Economics of Resilience: An Ounce of Prevention, a Pound of Cure

Question and Answer Audio Transcript

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Julie MacCartee: Wonderful. Thank you so much to our presenters. Those were excellent and thorough presentations and thank you to our audience for asking a lot of great questions. They've been rolling in over the past ten minutes or so. So I'm going to go through them as best as we can and see how many we can answer in the next 45 minutes or so.

So I'll go ahead and kind of run through them mostly starting at the beginning from what first came in and I'll throw them out to the presenters. I get the feeling that most of them are for you Courtenay but Mark, Tiffany, and Tanya I'm sure you'll have places to jump in as well.

So going back there was a few questions coming in from Alisa Wong, Gilberto Amyia and Sophie Javers about the safety nets. They wanted to know a little bit more about what is the safety net transfer the only resilience intervention that the research studied and what exactly do you mean by "safety net," were they transfer of cash versus input?

C. Cabot Venton: Yeah sure. So I think something that's important to keep in mind in this study is that any type of intervention that we looked at we would ultimately have to monetize. So we weren't necessarily looking at specifically which interventions were the best approach, but rather if we were to provide for example in the case of the safety net a stable income every year and account for the cost of doing that does that – is that more expensive or less expensive than responding with humanitarian assistance?

And that's not necessarily a given. I didn't really go in – you know we had our sort of theory of change in our hypotheses, I wasn't necessarily expecting, because safety nets can be quite expensive that that would be necessarily a less expensive response, but it actually showed up as being significantly less expensive.

And the way that we defined the safety nets it was specific to each country. So for Kenya and Ethiopia they obviously already have very large safety net transfer programs. In Kenya if we assumed that the safety net was delivered in cash we used the already existing data on how much it costs to transfer that money based on the HSMT. Similarly for Ethiopia we assumed that in that case that the transfer was made in food, but we then monetized that in terms of its cash equivalent in the economic model.

In the Ethiopian analysis if you download that report you'll see that we also did some playing around with what the different cost scenarios would be and how much we could save if we were to actually shift to an entire cash-based response in Ethiopia, because we had really good data there, but that wasn't a core focus of the study overall.

Then in Somalia we used evidence from – because there's not a formalized safety net transfer program we used evidence from the different organizations that are doing safety net transfers on how much they transfer and how much that costs.

Then we transfer those amounts to all very poor and poor households in our model to see what that looks like in terms of how much that offsets the humanitarian assistance that was required.

I hope that answers the question. Tanya and Mark is there anything I missed?

Tanya Bourdreau: No.

Julie MacCartee: I think that was good in terms of the perspective from the participants. But of course we always encourage you to keep chiming in if you have further clarifications on your questions.

Then I thought I'd also bring up there seemed to be a little bit of confusion about the safety nets versus the resilience pieces. The broader question of course that others might need to chime in on when you suggest investing in resilience can you be a little bit more specific about what actions are behind resilience investment both what you chose to look at within the study and perhaps more broadly?

C. Cabot Venton: Yeah absolutely. So coming back to the first point that I was just making the way that we treated resilience investment in this study. So I basically could choose to take ten different interventions whether they're fodder schemes or IGA schemes or health or education, whatever they were and look at how much they cost to implement and what's the benefits of those were and integrate each one separately into the model.

But effectively the way that you build the economic model is that you have to monetize the benefits of anything that you're investing in, whatever type of intervention it is. So rather than saying, "Well fodder scheme might yield us a $100.00 per household and a health intervention might yield us $50.00 per household" and choosing lots of different price points as it were. Instead what we said was, "Let's take" and it's a little bit different per study, but, "about $125.00 to $150.00 increase in income." We aligned it to be 50 percent more than what they were getting with their safety net transfers. So we were basically saying, "If you," in Kenya for example, "If you have a $300.00 safety net transfer what if we also assumed that a resilience building intervention is allowing your household income to go up by another $150.00, what does that then do?"

So if you now have $450.00 per household what does that look like in terms of your household deficit and your income and assets? The difference in that economic model comes out where the safety net transfer obviously costs quite a lot, because you have to pay for the full $300.00, plus the 16 percent overhead to implement that safety net program. Whereas the additional $150.00 change in household income – so for example in Kenya we looked at women's graduation approach, a fodder approach, and I think the other one was doing vet services, I'd have to look back, I can't remember, I think there was al an agricultural approach where we had data on both the cost and the benefits of what it costs to invest in these resilience building measures. They all averaged a return close to three to one. So for every dollar invested you were yielding $3.00 of benefits.

