



MPEP SEMINAR SERIES
Exploring Frontiers in Inclusive Market Development

**Monitoring and Evaluating When Facing
Complexity:
Perspectives From a Practitioner-Led Initiative**

Presentation Transcript

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Presenters

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Female:

Everyone I'm Joy. I'm with the KDMD project and we're going to get started in just a little bit. Grab your coffee, grab your breakfast, and for those of you joining us on webinar welcome. It's quite exciting to have actually a very global audience joining from webinar including Bangladesh, India, Kenya, Columbia, and many more other countries. This is the second USAID Impact Seminar Series. I'm happy to introduce Tjip Walker. He's a senior policy analyst in the Bureau for Policy, Planning, and Learning; Office of Learning, Evaluation, and Research at USAID.

He leads the agencies efforts to promote organizational learning including more consistent and effective use of research and evaluation to support strategy, development, and project design. And he also leads efforts to adapt evaluation techniques to complex environments. We think it's very fitting for him to join us here today. Without further ado I'll turn it over to Tjip.

Male:

Good morning everyone. It's a pleasure to see you all here in person. I'd like to welcome, again, everyone who's participating online. We're very pleased to have a very interesting and I think very timely presentation this morning from Marcus Jenal who will be talking about Evaluate, the work that he's been doing with colleagues on trying to develop better approaches for evaluation to address questions about complexity and systems.

And as Marcus will certainly mention, this is a topic that lots of organizations, both non-governmental organizations but also donor organizations, are increasingly interested in – in part because I think there's a growing recognition that the development challenge is really more one of dealing with complexity than it is with dealing with as we have tended to treat it as a technical and linear problem that is solved by particular technical fixes that can be replicated with certainty from place to place.

But I think that – And the reason I'm particularly impressed is that of all of the various topics that you could choose trying to address this question about monitoring and evaluation is probably the most complicated because of all of the presumptions you have to make beforehand about against what are you evaluating? How are you going to know whether or not you are succeeding and so forth, even if you're choosing evaluation methods that are different than the traditional ones or as we've seen recently the fascination with randomized control trials and things of that kind which don't particularly work well in a complexity framework.

But it is a very difficult question and indeed I think the challenge that any of us face who are interested in reframing development more from a

complexity and a sustainability point of view is essentially this question about while it's relatively easy I think to convince people about the complexity of the development problem, figure out then what is it that interested outsiders can usefully do under those circumstances becomes a lot more problematic.

The kinds of tools that we have traditionally used to do strategic planning, to do the designs, are all predicated on a linear model. And it is difficult and a bit, I think, frightening for many people to sort of say, "What does it mean then to engage thoughtfully and effectively in a development process with not being able to really draw on the tools that we have become accustomed to?" And I think the big question (and this is particularly at the center of monitoring and evaluation) is what does accountability mean under these circumstances?

As anyone knows in this particular budgetary environment here in Washington we are increasingly being held and being asked to be held accountable for the tax payer dollars that we receive. Generally that accountability is framed in terms of results and relatively quick results. And the presumption is that we can commit ourselves and be expected to produce on those kinds of results. As we have seen in some spheres and in some areas it is easier to do that. B

But on a lot of the really core questions, including now the new challenge about addressing extreme poverty, there really is I think some serious questioning about what are the appropriate models and whether or not the kinds of linear approaches that we tend to use are really going to be effective to address a problem of that scale. So anyway it's for all of those reasons that I think that this is a particularly interesting and challenging question. Marcus has been thinking about this and working with a group from the Market Facilitation Group part of SEEP on this for several years.

They've recently produced a paper on which this presentation is based. It's worth reading even above and beyond what he's going to say here. He's a very thoughtful thinking on this and has been engaged with lots of different organizations, helping them to advance their thinking along this continuum about how to embrace complexity in a useful way. Without further ado, Marcus, thank you for being here and we look forward to hearing what you have to say.

Male:

Thank you very much Tjip. Welcome everyone. Thank you very much also to the MPEP office for giving me the opportunity to present our work here. Today I want to talk to you about – Well I want to take a step back first and talk to you a bit about what we see when we talk about systems, what we mean when we talk about complexity, just to give you a little

background and a little base. Why do we think that complexity and systems are relevant? Tjip already mentioned some of the aspects.

