on our economic development team that sits within a broader unit at CARE that's focused on food and livelihoods, justice. So we have people within that team looking at water issues, looking at gender issues, looking at sustainable agriculture and economic development and financial inclusion. I sit on that team. So the lens that we're going to be looking through is from our market engagement work, what are some of the things that we've been learning. And then what do we see as five emerging good practices from that. And I'll be able to speak a little bit to how these lessons have already informed the work that CARE is doing in a number of countries.

So with that background we'll start in Bangladesh, and I don't think that I have to spend too much time giving people a background on the situation in Bangladesh. But just high level, CARE has been working there for 30 years; we run a number of food security initiative in the country, including one of the largest food security initiatives in the world, funded by USAID. And we have a number of factors at play: high level, strong economic growth for a number of years, but sort of stagnating poverty reduction in terms of low-income people, one of the highest child malnutrition and stunting rates in the world. And so a few years ago CARE was looking at a couple of communities in the northwest of the country, and these are low income households living on less than \$1.00 a day and with anywhere from half an acre or less of land. We looked at a whole host of opportunities to engage with these households and try to help them through predominantly a value chain approach. This was CARE looking at our portfolio and what we'd done; a lot of community development, a lot of gender work, and a lot of sort of smaller scale livelihoods

opportunities, and we wanted to see how a value chain lens could help us enrich that portfolio.

So we ended up working with 36,000 small holder producers. These are households that had between one and three cows, because we decided that working in the dairy sector made a lot of sense. The dairy sector in Bangladesh has seen consistent growth in demand, but 30-percent of the country's dairy is still imported because we're not meeting that growing demand nationally, and 90-percent of the milk that's produced in Bangladesh is produced by households with between one and three cows. So this was a good fit for us.

Over the past four years we've seen a number of fairly incredible – you know, strong results from a value chain perspective for us. We were able to support 140-percent increase in production, between 100 and 255-percent increase in income from dairy, and I can talk about why we see that huge variance in terms of the income gain, but even for the low end of the spectrum we saw very strong income-related results, and we've seen a strong increase in dairy consumption at the household level. So for us this was all incredibly promising. You know, and I think looking at the value chain framework, it was an illustration of some of the power and the potential of that lens to drive benefits for highly vulnerable food insecure households.

I want to talk a little bit about how we got there and some of the key things that we learned along the way. So the first thing is looking at this household, we said we want to work – the official target for this program was to double the dairy-related incomes of 35,000 small holder producer households. This is supported by the Gates Foundation; it was a four-year program, \$4.5 million. So we said, okay, 36,000 – 35,000 households, first thing we did, like many organizations and many development interventions, is get people into groups.

So this was an – and I'll talk a lot about the groups – we ended up with 1,280 groups, 3,200 farmer leaders. And the groups, there's a couple different types of groups, and this is one of the key things that we want to talk about today. We had groups that were both mixed-sex groups and women-only groups. These were self-selected groups; CARE didn't go in and say, "You are in the group. You're out." We went into the community and said, "This is the opportunity. Who wants to be involved?" It had to be a household between one and three cows. That was sort of our cutoff. If you had four cows we kind of said you're well enough off; you're not necessarily the target for this particular program.

We also made sure that we had three leaders in every group, and I'll come back to this as well, because this is another key thing for us. And these

groups were then trained in 13 key practices; cattle management practices, financial management practices, group governance, all of these issues that you would typically see in a producer group kind of training.

Now what was interesting to us was as we went along what we found out is that the women-only groups outperformed mixed-sex groups. The women-only groups also outperformed any group that had a man as a leader. And groups that self-selected their dairy collector, so who were they going to give their milk to to take it to whatever the nearest collection point was, if they self-selected that individual they made more money.

So this next slide, there's a lot of detail on this, but there's a couple of key takeaways. On the bottom-right you can see that what this is basically showing you is that over time groups that were led by a woman outperformed groups that were led by a man. So that's what that bottom-right graphic is showing you; over a four-year period groups led by women were getting 7-percent more return on that investment. On the left it's showing the gender composition, the returns-to-you gender composition of the groups. So this is women-only groups with women leaders, obviously, were doing 12-percent better than mixed-sex groups, or groups – if you had an all-male group, regardless of the gender or the sex of the leader, you didn't perform as well as groups that were led by women and comprised of women.