So the extra income that came about was on top of the – so for example in Kenya if you assume that each household has an extra $150.00 in income, but through a resilience building intervention that it would cost us $50.00 achieve that $150.00 increase in income.

What one of the points that we really are trying to emphasize with this study is that we haven't said which intervention is going to most cost effectively get you that extra income. That really is a whole another year-long, I don't know five-year long set of studies to try and figure out how you most cost effectively achieve changes in the household income. But I think that what this study really highlights is that if we can start to build out this type of programming it's clearly going to be a lot more cost effective than investing in humanitarian assistance.

So let's start building out resilience programming and start to figure out what types of interventions are going to get their most effectively and that's where the points around agile and adaptive management really came out. That it's quite to hard to say, "This is what you should be investing in and you should take it to scale," because as you saw from the second half of my presentation the ability of people to invest in productive activities beyond their consumption needs is quite distinctly variable depending on which population you're looking at.

Julie MacCartee: Great, thank you so much Courtenay. Another question came in from Michael Felix for you asking: How do you view the current level of collaboration between safety net humanitarian response, livelihood support actors and programs? To what extent is the level of collaboration a challenge to realize in some of the projected gains in coordinated and proactive investments?

C. Cabot Venton: Oh it's a great question. You're going to land me in it, this is all recorded. *[Laughs]* I think what's really interesting is when you start to look at all of this through a political economy lens and that's why I also at which speaks to the collaboration and the coordination point as well and that's why I was really interested in some of the questions that I highlighted that rollout from some of the more specific analysis that we did around how do you actually build out the systems and infrastructure that can allow people to achieve these types of gains and is that feasible?

So the idea that investing in resilience is far more cost effective than responding with humanitarian assistance still holds, but in certain context and this really starts to bring up the question too of how do we address populations where it may not be feasible to continue engaging in the livelihood in that zone? How do you start to unpack that and figure out what the cost is to actually ensure that people can get the full amount of access to services, access to roads, access to market that would be required to allow some of these shifts in household economies to take place?

And so I think that there is – I see examples of both. I feel like I've definitely seen places where collaboration is working really well and I've seen places where it's not working so well. We had a really interesting experience on a DFID project that we were working on in Ethiopia this year where we were asked to do a much deep dive in collaboration with USAID as well to look at how the sort of network of resilience building interventions in the Somali regions had contributed to people's resilience?

And we couldn't even map the different interventions that were taking place and where because it was so scattergun that there really was a total lack of coordination and it meant that it was really kind of tinkering around the edges rather than creating a really concerted and comprehensive investment in building resilience. So I think that that's where some these bigger conversations around collaboration and this sort of political economy of how do we get all these actors together and create some level change needs to take place.

Julie MacCartee: Wonderful, thank you. We had just a clarifying question coming in from Dick Tinsley. You mentioned carryover from good years to poor years and he was wondering: What form did this carryover take? Was it crop, livestock, cash, et cetera?

C. Cabot Venton: Mark it might make sense for you to answer that in terms of how the savings forward into the next year.

Mark Lawrence: Yeah sure, yeah the savings were either in food or cash depending upon what was there was a surplus of. So if people ended the year with some of their crop production leftover then that was stocked as food for the following year, otherwise by and large savings were in cash that were carried over. We didn't consider anybody using that cash to then invest and then purchase additional livestock for example. I think that's all I have to say on that.

Julie MacCartee: Great, all right. Let's see, there was a question that came in from Bernard Cartella, I think another clarifying question: Does early response mean early action based on outcome analysis forecast and triggers and are both triggers predictive?

C. Cabot Venton: I'm not sure I totally understand it. Mark do you understand?

Julie MacCartee: Or perhaps if you could provide just a little bit more detail on early response. The definition that you used for early response and what sort of – is there a past review for that?

C. Cabot Venton: Yeah sure. So early response, yeah and Mark you can clarify. Early response effectively in the analysis referred to action taking place before negative coping strategies started to kick in and then looking at what impact that had on the household economy. We weren't specific layering in distinct early action measures. Mark do you want to add to that?

Mark Lawrence: I'm wondering whether this is a question about you know how effective our early warning is? I think the question here is if we do an outcome analysis to predict that there's a problem and we respond on that you know how many false positives do we get and to the extent to which that might waste resources. Is that, is that, that's how I would see it, do you understand what I'm saying?