Then I want to introduce this Systemic M&E Initiative, the initiative of the SEEP Network where we specifically looked at challenges for monitoring and evaluation when facing complexity. I will use a couple of words at the end where we think we could go with that in the future.

What are systems? I generally use a rather broad definition of a system saying that a system basically consists of interacting and interconnecting components. These components can be everything from farmers in a developing country to actually Big Eight organizations like AID or NGO's or enterprises or anything you can think of that interacts with each other can be a component of a system. And through these interactions these components form what we call an integrated whole.

You can kind of imagine that some components interact more strongly with each other than with others. That's where you can put a boundary around the system so you get the system, the boundary, and surroundings. Usually that's an artificial concept but it helps us to look at our problem in a developing country that we want to tackle by putting a boundary around it and saying, "This is our system we want to work with." An example can be a value chain. If we work in a value chain all the actors within the value chain we see as part of the system.

Of course we have to be aware that there are a lot of interactions that going on between the system and its surroundings. These boundaries are not impermeable but they are open. But they still help us to see what is inside and what is outside. If we say we want to be more systemic what we actually mean is that we want to look at this whole system and how it works in its entirety and not look at the individual components and how they act on their own.

There's a very specific type of system that is called complex adaptive systems. Within complex adaptive systems the components are – There is a big variety of components. Going back to the value chain example you have a lot of different agents in the value chain from the producing farmer to traders, processors, buyers, regulators, and so on and so forth. NGO's, and also our interventions, our projects, can be seen as sort of an actor. There is a lot of different variety within the actors. They're usually very strongly interconnected.

If you think of other market systems, a market system where enterprises interact with farmers and so on, there's a high level of interconnection between all of these agents. And they are strongly interdependent from each other that the product flows really from production to the end

customer. And another aspect of complex adaptive systems (that's why they're called adaptive) is that these different agents within the system adapt to each other. They change their strategy on an ongoing basis based on what they see others are doing.

Enterprises change their strategies based on what their competitors do – change their strategies based on what kinds of regulations are out there. This all together, as you can imagine, makes complex adaptive systems very dynamic. There is no equilibrium in there. There is a constant change of strategies of adaptations. When someone changes something the others usually adapt. When one competitor comes in with a new idea everyone adapts. So there is a high level of dynamic in there.

This leads to the fact that complex adaptive systems have some specific characteristics. One is it being nonlinearity. Nonlinearity basically says that the scale of the cause is no apparent relation to the scale of the effect. If you, for example, think about mobile money transfer I would say that the fact that you can transfer money from one mobile phone to another is a relatively small cause compared with the whole financial – the change in the financial transactions that is happening in these countries. I would say that's clearly a nonlinear effect of one of these systems.

Another characteristic of complex adaptive systems is what we call emergence. Through the interaction of these different agents new characteristics are coming up – emerge – out of the interactions. They are not there when you look at the individual agents or components. They only get apparent when they start interacting. An example there is a community.

You cannot see a community when you look at individual people that live somewhere, but only when they start interacting with each other, when they start coming up with rules – formal or informal rules of behavior – that guide their living together, then you can start talking about a community. Another example is market price. You don't see a market price when you look at one trader. It's not there. Only when traders and farmers and customers start interacting a price emerges.

Maybe a physical example is wetness. An individual water molecule is not wet. Only when water molecules start interacting you get wetness. This emergence, through the interaction, also leads to the fact that complex systems are very strongly embedded in their history. If we go back to the community and look at the behaviors and rules (formal or informal) and habits people that live together in a community have, they kind of evolved over time. But this evolution, how the community came to their current set of rules that guide their behavior; this evolution is very important.

If we want to understand a system we need to intervene in a system. And all this is nonlinearity. The adaptation of the individual agents makes it inherently hard to predict these kinds of complex systems. It's hard to say where they are going, what is happening, and how agents are adapting. And it's hard to say what will happen if a development project comes into community and intervenes there with one or the other goal? It's hard to say is it working? Is it not going to work? How big is the scale of the effect that we are achieving?