The message here is not that we should all go out and only put women in producer groups; the message for us was that the gender composition of the groups and the sex of group leaders is really important, and we don't hypothesize that it's going to be the same everywhere, but we are saying that we need to be very conscious about who should be in groups and who can lead groups and what kinds of outcomes is that going to deliver for you.

Moving from the production piece we then started to look at input issues. And what we advanced was a multi-prong strategy to improving access to inputs. So looking at livestock health workers and artificial insemination service deliverers, and these are independent agents who would be in a community and provide these services on a fee-for-service basis. We also invested pretty heavily in developing a network of input supply shops. That, for us, made the most conceptual sense, a one-stop shop at the community level, accessible to these households, where you could get access to appropriate high-quality inputs, feeds, vaccinations, and services. But you can sort of see the distribution in terms of the level of effort that we put into those different prongs, but we continued to advance on multiple prongs at once.

The other thing that we worked on was informal feed producers and sellers. So these were people who were doing a little bit of backyard or side-of-the-road feed production and then selling that locally. What I think is important about this for us is not so much that we worked in multiple areas; I think a lot of value chain programs do this, so that's not necessarily unique, but the way that we're looking at it and what we're trying to understand is how pursuing multiple and overlapping opportunities for people to access those services becomes a core part of what we do in these initiatives. And this I think ties a little bit back to the resilience piece for us. We do think that full-service shops make a lot of sense, but we're very focused on trying to make sure that consumers of those services have multiple options, both so that there's competition locally, but also so that if something goes wrong with some of those options there are other people positioned to provide that service.

I'll just mention the last point there. From a gender perspective we also see this giving us more opportunities to help women get engaged in positions in the value chain that have historically been closed to them. So it also helps on the women's empowerment and transformation agenda that you're trying to move forward here.

On the output market side you see something very similar. So the big drive of the program was about trying to help get rurally-produced dairy into this growing urban demand, which meant working with formal sector processes. So there's four major sector processors in Bangladesh. We worked with all four of them and we worked with them extensively. But we didn't only work with them; we also worked with local collectors – I mentioned that groups were identifying their own collectors – and we worked with informal market linkages.

We had the unfortunate opportunity to actually see what happens when you're solely focused on the formal sector; a year into the program there was a crisis in the national dairy sector, there was a whole bunch of milk being imported, powdered milk being dumped on the Bangladeshi market, and those formal sector processing companies stopped buying from rural households. We very quickly had to say "What are the spillways in this system that allow those households to still channel that milk somewhere." There's also a lesson in here about getting very vulnerable households into perishable commodities. But we very quickly looked at what are the output market – the local market channels that we can help these households to get into.

So again, you see this sort of multiple channel issue and making sure that producers have choice of where they're going to sell their milk and how they're going to sell their milk. I think in the online discussion a month ago about small holder resilience one of the key takeaways was that it's

often positioned as an either/or, and sometimes it needs to be a both sort of proposition. Now what that means in practice for us was we had to do a lot of thinking about the tradeoffs between a more efficient approach, which would have us focusing on one channel, and building in these market redundancies and this inherent competition. And that has budgetary implications, staffing implications, it changes your targets. It is another piece of work that you're doing at the local level, so it does have really significant implications for what you can do at the end of the day. But that's one of the tensions that we're trying to manage increasingly.

It also, though, helps us a little bit on bridging the gender asset gap. And what we're talking about here is the difference between what men and women have access to in terms of both tangible and intangible assets. So their information, their access to resources, you know, physical resources, cows, inputs, etc., their mobility, all these sorts of things. And we've been working with both IFPRI and the International Livestock Research Institute on better understanding the gender asset gap within this program and how we could influence that.

So one of the things that this strategy also kind of naturally does for us is it creates additional opportunities to get women involved at points in the value chain where formerly they were not able to engage. And it's very, very difficult; we did not hit our targets for the number of women livestock health workers. Helping women in Bangladesh get into a position in a value chain where they need to be able to move freely, even within their own community, as many of you know, I see nodding heads around the room, is very, very difficult. But it's also very, very important to achieving these objectives of food security and achieving objectives around resilience. So this gives us more places where we can try to help advance that change.

