Digital And The Everyday: From Codes To Cloud
Prof. Janaki Srinivasan
Department of Multidisciplinary
International Institute of Information Technology, Bangalore

Lecture – 16
Digital Finance-Part 02

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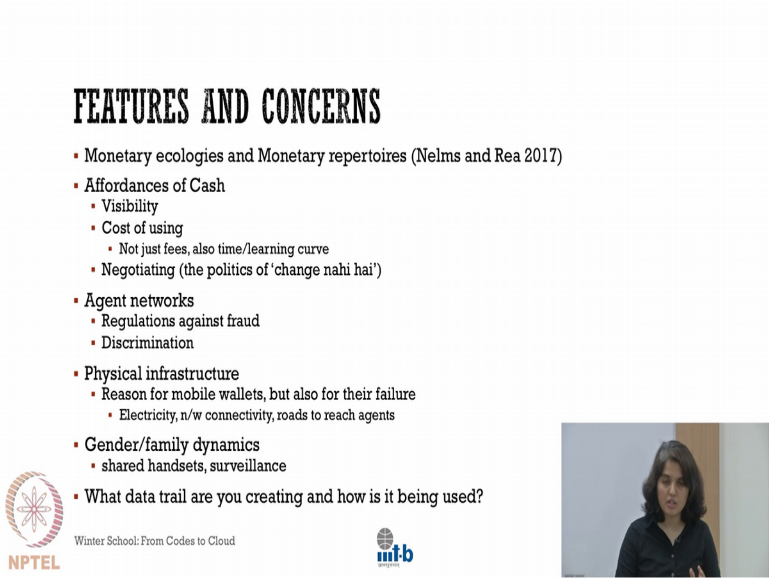

And this is actually a term for this right that whenever you introduce a new new oh device or mode of transacting, financially, it is introduced into pre existing monetary ecology which has a certain institutional and regulatory contacts. There are certain social relations on which it works. There are certain social norms and people also has certain monetary referred to us which means that they here mark certain kinds of currency for certain kinds of activities, right.

So, cash might be for things that cost less than a certain amount or they might be for buying vegetables, right frequent miles; obviously, you are restricted from using it in all places, only some places will accepted. So, whether it is for institutional reasons or social norms, people keep aside certain kinds of money for doing certain kinds of things.

So, they in fact, anthropologist; I do not have time to go into this in great detail, but anthropologist have found overtime that even the same currency rights for you might have dollar or rupee bills, but people will keep some in a box which will indicates savings, they will keep some in their wallet which is for spending they might keep some in their pocket which is only for buying tickets and so on and so forth. So, we have a fairly sophisticated and evolved way of thinking of bucketing are different payments and expenditure and so on right.

And as researchers of mobile money, I think it is very important to think about what is the ecology and repertoire to which you are introducing mobile money and I think the thing to keep in mind is also that people do and have always continued to use different forms. So, instead of thinking about cashless, maybe we should think about how does cache get incorporated what are the advantages that it offers what are the things, it is continuing to be used for and in what cases does it not make sense for cash to be used or for what kind of people is mobile money a better way to transact right.

So, rather than thinking in terms of the binary of cashless and only cash, I think the whole point here is that we are enhancing people's choices and the kind of modes that they operating. So, that is one thing I would like you to keep in mind, going forward again, coming back to what is the that cash can do, right, there a very very interesting examples, for example, visibility right. So, there was a there is a research group called institute for money technology and financial inclusion that I work with and they have fascinating stories of how people continue to use cash.

So, one of the things they found in the Philippines was that migrants when they came back home for say you know festival holidays or something like bringing back cash if you transferred cash on the phone it would not be visible to the rest of the village right for you wanted to say that here is how much I have made as part of my work which I do as a migrant and this is what I have brought back in lieu of that work correct. So, there are some performative ads of which cash is a part. So, I think that is very important to think about another way to think about this is our housewife from Kanpur, who was basically saying that in her case the cash was invisible right as long as she kept her savings of money in cash, she did not necessarily have to account for them she was not constantly traceable, but with bank accounts and presumably with mobile wallets that is traceable.

So, thinking about these questions of how visible cashes and whether you wanted to be visible or not in particular scenarios is important there is also the cost of using right everyone accepts cash um. So, there is that and it is not just the that people will just take cash at part right you do not pay fees to use cash with lot of your mobile wallets for other means they might be fees and the fees might sometimes be hidden not everyone might understand what fees you are paying for each transaction with cash, you know that that is not going to happen right it is also the other kinds of cost are also time and learning curve you do have to learn how to use other kinds of thing like mobile money and so on and so forth

Where is with cash, I think historical everyone knows now how to use cash how to pay it out etcetera there is also another aspect of cash which I am sort of interested in and I will probably do more research on going forward and that is your ability to negotiate with cash. So, I am sure you have also seen this in every day transaction, but I will give an example from my research again among the fishing community in Kerala, one of the things that happens is that fisher auctioned in Kerala right in a public auction. Now what happens is that fisherman will bring that fresh catch laid out on the sand and someone will auction out that fish and the person who comes up with the best price gets to buy that fresh, a lot of the buyers are small scale fish vendors who happened to be women, right.