Now as Tjip already said complexity and the realization that many of the systems we work in when we do economic development or policy development – Many of those systems are actually complex. This realization is growing in the development community. There are a lot of publications that have come out recently on complexity and development. Organizations like the Overseas Development Institute or the Center for Global Development have been publishing quite a lot of papers on the topic.

Also donor agencies like AID are working on figuring out how this can be introduced in their work. Jeanne Downing who cannot be here just recently wrote a blog post on the CGAP web site about how her office is trying to take a more systemic look at market systems and how enterprise development can be done with this more systemic perspective. There is quite a lot going on, at least in the conceptual sense, in international development.

Another big question is why is that relevant? Why should we think about complexity? What does it bring to us? And I want to fall back on Matt Andrews and colleagues who recently wrote in one of their publications that what we often see is that projects that work, for example in infrastructure, building roads, building schools, building hospitals, or building government buildings, usually are very successful whereas projects that try to improve services, that try to improve education, transportation, health care, or government services, tend to be much less effective.

There is a clear differentiation between different kinds of problems we face in development. If you want you can say they are more simple. Or maybe they're complicated but still they're kind of on the simple spectrum. And then there are these more complex problems where there is a lot of interaction between individual and diverse actors. Now we have been using for all these problems kind of the same approach. It's the same problem solving strategies.

We have run into this problem that for the complex situations they usually don't tend to work. And reason why they don't tend to work is what Robert Axelrod wrote and Michal Cohen say that there is a lot of uncertainty in complex problems. And there is a lot of uncertainty of the consequences of our action. But there is also a lot of uncertainty about what kind of action we can actually take in order to achieve the outcome we want to see.

And what Harry Jones adds to that (which is in my view very important) is that if we just stick to these traditional infrastructure building ways to do development this might actually have quite some serious side effects. It's easy to build a school but it's much harder to get the education system going. And if we don't use the right approach it might actually be that in certain situations we have some negative side effects which makes a situation worse than it used to be before. That's basically in a nutshell what we define as complexity and why we think complexity is very relevant in our work.

Now I'm going to the Systemic M&E Initiative. There has been quite a lot of discussion on the Market Facilitation Initiative platform, the MaFI platform. MaFI is part of the SEEP Network and it has a very well-populated and very active LinkedIn discussion group where mainly practitioners, but also many other representatives of donors or implementing organizations or consultants are actually discussing with each other about how to make market facilitation more effective.

We received funding from USAID through FHI 3/16/2012 to make these discussion more focused specifically on how to make monitoring and evaluation systems better adapted when facing complexity. Through this we could organize a couple of events. We organized a three-day Microlinks Speakers Corner and the webinar. We also organized the Opening Plenary at last year's SEEP Annual Conference.

We recorded three podcasts; one with David Snowden who is a well-known expert on complexity in organizational development and knowledge management; one with Shaman Butania who is a professor at the University of KwaZulu-Natal and works with complex systems; and one was Jeanne Downing who was explaining how USAID and specifically the MPEP office is trying to use these more systemic approaches in their work.

And as Tjip already mentioned we published this synthesis paper. My colleague Lucho Osorio and I wrote it but basically this brings together all these different discussions mainly by practitioners but also with the involvement of various experts. One of the things that came in this synthesis paper is this distillation of pre-issues we found predominantly

mentioned by practitioners in the discussions. What are the issues with current monitoring and evaluation system that these practitioners are facing?

One issue is that current monitoring and evaluation frameworks are focusing strongly on the project's direct effect on the poor. There's a strong focus on what would be called beneficiaries or the poor without this wider focus on the whole system. Secondly there is a strong focus on extraction of information for accountability for the donors. I don't want to say accountability isn't important but it takes up most of the energy and efforts of current monitoring and evaluation system frameworks, which make them often not priority for project management. So they are just kind of running along, not being very important for the whole project management.

The third issue here is that a notion of sustainability that basically looks at what could we achieve at the level of the poor and is this going to be sustained over the next whatever? If we come back in two years or five years can we still see the same changes on the level of the poor? These are the three main issues that we distilled out of the discussion with the practitioners. Now based on these issues, together with the insides from complexity and systems thinking, from the discussion with these experts I mentioned, we came up with this list of seven principles that we think can build a basis of more systemic monitoring evaluation.