The last thing I'll mention about Bangladesh is on the women's empowerment front. We were very encouraged early on when we started to see trend lines like this. What this is showing is the change in women's influence on decision-making about purchasing a cow. I can show you the same trend lines around selling a cow; I can show you the same trend lines about how to use the income generated from dairy. So this was very positive in a lot of senses. We don't see women getting more absolute control, but we do see a change in their influence on control, which is a progressive step for us.

What we also saw quite clearly when we asked about consumption was there remained a big gap, and this is slightly old data, so our final evaluation is being done literally right now. But there remained a big gap between who people felt needed to be drinking milk and who was actually drinking milk in the household. And so our efforts to improve women's

decision-making and influence were making some progress, but they weren't necessarily changing intra-household issues around consumption, which we all, I think, can obviously see as a huge challenge.

So what that pushes us towards is that we think that market-based approaches can help us move in a number of areas towards more equitable systems around gender-related issues, but they're not going to be enough and we need to be doing additional things. Anyone that's familiar with the Shouhardo program, which we're running in Bangladesh as well, may know some of the evidence that we've gained there, which demonstrated that the people we worked with around women's empowerment had a much greater level of reduction in child stunting than the people with whom we did all the same things, minus women's empowerment interventions.

So I can talk about how that has changed our approach to the work that we're doing in the dairy sector and elsewhere. We'll get to that in a minute. But before we do that we'll shift to another national example. Ethiopia, another country that I'm sure many, many people in the room and on the webinar are familiar with. Eight million households, food-insecure households that currently participate in the National Productive Safety Net Program. CARE has been working in Ethiopia for 30 years on a lot of these issues.

Over the past few years, with USAID support, one of the things that we've been working on, along with a number of other partner organizations, is what we call a push-pull model. And again, I think a lot of people have seen some of this and they know some things about this, so I'm not going to spend a ton of time talking about how this works, but I do want to get to pointing out a few of the key things that we've taken away from this.

In essence what this is designed to do is target ultra-poor small farmer households. In Ethiopia that means targeting people who are benefiting from the National Productive Safety Net Program, we use a number of government-designed metrics in our targeting. We can talk about the issues around that as well if people want. But then using a combination of push and pull strategies to help these households progressively move up to positions of food security and stability. In practice what this means is identifying a series of on the push side risk-appropriate ways to help these households progressively and incrementally move forward. So a lot of that has to do in this program with helping people get involved in savings groups first, spending, you know, 9, 12 months on improving peoples' ability to save collectively their own resources locally, and then to lend that out to one another and start small income-generating opportunities. I think we know that that is a progressive step; there's plenty of evidence to point to what that helps us do, but we also know that it will not help

people, you know, transform themselves and get out of poverty and food insecurity.

There's then a whole component around helping those same households get involved in a number of different value chains that are locally appropriate and start improving productivity and eventually linking them, so the theory goes, with a number of output market buyers. So very similar to what we were doing in Bangladesh, but there's also a much stronger financial inclusion component from the get-go in this model.

The other thing that's critically important from the beginning was to start involving all those other ecosystem actors. So there's the – you know, I feel like a lot of times we hear about getting households market-ready, but there's getting the market ready for the households as well. And so trying to drive in both directions at once.

From a resilience standpoint what I think we feel like this boils down to is a combination of interventions designed to help reduce risk and increase the adaptive capacity of both the households and the systems that we're trying to help them engage with. Now what we learned from PSMP Plus, we had a couple of positive results. We did not hit our graduation targets, so one thing we learned very clearly is this is hard. We had a three-year timeline to run this, so in our minds it was largely a pilot and we had a significant drought in the middle of it. There's a lot of reasons why we didn't necessarily hit the targets, but what we did accomplish was of the households that during that time period in the areas where we were working that were able to graduate, the overwhelming majority were participants in this program. On the resilience side, while the drought was negative in every regard, what it did tell us was the participants in this program were able to bounce back more quickly than households who were not.

Just to give you a little bit of sense of scale in terms of financial inclusion, 37,000 households – or 37,000 village savings and loan association members saving in the range of \$317,000.00 over this period. On the market inclusion side you see that we have a lot of households that have been formed into groups, and I don't have a bullet on market linkages. And that was one of the challenges, I think both with the timeline and with the drought, but there are also challenges that we're still working on in terms of how you help these households productively engage in the market.