C. Cabot Venton: It makes sense to me but I wonder if the – I don't know maybe that's one where we need to get more clarification.

Julie MacCartee: We can see that Bernard just commented in the Chat Box. He meant is the early action far ahead of the shock or the response is provided at the earliest occurrence of the shock?

C. Cabot Venton: Yeah, no it's a good question, it's a really good question.

Mark Lawrence: Okay.

C. Cabot Venton: Mark go ahead.

Mark Lawrence: Do you want to carry on Courtenay? Yeah okay. No I think that we also thought in terms of timeframe didn't we that a late intervention meant that the intervention occurred in the last four months of the consumption year.

So if you had a shock beginning with a failed harvest for example then a late intervention meant that there was no intervention until eight months after the harvest. Whereas an early intervention we were thinking of something much more prompt. Certainly and before any – so after the failed harvest, but before we saw any negative coping strategies kicking in so we were certainly thinking within four months of a failed harvest.

C. Cabot Venton: Yeah and I think also it's important to highlight that this is a really tricky question and lots of people say, "How early is early?" Like when does that early response need to be? And because we define it as before negative coping strategies in play and before prices start to destabilize in the market you can't – we're not specifying when that happens in the seasonal calendar, although I'm sure if you spoke to local experts they'd have a good sense of that. Again pulling from the work that we've just been doing with DFID in Somalia and in Ethiopia it was interesting that the people there said that their crisis really started two years before aid started to flow, which is tough because there wasn't much chance of an early response that early.

So it's a good question, but I think it's one that a lot of people are trying to answer.

Julie MacCartee: Great, thank you both. A question came in from Peter Richards which I think is a very straightforward and important to address. He said that "Much of the evidence that you presented seems to be based on scenario modeling. To what extent have past investments in resilience led to cost savings in humanitarian aid or a related question are there any gaps or areas that for which there maybe isn't enough evidence that will require some further analysis?"

C. Cabot Venton: Yeah brilliant. Peter your question is spot on because we have – you know when we started out this study we were very much trying to also see what kinds of evidence, empirical evidence there were to help us understand why their investment in resilience had indeed offset humanitarian assistance? And in a second Tiffany can probably give you a brief overview of some of the other work that USAID is doing that's trying to look at this.

It's a really tough question because you know sort of similar to the Tigray study where we couldn't, you wouldn't necessarily think people were more resilient unless you could have done that modeling. It's very hard to tease apart whether an investment has empirically meant people have been able to cope better, because the – for a whole variety of reasons, because trying to find areas that have a high intervention of resilience interventions versus a low intervention of resilience interventions is really different because so many people are doing so many things in so many different places. So it's very hard to get a clean sample and terms are factual. Also because the things that drive resilience are so varied and also because resilience can show up in year 1, but can also show up in year 5, it can show up in year 15. So it's very, very difficult to measure empirically.

I know from some of the work that DFID has been doing in Somalia, they have a three-year longitudinal study where they have found that people who and they actually have a very clear, they've been able to get a much cleaner sample of counterfactual and resilience communities. They found that in this last year's drought that all of the counterfactual and all of the communities, sample communities were in exactly the same place. That the high levels of resilience intervention had not helped in this drought.

There are a few other studies that echo that finding. But what a lot of people were sort of feeding back is does that suggest that we're also to sort of measure where there was more resilience in one of the worst droughts on record might be a little bit ambitious. What they did see was that in other years that these households were definitely better off.

So how do we you know like that Somalia graph that I showed where even with quite a lot of investment there were still years where they got absolutely hammered in that 2010-2011. There's always going to be droughts that overwhelm the capacity of the system to respond.

Tiffany I don't know if you want to just give a few, a little bit of an overview because this is something you've been looking at a lot.

Tiffany Griffin: Yeah I mean we don't have any hard findings to that as of yet. We have woven in some different measures of humanitarian assistance into whether households have received humanitarian assistance into some of our recurrent monitoring. The thing is we're not able to make the leap as to why certain households have or have not received the humanitarian assistance. So is it an access issue? Is it a capital issue, kind of a social capital, human capital issue?

So we're not comfortable making interpretive leaps as to some of the reasons why the different households receive and didn't receive humanitarian assistance and then how the humanitarian assistance functions in terms of protecting the households in the face of the shock. So we are working on different methodologies to capture that. By using the recurrent monitoring methodology we are able to look at the timing of humanitarian assistance and kind of when it was received and whether earlier receipt plays a more protective effect.