These are, of course, more a basis for discussion than they are the seven commandments for systemic M&E. They are still very open. It's actually the second version already. The first version we presented to the practitioners during this Microlinks speakers corner we had. We got quite a lot of feedback on them and we adapted and rephrased them. This is the current version of these principles. I would like to go through a case or an example in order to illustrate these principles to you.

For that I took this value chain. It is the value chain of maize production, or corn as you say here in the US, in Tanzania. It was assessed by a USAID project. As you can see there are two channels where maize is going from production to the customer. One is local production and the second one is import. One of the main constraints the value chain analysis found is that there are a small number of large traders that basically dominates this value chain with the effect that they get a much larger share of the overall margin than the other stakeholders.

And naturally if we come with a development perspective we think we need to improve the situation of the farming families to increase their income possibilities. That could be one possible outcome of a development project here. Now let's look at these principles. If we talk

about indirectness of impact, one realization is that this value chain system here (I've said it already) is a system and it has a variety of different actors. They are strongly interacting.

We see on the slide the complex system. Complex systems are strongly embedded in their history. So the whole interaction and the situation that these traders are dominating the value chain have evolved over time through the interactions of these different agents. One thing we say is the systemic change is driven and sustained by the stakeholders. In order to achieve change there a project should try to collaborate with the stakeholders so they kind of –

The project rather changes the evolutionary path of this system. Instead of going in and trying to forcefully or change the situation of these farmers, by for example, doing training or by trying to ask them to avoid the traders and so on. An indirect way of impacting a system is trying to change its evolutionary path so the normal evolution within the system can go away from this skewed power distribution in the value chain to where it's a more equal distribution of the margins through all levels of stakeholders.

Now this also has an impact on what level a project can influence. When we say depth of impact we mean that there are different structural levels within the value chain. One of the levels is the flow products or the flow of money, which is usually regarded as a very superficial level. Deeper levels are the interaction between the different actors in the value chain. If we look at only the superficial levels, which many monitoring and evaluation systems do at the moment.

They look at how much more income do the farmer families have? How much more can they produce? Then we get a very superficial image on the value chain and we get a very superficial image on what kind of change the project could affect. The deeper the impacts are the more long-term effect they have. And if we only look at the superficial ones we don't always - Actually is it because there are structural changes or is it because there is a temporary adjustment towards – because of the influence of the projects towards higher incomes for the farmer families which is kind of relapsing as soon as the project has left.

The notion of network-driven change also goes in this direction to say we want to look at the networks, at the actual structure of the system. And when we go back to the value chain what do we see in the network? We see that they are the actors within the value chain that interact. So instead of having these boxes where we see how the product is flowing we can also look at it in the form of a network where we see the farming families are part of the network. The trainers are part of the network. But there are

also other actors that are part of the network, for example, on the regulation side.

Now networks are strong drivers of change. So if we find that there are some networks that we can use as a project and work together with this network – for example a network of smaller traders that are less dominant – the we can try to work with these traders to strengthen their position in the value chain. We can use this network to affect the change we want to see.

Or on the other hand if we don't see a network, if we see that all the farmer families are kind of disbursed and there is no interconnection between them and other actors that we think are important drivers of change, we can start to build these networks. And I think this is especially important if we talk about going into areas where markets are still very scarce or very thin. We have to see what networks are there and how can we use these existing networks to bring about better services for the farmer families.

And this also has an effect on how we look at sustainability. One way to look at sustainability is, as I mentioned before, to look how the changes on the level of the poor are sustaining over time. But another way to look at it is to see how can the poor or the actors in general adapt to changes in the market? And as we know markets like maize are very strongly dependent on global markets. In countries like Tanzania there is always the government –

It's a possibility that the government intervenes and then there are strong turbulences within the market. One way to look at sustainability is how can the network of actors adapt to these external forces and improve their own strategy over time? So instead of giving them one new strategy to solve their immediate problem it's kind of building the capability to continuously adapt to problems that come up along the way in these kinds of dynamic complex systems they function.