So the first lesson we took away from PSMP Plus was we were encouraged by the fact that the causal model seems to have validity. We can't tell you in terms of attribution with enough definition yet what degree this played in peoples' ability to graduate, but we do know that it

contributed to their graduation. That was validated by IFPRI, it was validated by TANGO, so there's been a number of external people who have looked at this and come back and said, "Yes, this has some degree of relevance to the problem."

The second thing was looking at households that are engaged in multiple value chains were more likely to graduate than households that were not, and this was particularly true for female-headed households, which kind of goes against what we would have thought, because female-headed households are more labor-constrained than households have at least two able-bodied people in them. And the able-bodied is also a big assumption on our part. We do have lots of data around the number of people in those households who are handicapped, another thing we can talk about if you want.

But this was important both from a resilience standpoint and from a graduation standpoint. So I think a lot of us would've thought, "Let's get them in the highest value opportunity possible and let's double-down on that and they'll be able to graduate." We had some of these households involved in very profitable activities. The ones who are involved in that at some level plus something else did better.

And the last thing we took away – sorry, this is terribly wordy – but in essence what it's saying is village savings and loan associations were a great foundation on which to build, they are appropriate for the risk profile of these households, and we can do a lot of good things within those groups; financial literacy, business skills training, all the things we might traditionally associate with these kinds of groups. But they don't – we've learned from actually randomized control trials exactly what we think VSLAs do and don't do in terms of empowerment.

And you see very similar outcomes to the ones I was showing you in the Bangladesh example. They do help on women's decision-making. They do help on women's self-confidence and aspirations. They don't necessarily change women's mobility and they don't change domestic violence, which is something we rarely talk about I think in this space, but we have evidence from multiple places to show us that if you can move the needle on domestic violence many, many other things are going to be going well. And so that's one of the things in Bangladesh that we're now focused on; we have a dairy value chain project that has an overlaying strategy in some places, we're piloting this right now, that's focused on community-level dialogue and household-level dialogue around domestic violence. It has nothing to do with dairy theoretically. So this sort of was showing us some of the limitations of our traditional approaches to economic empowerment, resilient livelihoods promotion.

What does this mean for us and how is CARE now taking these things and incorporating them into our own work? I'm going to focus on five things and I'm going to be able to talk a little bit about where we're doing this, what we know, what we don't know, how we're trying to invest in research and learning around these issues. So I won't be able to give you the same kind of figures as this worked and this is the solution, but we think these are promising areas and things that we need to be paying more attention to, certainly within CARE we do.

The first is adapting the push-pull model. So we knew in Ethiopia that this had value. We also knew it didn't quite get us where we wanted to go. So in Ethiopia what that meant was under the current – there's currently a program called GRAD, Graduation with Resilience and sustainable Development. I think.

*[Laughter]*

*Female:* Sounds good.

*Christian Pennotti:* Yeah. I'm pretty sure I came up with the acronym, but you know how quickly you forget those things. Or maybe AID came up with the acronym. But you see the same model and then you see what a lot of these models do, right; they say, "Oh, cross-cutting issues; let's throw them over here and we'll cover them." Right. The important thing is they are really important, right? So it's an acknowledgement that we need to be paying attention to women's empowerment, we need to be paying attention to climate change adaptation, we need to be paying attention to nutrition issues. This is nothing new for this audience; everyone would say, "Yes, of course we do." But I'll talk a little bit about what that means in terms of what we're doing differently on the ground to try to achieve this, and it's not easy.

The other thing, though, that we're really excited about, is we have a new program called Pathways to Empowerment in Agriculture. This is something that's supported by the Gates Foundation, and where we had actually the luxury of having an 18-month analysis period and we had six countries spend that time looking at underlying drivers of insecurity and vulnerability for women involved in agriculture. What those teams did was we didn't give them an overarching framework; we didn't say, "Here's push-pull, now you go make it work in your country." We said, "You've got time to try to figure out what we should be doing. You tell us."

They came back to us and they identified five things. They said, "We need to be working on access to – access issues. Access to inputs, access to markets. We need to be working on productivity issues. We need to be

working on man engagement in the households and household decision-making. We need to be engaging on enabling environment issues. And we need to be engaging on engaging men and boys in a multitude of ways.” And this is what they came back to us and said. And they didn’t all say this in unison and they didn’t all say it in the same way, but when you looked across what they were saying, we were able to say, “Okay, we think these are the five things you’re all talking about” and go back to them and say, “Does this make sense?” and they said “Yes”.