Now, these women will come and they will decide on a particular figure right. So, he will announce a I do not know randomly 700 rupees 1, 2 and 3 and 3; 1 percent taken at right and she will maybe 700 was on right figure. So, she will say 720 is what they have decided on. Now this women will come, look through wallet and she will say you know actually I do not have 20 rupees change, right. So, it is not that this will happen every day, but every once in a while these kind of negotiations do happen right.

So, this might be genuinely because someone does not have changed, but sometimes it is also a way of saving a little bit and I am not taking like a moral stands on this my point really is that it becomes cash and change become a way in which people can negotiate with each other and slightly have a little bit of leeway to do that in a way that other kinds of monetary instruments maybe do not, because if you can send an exact amount where would the space for negotiation be anyway this is something that, I am interested in going forward again coming back to the features of this whole remittance and payment sort of landscape.

We have already seen that agent networks are critical, but one thing to think about is, then how are these networks regulator right, what prevents how do you prevent a fraud what about someone who takes money and just runs away, how would you deal with something like that the other point is also you might remember that I said one of the things about mobile money agent that they are from the local community which means people trust them, but the flip side of this is that. Obviously, then they have a very specific social position they might belong to a particular religion particular cast, etcetera and all the kinds of discrimination that feed that flow from that are likely to be reflected in their transaction and there have been documented instances where is this happens.

There is also the question of physical infrastructure right. So, one of the reason that people speak of moving to mobile wallets is because the earlier banking infrastructure was not that great the banking physical infrastructure, but of course, mobile wallets also need their own kind of infrastructure whether it is a electricity network connectivity or roads to reach agents.

So, all of these again have to be kept in mind, then we come to the ownership of the mobile phone and who gets to use it right and yes where family and gender dynamic typically play a huge roll because of your mobile phone is shared what is that mean in terms of how much cash you can how much m-pesa transfer can happen to your phone is your family comfortable with that whose transferring you money, etcetera. So, it might again be used as a surveillance device again something think about and finally, like a pointed out earlier too what kinds of data trails are you creating and how is that being used, alright.

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So, with this, I want to move on to digital credit which is another space in the whole digital finance landscape which has been getting a lot of attention, right. So, digital credit involves a lot of different types of entities and institutions increasingly in a typical digital credit offering a mobile phone operator will partner with a financial institution to provide small short term kind of loans and they will do this directly. They will directly offer to this to customers over an existing monetary sort of ecosystem 2 of the examples I have here are m-shwari and lenddo, these are both part of this whole new age digital credit sort of an ecosystem.

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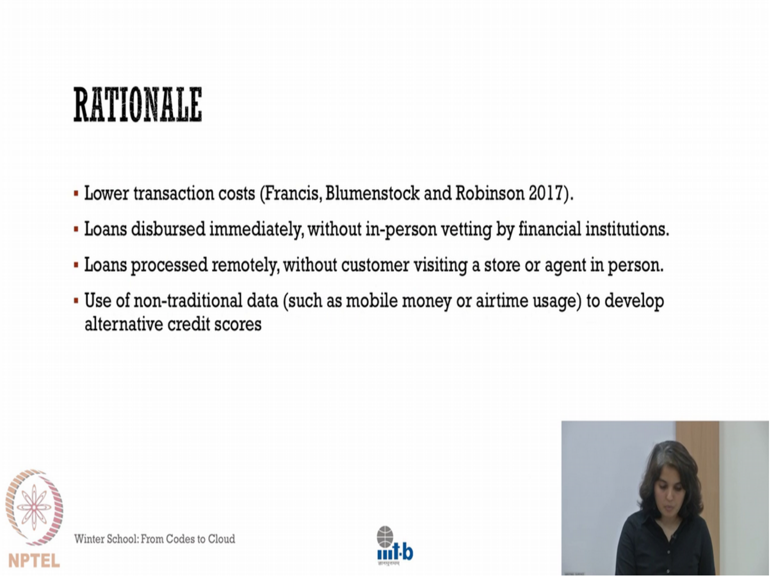

Now, what was the rationale? The rationale was that digital credit lower transaction cost because these loans can actually be disbursed through mobile money and this can happen pretty instantaneously.