These four principles have a strong implication on project design. But also monitoring and evaluation are important here. How is that? In monitoring systems and also evaluations later have to kind of pick up on that. They have to pick up on the impact pathways a project is trying to use. They have to pick up on what level of impact a project is actually achieving. Again if monitoring only looks at changes at the level of the poor our CT's are only comparing income versus project activities.

We kind of ignore or don't see the more structural changes. So monitoring evaluations have to look at how the networks change over time because of the project. When we look at sustainability what we want to try with

monitoring and evaluation is to see how is the adaptive capacity of these actors changing over time? The remaining three principles talk more about these characteristics of complex systems, for example on predictability. And here the question really is can we use the approaches that we have so far for project design and monitoring and evaluation?

We think no we need new approaches. We need approaches that build much more on the principle of variation as there is a high degree of uncertainty. We cannot know which interventions will actually lead to the outcome that we want to see. So we'd better come up with a number of interventions – different possible interventions and experiment with them. Bring them into the field and try which is working and which is not. Adapt them to what we see is working.

And here of course, obviously, the monitoring system is central because the monitoring system can give the project management the necessary feedback to quickly adapt or quickly choose which of the interventions is actually working and which one is not. For that we need a monitoring system that has quick feedback loops back into project management to build the basis of the decision making. And the same is true for this principle of information deficit that basically says we can never see or never know the whole complexity of the system.

We always only see a part of it, which plays into that there is always a lot of uncertainty on the one hand, but it also plays into that we have to be aware that pre-project assessments are not necessarily still 100 percent valid once the project is actually implemented because of these dynamics and the constant adaptation. Nowadays often decisions are based on pre-project assessments. And value chain assessment that was done maybe half a year or even a year before the project actually started.

Here the monitoring system is very important to update – to constantly update this knowledge we have and give us the best possible view on what is going on in the system as a basis for decision making. Now sensitivity to external results is something we have to be aware of whenever we go into a country or into a region that as soon as the project get there kind of announces, "Here we are. We want to do something." This already has an impact, especially if we come as a big project with a lot of money we might actually change the incentive structure of the area where we are.

For example out of my own experiences I have seen private sector companies that instead of having their product and their marketing strategies – One of their strategies is how to tap development money and how to get in touch with development projects to kind of deliver services to these projects? We have to be aware that there is a sensitivity to our

presence and we have to see how can we minimize that and how can we tread lightly in a way not to change the incentive structure too much?

Based on the discussions we had and based on the insights we have from these fields of complexity sciences we think that we actually need a change in paradigm. It is more than just using a couple of new tools. But we have to realize complex systems are different from complicated systems. It doesn't say everything is complex. We still have these problems like building roads or building schools. But there is a set of problem we are facing in international development that cannot be solved with these engineering construction based logic.

We need to realize that and we have to get away from this kind of predictability and control-based approaches to much more adaptive and much more decentralized, bottom up ways of implementing projects. And here one thing that we think is important is to see that we think the biggest obstacles are actually political because the fields of complexity sciences, the fields of system thinking are quite advanced already and there is a lot out there that we could use in our work in international development.

But there is still a very strong orthodoxy based on this control and predictability paradigm. Where do we go from here? The next steps we think are important are to document what is already happening. We know that there are many projects being implemented that already adopted this mindset and that already implement implicitly these principles for systemic M&E and for systemic and project design and management. And we want to find these projects and we want to document that in the form of case studies and to publish that.

And then from there we might go into more trying to find different frameworks based on the insight and based on the examples we find in the field that we can use for future projects. Thank you very much.
[Applause]

Male:

Thank you very much Marcus. It was a very good presentation, both in some of the background on complexity and then the application of the various principles to that case. Before we open it up to Q&A I just wanted to make a few observations. One of them is, as Marcus implied, we are (within USAID) trying to think seriously about these questions about complexity and how we might integrate it more into our ongoing work.

Some of you may be aware that about a year and a half ago we organized a day long complexity event. It was an attempt at examining – sort of throwing out some of these basic ideas about complexity and trying to see how well they resonated with staff. It was quite an interesting and challenging day. If anybody's interested there is a brief that was

published. It's available publically. We'll provide the links to you. It describes both the presentations that were made –

Different perspective, because there are somewhat different perspectives on complexity, but also I think some of the efforts in saying how do we take this forward within the context of a development agency? As Marcus said I think the biggest challenges are in fact political in terms of how do we accommodate some of the rather paradigmatic shifting implications of some of this? The road hasn't been easy within USAID. But I think the emphasis that we're doing now is essentially a little bit more of a lighter touch.