We then said, “Interesting. Why don’t we show you what we’re doing in Ethiopia?” And we showed them the push-pull model and it instantly resonated with the entire program. Now this is operating in Mali, Ghana, Tanzania, Malawi, Bangladesh, and India. So West Africa, East Africa, and South Asia. And all of the teams were able to look at that conceptual model and it resonated. So for us this is very exciting because institutionally it means we’re starting to build some more common mental models around how we look at the problem and the opportunities and support cross-learning. And I think what I like about this is as opposed to the five sort of key levers, we have all sorts of diagrams showing how they relate and all this, but they end up being terribly abstract. This is something that we’re able to put very concrete actions on and we can actually monitor progress against those over time across a large number of countries, including Ethiopia.

The second thing we’re doing is all of this implies the need to be way more efficient at the field level. And what we tend to get is if you go to the nutrition team we say, “We want to work on nutrition issues.” They say, “Great. We’ve got this local – we can get a local person in the community. We’ll train them. We’ll do behavior change communications. We’ll do cooking demonstrations. We’ll do breastfeeding groups” blah blah blah. They’ve got this whole slew of things they’ll do. You go to the water people, you get the same answer. You come to me, you get the same answer. Now that’s all fine, except you’re talking about the same people at the other end of that channel, and you’re talking about having to have individuals in that community that could actually provide that service efficiently.

So for us it’s a question of how do you start to do these things in a logical sequence, organizing them around agricultural value chain or agricultural crop timelines and sequencing different types of interventions and getting more interoperability between our different programming elements. So when someone comes in to talk about nutrition, they get the push-pull; they understand where they are in this model. They get the market-related issues. They get how their programming needs to be tailored to – so if it’s the gender programming, how it needs to fit with the messaging around

agriculture, with the messaging around financial inclusion, so that they have better context.

And this seems logical, but when you're talking about working with a local community-based organization that maybe traditionally has done one of these things and they're the game in town, or maybe there's a few of them, that efficiency is really a challenge and something that we're focusing on intensively, because we think if we can't figure that out, this is going to continue to look very nice on slides, but we're not going to get the results that we need.

A second thing that we're focused – or a third thing that we're focused intensively on is the groups issues. Now in the value chain arena I feel like we have a bit of – someone says “groups” and we kind of go, “Ooh, groups, really? You sure about that? You sure you want to do that? You know, they're not that sustainable. You know, it doesn't always – it doesn't work like it's supposed to.” We don't see a way around it. Groups are there, and we need groups for a whole host of reasons. We understand that when groups are done well they can have tremendous value.

What we think we need to be paying more attention to is understanding which groups for which purpose for which people and both the relationships within those groups and the relationships across them. And clearly there's a lot of evidence and knowledge and information out there on a lot of these issues. For us what it ends up being about is improving what we know. We have a more complex set of issues that we're trying to address, which means that all of these relationships become that much more complex in the local environment.

So this is just an example from Ethiopia. They moved from VSLAs and producer marketing groups to what they're calling VASAs, which is basically about taking a VSLA and adding on some pieces in terms of information about different agricultural opportunities and then moving the production conversations to a separate group. So they're bringing that in. They're also bringing in nutrition issues and gender issues.

Our colleagues on the VSLA side are very concerned about this; they see why it makes sense to try to do that, but they don't – we don't fully know the implications for that sort of program on the underlying integrity of the savings group. So we don't want to break what we already have by trying to bring more things into it, and that's something we're focusing intensively on.

The other piece is you've now got swarms of these in rural areas, you know, and you have another donor funding water user's associations and

you've got, you know, India – we could talk about India for a long time, but there are a lot of groups. Our colleagues in Tanzania and our colleagues in India have very interesting conversations about, “What are you talking about? Just producers and savings; it's easy.” And you see the same thing; I can show you the same thing in Bangladesh, right? We've got all these groups, and now in the southwest, where we've started to work in the dairy program, we're working with and through water user's association; whole different set of incentives and issues for why people are involved in those. But they're already there, they're functioning, and they're clearly a core element of any sort of resilient strategy in that area.

And how do we optimize the relationships here? How do we take what we're learning about group composition, group leadership, and its correlation with women's empowerment and apply it in an increasingly complex local model? These are just some of the questions we're asking. There's a lot of questions.