It's early evidence is suggestive that is, but again it's nothing that is like totally sound and so that we would you know put out there.

C. Cabot Venton: Also just to say that whilst we're doing scenario modeling I just want to emphasize how much empirical evidence goes into this analysis. So the baseline date for the HEA is extensive data from household community surveys and interviews that fuse to buildup the profile of these household economies and how they shift. That combined with actual data as I was mentioning from FEWS NET and the USGS and all these others on the last 15 years worth of price and rainfall and crop and livestock data. The economic model uses the actual data from WFT on the cost of purchasing, humanitarian assistance at different times of the year and how that can shift depending on whether they respond early and therefore can reduce the cost that's based on the actual cost of cash.

The returns of investments on investments of investing in some of these resilience investments is based on actual evidence from a wide range of agencies in each country on the specific costs and the results seen in impact and benefits of their different types of intervention. So it's very, very heavily pinned in a lot of empirical evidence that we then use the models because it's so hard to tease out whether or not households will be more resilient with an investment, sorry, whether they'll be, have less need for humanitarian assistance with the resilience investment. The model then really helps us to take all that data, that extra step to try and understand how things shift.

And over – the other thing is that it's very hard – you know we can't do a longitudinal study for 15 years. And one of the things that we've found really critical in the HEA analysis is that when you look at these populations over 15 years it's so fundamental what happened 5 years ago as to how they're coping this year. So you really need that longitudinal understanding to paint the full picture.

Julie MacCartee: Wonderful. Thank you for those very helpful responses. A question came in from Lena Herrin who said that she understands the category of benefits was the avoidance of loss, but did you include an estimate of the multiplied wealth that can come from income that accrues to those assets that are not lost?

C. Cabot Venton: No we did not and we did talk about the idea as well that whilst we included an estimate of income ____ _____ *[audio break]* through the resilience building scenario we assumed you know one of the limitations to the analysis is significantly more positive if we were to adjust this, but it was hard to adjust in the model that if we were investing in these resilience building measures that the outcomes from those should improve over time, where as we assumed the static $150.00 every year. But if people are sort of building out of poverty you would assume that that would increase a little bit each year. So no we didn't directly account for that and it's something that would be useful to be able to do.

Mark Lawrence: Courtenay if I can just _____ *[audio break]*.

C. Cabot Venton: Yes.

Mark Lawrence: There is one category of income that we did take into account and that was the livestock.

C. Cabot Venton: Yes that's _______ *[crosstalk]*.

Mark Lawrence: So you know we had that ______ *[audio break]* there was a small reduction in mortality and stockholdings increased as a result of early intervention, not by a huge amount but they did progressively over the 15 years and that then did result in an increase in livestock income between the two scenarios. Okay?

Julie MacCartee: Thank you very much. Let's see we've got about 20 more minutes for question so please do keep them coming. We will get to as many as we can over the next 20 minutes, but if there are some that we're not able to get to we will also follow-up as best we can via Agrilinks and via the post-event e-mails that we will send to all of you who joined the webinar today.

All right let's jump to a question that came in from Richard Shulerton who wanted to ask about how we factor in disaster risk reduction? "You're analysis focuses on income and transfer, but disaster risk reduction would reduce the impacts of shocks and reduce the resilience and survival deficits that households face." He notes that, "It's been hard to integrate this into cost benefit analysis given the diversity of disaster risk reduction actions and the lack of real evidence on how much they reduce the impacts of shocks." So he's wondering what new idea or progress has been made in disaster risk reduction?

C. Cabot Venton: So I guess I mean we did, we basically we're looking at if we were – I think it so much depends on how you define the district risk reduction as compared with resilience building. But effectively what we were looking at was if we improved household income by a certain amount of money how much would that offset the deficits that that household faces? We're also because we're rolling from year-to-year we're able to see how a lack of a deficit in a previous year allows you to then cope in the next year. So there is somewhat of a rollover from year-to-year as well.

So I think I mean if you were – if you're investing in disaster risk reduction you're obviously going to be having a similar impact. So in theory if you're disaster risk reduction intervention is successful then you're income and asset loss won't be so significant and therefore again that would translate into the same modality as we've already used in the model, which is if we invest and our income and asset changes by $300.00 what does that do the household?