We're presently working nationally on developing a piece of policy guidance on strengthen country systems. And by systems we mean system in very much the way that Marcus was describing them. So take a term that is very much in currency in the AID effectiveness world, much more narrowly defined, and saying that if you really want to try to address the issues of building sustainability and local ownership that you really do in fact have to develop this broader systemic point of view.

We organized a two day experience summit at the end of November of last year. Over 100 individuals participated, about half of them from our development partners, both NGO's and development firms. And there is a whole raft of information about that available also; including a brief that describes some of the summary. We'll provide a link to that as well. On the particular issue here about grappling with this monitoring and evaluation, as the introduction mentioned, I work in the Office of Learning, Evaluation, and Research.

So this is obviously very much of a question for us. I want to throw out one thought. We have this tendency, again as part of our traditional paradigm, to essentially treat M&E as a word and monitoring and evaluation as a long string of things. I think the question really is when you move into this complexity space at least my initial intuition is that the issue of monitoring and the issue of evaluation are two very, very different things. I think that one of the things we may want to think about is whether or not we need to be thinking about monitoring, full-stop, and evaluation full-stop.

And what might be the particular approaches there. I think, for example, when we start talking about monitoring and we're talking about engaging the system it may be true that not everybody knows the system but part of monitoring may be bringing people to get parts of the system together more frequently to talk about how in fact the functioning of it is going. And that is probably something – It is largely internal to the system

process as opposed to an evaluation which might involve some form of an external look.

In terms of the evaluation and monitoring and evaluation efforts more generally, obviously we are also looking at different tools. Some of you may be familiar with some of them. Michael Quinn Patton wrote a book a couple of years ago about development evaluation, which is an attempt to try to address the issue of complexity straight on. There are tools that have been offered up: things like outcome mapping or outcome harvesting that have been seen as being potentially better suited to these kinds of things.

We're trying to better understand these alternative methods. And then lastly with respect to this question as we move into thinking about if we are going to propose a more systemic approach to the way in which we design projects. Some of the evaluation people in our office have been suggesting that it's really important, perhaps, to think about are there generic characteristics of robust, well-functioning systems, because you need something (they would argue) against which to measure some kind of progress.

Now some of the seven principles that are there would seem to qualify. Others are a little bit different. As we've been doing it I think we've sort of come up with four. But again it would be interesting to get your reactions to this. So clearly, if we're interested from a development point of view, one of the things we are interested in are the outcomes or the results of this. If we're trying to produce more maize or we're trying to address nutrition or we're trying to lower the infection rate of HIV/AIDS we're interested in the capability of the system to produce those kinds of results.

That's more of a traditional perspective. But how do the various components interact and produce them? Clearly this question about internal responsiveness – in other words is there ability for the system internally to adjust the changes in terms of their interactions and so forth? Another related idea is this issue about the relationship of a system to its surroundings, which you might think of as addictiveness – if there are changes in the broader surroundings if the system able to make everybody become aware of them in some sense and then make some adjustments?

And then I think there really is this question about governance in terms of the governance of the system. How is it essentially self-organizing kind of in a process or is there actually – There is a government HIV/AIDS prevention and treatment system? Then the questions come down to what are the incentives and what are the rules that prevail there and are they essentially compatible with the outcome that you're trying to produce? A

lot of the more experiences that I'm familiar with examine about the fact that each and every one of these services that are being provided or the commodities need to be well-adapted to the systems that they're doing.

A system – even a market system for maize – would necessarily be the right kind of configuration that you would want for small holder coffee for example. Anyway we do continue to grapple with this question and that's why we are interested in supporting the work of Marcus and his colleagues and any of you out there who are sort of scratching your heads on this, because while it is a paradigmatic change I think one of the things that we can do to ease the change is helping those understand that we do in fact have useful tools and that we are interested in, in fact, many of the same objectives, which is to make positive change and to be able to still hold ourselves accountable.

With that we'll open it to questions.

[End of Audio]