So, instead of earlier situations where a physical banking infrastructure had to be leverage to do these loans can be disbursed much more quickly in this case through mobile money the other thing is also the reason. This can be done quickly is because earlier digital credit and loan approvals will typically required in person vetting of the person right um. So, will they be able to repay this etcetera was something that people verified face to face by travelling to where the way lived where they worked etcetera but with digital credit its more immediate and why is this because and will come to this later because of a bunch of new sort of algorithms and so on.

Whereby you can companies are trying to detect peoples creditworthiness using other means, then third loans can also be processed remotely without requiring the customer to visit a store or agent in person again saves time possibly transaction cost and finally, since the giving of credit and loan is typically tied to peoples creditworthiness or credit score and many people do not have this kind of credit score how do you really wet people for their worthiness.

This is what I was saying earlier to is that there are now a bunch of innovative ways in which people are trying to do this and very often in doing those they use very nontraditional data and what do I mean by this instead of necessarily. So, so earlier if you applied for loan people might look at how much you earn which would be available to them say from your bank what is your credit history, what have you been spending on which might again be available with the credit bureau or possibly your bank. Now when this does not exist these new companies of started looking at other kinds of details like how much air time do you load up. And are you able to pay for that have you been paying bills using mobile money those are the kinds those are one kind of things that get tracked you other kinds of usage might also get tracked um.

So, for instance most lenders associated with the telecom industry will use the applicants history of mobile phone usage air time purchases data used etcetera as well as mobile money transactions when the applicant has an app installed this will also collect things like g p s data contact list and so on and so forth. For example, lenddo which I showed you it uses people contact list how frequently they are in touch with others on the contact list, etcetera to figure out the social network within which they operate right and the use this to come up with a score which measures their creditworthiness some other companies even use quizzes to figure out your credit worthiness others use psychometric analysis. So, they might try and figure out the kinds of things you say on say your social media account which might actually not be directly connected to your finances, but it helps them build up a certain kind of profile of the kind of person you are which they then link to creditworthiness.

So, you can see how different this is than earlier ways of offering credit and; obviously, as with anything new they both as new features, but also there are things that you are concerned about.

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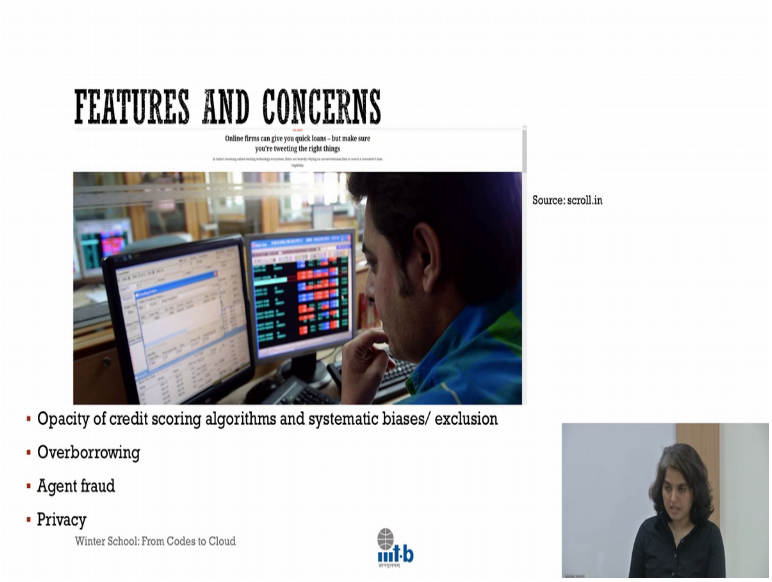

Reasons scroll article for example, sezz online forms can give you quick loans, but make sure you are twitting the right things, because basically what they are using to determine your credit worthiness is the kinds of things that you say on say your Facebook or Twitter account. So, one of the things that we really need to keep in mind given this burgeoning space of digital credit is the kinds of algorithms on the basis of which they operate.

Now, as you have already learnt from you must have from Shreesha's session yesterday, systematic biases often get encoded into algorithms right. So, in this case for instance someone’s digital trail might be very very weak because they either cannot afford to or just do not use certain kinds of digital technology is our you know do not purchase air time as often, etcetera. Now you might use this to come to very erroneous conclusions about their credit worthiness. So, there is that what sort of makes this even more problematic is that these algorithm are often opaque. So, you do not necessarily know on what basis they are scoring you.