So I don't, the model didn't specifically tease out what or compare how a disaster risk intervention would compare with a resilience intervention and underneath each of those obviously there is quite a few different interventions that could be considered. We didn't compare which ones would get us most cost effectively to the outcome that we predicted. So I don't know if – and Richard we can also chat offline anyway later about this, but I don't know that it added specifically, but I don't know if I'm getting at your specific question and maybe misunderstanding of it.

Julie MacCartee: I can see that Richard is oh is typing. I was going to see if he had ____ _____ *[crosstalk]*, but he just says, "Thanks Courtenay, excellent and it sounds like you can text further as needed."

C. Cabot Venton: Okay he's happy. *[Laughter]*

Julie MacCartee: Great. Let's see. A nice question came in from Ryan Huddle who pointed out that this is largely an econometric measure of resilience and does not look at environmental, health, gender, equity or other fairly important factors. His question is: "Have you been working on any predictive modeling that helps identify best bets in terms of interventions, safety nets, improved practices, et cetera?" And I'm assuming he means some best bets kind of considering that there are all these other complicating factors in resilience measuring.

C. Cabot Venton: Yeah and that was a great question. That's why I pointed out on that slide that shows the breakdown of donor cost compared with avoided losses. That really the avoided losses we were able to isolate a couple of really big important factors for the households. So it's certainly not insubstantial, but obviously there are many other forms of benefits that we couldn't quantify or monetize to include in the analysis and that would absolutely include some of the things that you're talking about that would hopefully help to push along the progress on resilience factors and we're able to achieve it in our model.

So the good news is that means that the findings from the model are conservative and there's lots more that could go in there that would be really important if we had better evidence to quantify it. I do think again though that coming back to like what are the best sets of intervention? Most of my career I've spent looking at the cost and benefits of different types of interventions and one of the things that consistently comes out is that most of the things that we consider to invest in are typically cost effective; normally the benefits outweigh the costs.

But what really impacts whether or not they actually achieve that impact in practice is how they're implemented. So where I've been asked to do an economic analysis of interventions that really have not achieved what we would have thought they would have been able to achieve it's because they weren't built up from a community-driven perspective. I think that shifting – that's why this points around agile and adaptive programming is so important because we still tend to take such a sector focus on our different types of interventions, whether it's savings or gender equality or an environmental intervention or health intervention, as opposed to and I think the World's Humanitarian Summit has helped to really open the conversation around investing more in local actors. I think the cash conversation has really helped to show up the real diversity and how households spend their money in order to be able to cope.

So I think that from my perspective from what I've seen and the economic evidence the best bets are the things that allow the communities to drive their developments that allow donors and NGOs to be flexible and shift when shocks *[audio break]* need comes out or context changes and people next access to other things to get them through whatever is happening. I think that that flexibility is pretty critical and I think that's certainly where people like DFID have been trying to drive with some of their work on multiyear humanitarian financing and cash-based agendas, et cetera.

So I don't – you know as I said in the presentation *[audio break]* questions is okay, but where do we put our money? What interventions are going to get us so far *[audio break]* the fastest? I think it's a little bit more nuance than our current conversations and that there needs to be much more focus approach around flexible, agile, adaptive, shock responsive, I can't think of what other labels *[audio break]* different kinds of approaches.

Julie MacCartee: Great, thank you Courtenay. I would like to quickly call out for our participants that April Thompson just posted in the Chat Box a really useful guidance document on resilience. That for those who need a bit more of a primer or primer depending on how you pronounce it, on resilience and how it relates to the relatively new US Global Food Security Strategy please visit that link and be sure to read that document.

We still have a few minutes for question, but I'd also like to just quickly pullout and point out some coming attractions for Agrilinks and MicroLinks. We actually have a webinar next Wednesday, January 31st on trade-based solutions to food and security, where we will be looking at grain trade, interregional trade in Africa. So that should be interesting to some of you.

We also have an event, probably an in-person event coming up in late February with the US Office of Foreign Investor Assistance on feed storage and marketing. So keep your eyes open for that.

Of course Agrilinks has been doing theme months and our current theme month is Water for Food. We've got some other theme months coming up on, let's see next month is Finance Focused Month. We also have Food Safety coming up in March. So you will get updates on all of that if you are on the Agrilinks mailing list, which I hope many of your on Agrilinks and/or the MicroLinks mailing lists. So please do signup if you're not a member already.