But we do have research initiatives around some of this and I can speak to what we're trying to do there. We're also looking for other people who are interested in working on these things for collaborations, 'cause we don't think we can get into all that ourselves.

The fourth thing I'll just mention is how do we start to optimize some of these models? So again, I think there's a lot of information out there clearly around economics and how market systems work, but when we're trying to apply that at a local level and thinking about how much redundancy do you need, how robust do your spillover channels need to be so that when there is a shock this system will continue to perform at some level so that when things go back to normal or things move to a new normal people can follow that, they're not totally wiped out.

So an example here is an unfortunate live example in Bangladesh. Right now, due to a combination of election year politics and something more substantive, there have been a series of national strikes in Bangladesh for the last two months. I was there three weeks ago, and out of ten days there were three working days. What these strikes do is they shut down all the roads to the major markets, so you cannot travel from the rural production hub to the urban processing facility. And you've got people who have double – now they have twice as much milk. We can't solve that whole issue, but we do think that by having strategies around strengthening some of these alternative channels we can at least help that market and those households to respond better.

So in everywhere that we're working it's not just about trying to figure out how do you optimize one intervention, but starting to look at this multi-segmented, sort of multi-intervention strategy and doing more analysis to

understand how much do you need to invest in that local model to ensure that it's well positioned to respond to shocks. And there's going to be a whole bunch of relationships within that that we need to spend more time understanding.

One interesting thing that we're looking at with some researchers from the University of Miami, Ohio is around I mentioned that 255-percent increase for some households in this model. What drives that is that we're working with one major processing company to change the way that milk is bought. And we're using a technology that you can't cheat. So there are digital fat-testing machines that are being tested in Bangladesh – this is widely adopted in India already – that basically take out the opportunities for middlemen to add milk, to put all your milk into one bucket at the community level and give you one price for the aggregate amount of milk that you produced together, which means if someone is underperforming and someone is overperforming we're getting an average price. What's my incentive to invest in that situation?

We have found that that intervention alone is doubling and tripling what some households are getting. Overnight. They have changed nothing about their dairy management practices. But the kinds of signals that that's sending down to the system is something we want to understand. So if I'm the household that's now getting triple my milk and Jean's in my group, and I know Jean doesn't invest in her cows, she's off thinking about value chains, she's big-picture, she doesn't have time for inputs, why am I going to stay in that group? I just tripled my income from dairy overnight. And so we know that Jean actually needs me in that group if Jean's ever going to get up.

So we're looking very closely at how can we organize the feedback that people get through that vehicle in ways that might actually enrich the capacity of the group, rather than reduce the capacity of the group. Those sorts of things become very, very important, we think, and trying to understand them more is a big part of what we're trying to do.

The last thing that I'll mention is capacity transformation. I've sort of alluded to this in a number of places, and I think we all talk about capacity-building, but the more and more I think about it, we're not talking about capacity-building; we're talking about capacity transformation in a lot of instances. We're talking about helping local organizations that may have been doing village savings and loan associations and having them be able to wear a market systems lens, a nutrition lens, an empowerment lens, a financial inclusion lens, a climate change adaptation lens. And part of that is about helping make sure that the intervention sequences and things that we're trying to promote are

more in synch with one another and easier to sort of understand from a very logical what-am-I-doing-on-Monday perspective.

But part of it also is about changing the capacity of people up and down the chain. And this is just as true in Atlanta, at CARE headquarters, as it is in our field offices. And so I wish I had the answer to this. I can tell you some of what we're doing. So on the Pathways program we do have a core team that's working very closely on a number of these issues and then working closely with our teams to figure out, one, does the model we think makes sense actually make sense. And two, what do we need to do to help you to get yourself and your partners, be they government, private sector, or civil society, to be able to actually act on these models. So that's a big piece of what we're seeing.

And this was probably the most fun thing I've done since I've joined CARE, which is get about 50 people from 17 different countries to go out and spend a week literally just going and looking at that Bangladesh dairy sector example. We spent five days together without a single piece of flipchart paper or a single sticky note, which was one of my favorite things. So that's this group. But that's an element of what we're trying to do to help people really viscerally understand some of these issues.

So I started out saying that we would talk about what we've been learning from our perspective. I know there are a lot of other perspectives here and on the phone, and I know there are a lot of issues within the broader framework of resilience that we haven't touched on, but hopefully this gives you some sense of where we're coming from and some of what CARE is looking at in the market system side.