All right so we do have about ten more minutes left for questions. So I'll, let's see I'll toss it to a question from Ian Winbourne that perhaps might be good for Tiffany to chime in on. "Just a frank question that given the traditional programmatic divides between humanitarian aid and development programmer resilience in a mission", assuming he means the USAID mission, "looks like a great challenge what are your thoughts?"

Tiffany Griffin: Hi Ian this is Tiffany. Thanks Julie for passing this very difficult question to me. *[Laughter]* You know to keep it very frank I think it can be a challenge, but I think we have really great models for overcoming that challenge you know within USAID.

So I think one thing that is an opportunity that resilience affords is that it's not going to be strengthened, resilience is not going to be strengthened through any one sector or any one technical intervention and it's not achieved through any one timeframe, right? So you need immediate responses, you need long-term responses, mid-term, you know mid-length responses and so on and so forth.

So because of the complexity of resilience it affords an opportunity for strange bedfellows if you will. It brings together different sectors of course, different technical sectors within development. It also requires humanitarian development actors to work together such that you know humanitarian responses strengthen development over time and don't undermine development in that development similarly doesn't you know create situations by which humanitarian liabilities increase over time.

So one of our really great examples of collaboration across offices and across that humanitarian and development divide is actually in Kenya where they kind of brought together a number of actors both on the humanitarian side and on the development side, in addition to local government, national governments with different actors from the entire system if you will working towards the same goal in a specified geographic area.

We found that when you kind of create that atmosphere of everyone working towards the same goal and identify how each actor, be it on you know whatever side, the humanitarian side or the development side, how they contribute to that goal and what synergies emerge when they're all contributing towards that goal that actually the collaboration kind of fuels itself and it need not be as complicated or complex as it may seem on face value. So is it challenging at times or can it be challenging? Absolutely. Is it impossible? Absolutely not. We have some examples of it working really, really well.

Julie MacCartee: Wonderful, thank you Tiffany. As you all can see we have a few polls that have come up on our screen. Our exit polls that we always ask you to fill-out if possible before you leave the webinar. A few questions that will just help us scope and improve our future events, so please do answer those if you have a moment.

Let's see we can probably squeeze in a couple more questions. Perhaps we'll jump down to one from Daniel Bailey who wanted to bring up remittances. He asked, "Was there also an evaluation of private cash transfers, in other words remittances, and how did lulls of remittances impact the resilience effects was that considered?"

C. Cabot Venton: That's a great question. Mark do you want to speak first at how remittances play into the actual household economies

Mark Lawrence: Yeah sure. Well yes if there is remittance income then that does form part of the baseline. So we do collect information on received remittances in any given livelihoods zone and how much remittance income they might receive in the year. We also have – you know we make some kind of an evaluation as to by how that might increase in a bad year as a coping strategy. So all of those things are factored in to the HEA side of the analysis. But we didn't consider them as a component of their response in the same was as we did you know looking at the safety net sort of resilience projects.

C. Cabot Venton: No.

Mark Lawrence: Do you want to enter into that?

C. Cabot Venton: Yeah and I would just add that again coming back to this point that we weren't specifying what the source of or the intervention was that led to the increase in income at a household level. But obviously remittances from family could easily be one of their coping strategies. So you could surmise that if you had a very strong remittance culture, if you were in *[audio break]* you were looking at this does that could be the say, "intervention" that's boosting up the income to allow them to offset the humanitarian deficit.

But it does come through in the HEA in the sense that that would have been captured.

Julie MacCartee: Great, thank you. Let's see I'd like to just call out a couple of questions from Rebecca Chocko who was interested in some more detail about the assumptions and models around early humanitarian assistance and also a breakdown of costs for each of the scenarios, the four scenarios that you mentioned. For example for the final scenario how much is spent on the late humanitarian assistance, on the early humanitarian assistance, on safety net and resilience? I know we might not have time to fully answer those, but perhaps you could explain what exactly people can find within the various downloadable reports and whether that sort of detail is in there?

C. Cabot Venton: Yeah absolutely. No I think if you go onto the website where all of the reports are located as resilience you'll see there are both the overall summary report, as well as the HEA report. So the HEA report will have really detailed explanations around the assumptions that were included for that portion of the model. And then including you know how much every component of the model shifted depending on which scenario we were looking at. And then the overall report for each country will have the specifics for each country and they are very detailed tables in each of the country reports that spell out the assumptions, the costs used, et cetera for each of the scenarios. It also gives the breakdown of the cost for each scenario.

So please have a look at those. I'm really happy for anyone to e-mail me and jump on a call to talk through in more detail if you don't see there what you need, but there's a lot of information already in there.

Julie MacCartee: All right and then this perhaps hopefully will be a quick questions from Carlos Salia: "Did you have any experience with local institutional models of carryover like savings groups, et cetera." I'm not sure whether that's been already partly addressed but I wanted to call it out.

C. Cabot Venton: Yeah I mean again we didn't integrate it. It's pretty hard to integrate a very specific type of intervention like that into the model, particularly because there are so many. But obviously in order for the savings in the year where people are able to toss out enough that they have savings in order for that to then be invested in productive activities you would assume that there would be – you'd need t invest in passages and interventions that include savings groups so that they can carryover their savings or access to some sort of banking facilities. You would assume that they would need to then be able to invest that in a productive activity and what do you need to have in place in order for that to happen? Is it already there or isn't it?

So we assumed that people would be able to carryover their savings to the next year. But to be fair also in a lot of the cases that savings was pretty minimal.

Julie MacCartee: Great, thank you. A question it just came in from Rick Himmick and I think it's interesting to note, "How does the three to one ratio, the $3.00 to $1.00 compared to previous or other estimates that you're aware of?" He says it seems like a smaller difference than he's seen in the past, "But I was wondering if you know of other similar studies that might have different results or whether there haven't been quite enough that have been in this exact same vein?"

C. Cabot Venton: Yeah. So I think there's two points there. The first, the three to one is very similar – this study was preceded by a study that I did with DFID four years ago, which was quite well received and helped to kind of push the agenda forward. A lot of people quoted the returns of the cost to benefit costs ration from that study as well.

And this study went a lot, a lot, a lot, a lot deeper with a lot more data, a lot more nuance and it has yielded similar benefit costs ratio, they're not smaller, they're on par. What I would highlight though is that this three to one is the cost – it's the benefits that arises through avoided humanitarian assistance from investing in resilience. And that's a different beast entirely to what are all of the benefits that come from investing in a resilience and prevention?

So if for instance you were to look at an intervention around education you would actually be quantifying not only how much does that intervention offset the humanitarian needs of that household, which is what this three to one is, but you would be incorporating that there are benefit in terms of long-term income gains, in terms of I mean all of the different benefits it rolled out as an educational investment or a health investment.

So this if you're thinking of you know like the four to one which is what the tends to use and I think they just decided to increase it to five to one that's looking at a much broader set of benefits. Here we're really isolating what is the effect of the resilience intervention on humanitarian assistance needs and that's a very important piece of the puzzle.

So again though positively it means that what we're doing is conservative. If you were then to roll in all of the benefits that would additionally come outside of the humanitarian sphere, the broader development benefits from these resilience interventions obviously that ratio would go up quite significantly.

Julie MacCartee: Great. I think there's just one last punctuating question from Sophie Javers who notes that this is very important research and wants to know what are the future plans to bring this research to an even broader development audience beyond this webinar?

C. Cabot Venton: Tiffany do you want to answer that?

Tiffany Griffin: *[Laughs]* Hi, yeah, so we have I don't know if it's listed in the resources or somewhere on the slide where folks can access the actual studies that led to this specific presentation, but that is where you would get the actual studies. And then you know beyond this webinar we'll keep you know working to refine the models and then hopefully as a comment that arose earlier eluded to apply the thinking of value for money to more empirical kind of real-time analyses, so those are the place so far.

Julie MacCartee: Great. Well we are at our official end time and so I would like to extend a sincere thank you to our presenters, Tiffany, Mark, and Courtenay and of course our resources who have also been helping answer questions and then the Chat Box, the KDAD team, Kareem, and Tanya. Most importantly though thank you to you our participants for joining the webinar for asking such great questions and sharing resources, engaging in the Chat Box. You are the reason that we hold Agrilinks and MicroLinks webinars. So thank you very much for attending. Please continue to tell us what interest you and attend our webinars in the future.

Be on the lookout of course for the recording of this webinar, perhaps part of what we can do to keep the momentum rolling is for you to share this with your colleagues you think would be interested. So the e-mail with the recording will also contain links to all of the studies that Tiffany just mentioned, the official reports.

All right we're going to go ahead and wrap up and hopefully we'll see you at future Agrilinks and MicroLinks webinars. Thank you all very much and have a great rest of your week.

C. Cabot Venton: Thank you.

[End of Audio]