So, that is also an issue the other issue, but digital credit is precisely, because it is so quick, you can very often call up and get a loan within a matter of hours or days now what this means combined with the fact that there is no in person vetting is that first time borrowers might actually over borrow. So, they might borrow more than what they can repay they might have done it with the best intentions, but they are unable to repay and because the credit agency has not done the same intensity of due diligence maybe its basing it on metrics that we do not know how reliable they are there all pretty new.

So, given all of that there is a risk of over borrowing there is also the risk of agent fraud and this happens for multiple reasons one of which is that very often people will give agents their credentials this might include their mobile money wallet credentials etcetera, because that makes things easier for them now is this used to perpetuate fraud it there have been cases with this is something to watch out for and finally, again light of your previous session all of this also has privacy implications. So, if I say something on Twitter or on Facebook; why should that be taken into account when I am doing my financial transaction that is the question that you really need to ask.

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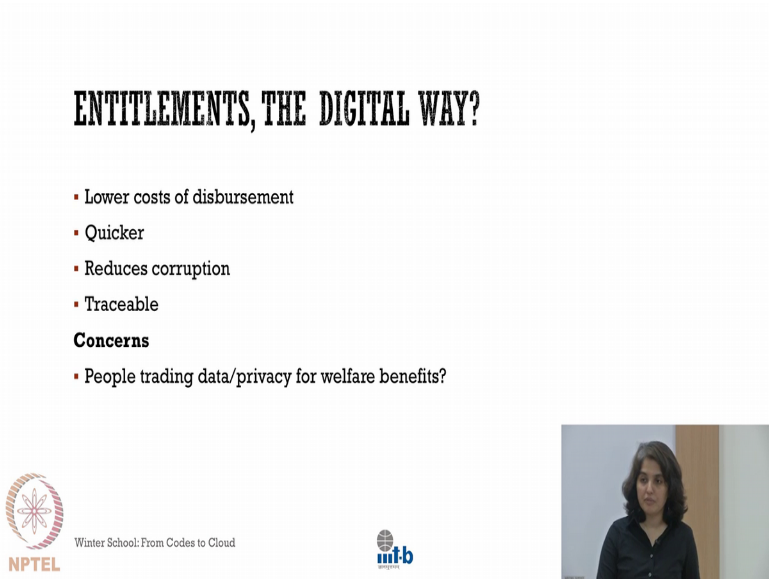

So, one thing I also wanted to flag was though I was basically going to focus on payments and on credit today there are; obviously, many other slices to the digital finance, one of them especially in the Indian case has this has been this question of welfare payment rights. So, people's earnings can also come in a digital form and one of the things we have been hearing about is direct benefit transfer.

So, this whole space of entitlement is also definitely worth studying and again speaks to all of these issues that you learnt about yesterday right. So, that the rationale for using digital transfers for entitlements is that the cost of disbursement or lower this is directly transferred into your account it is possibly Quikr, there is also the promise of reduced corruption. So, the idea is that if you do not have to deal with people and cash and your money goes directly into your account this reduces corruption and of course, link to this is the fact that your transactions can be traced.

So, you know where all it goes in a way that you cannot trace cash also the other thing is we again have issues around privacy and so on right. So, direct benefit transfer or conditional cash transfer is often based on do you do certain things and in return for that you get transferred certain money. So, again we have seen this whole thing around Aadhar, where by people have to part with certain kinds of details with their lives in order for them to get certain welfare benefits. So, this tradeoff between getting certain benefits and parting with your data, right so that should definitely be something that we think more deeply about and think about what are these trade offs for different demographics and so on and so forth.

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So, just wrapping up and sort of thing thinking of ways forward especially in the space of digital finance and financial inclusion one of the primary things we really need to think about is this whole vision of inclusion right as we do more and more research in the space we realize that the people that we call financially excluded might not be part of formal financial networks or banking institutions and so on and so forth, but actually they have been financially yet maybe that is obvious, but I think it is worth stating now they might have use different kinds of entities institutions those might have been more expensive.

Now they have maybe a wider variety of entities they can go to and this is reduced cost all of that might be reasonable, but I think it is worth while thinking about the pros and cons of including people into formal networks right as much as it offers benefits you could argue that some of this also means that they are exposed to certain kinds of risks depending on how the formal financial sector works which might not have been the case earlier right. So, we should really think as some college have recently pointed out maybe instead of think about financial inclusion we should really be thinking about financial equity or justice and then think about what are the implications of that for how you design products or policies, etcetera.

So, that is like a metal level product metal level sort of inside, but the other more ground level thing is very often digital finance or mobile money etcetera are sold on the promise that is direct right it disintermediates is a very popular word and the other things also is dematerialize that is the whole conversation around cashlessness, how we should move towards cashless know as a desirable goal right. But, maybe from what we have seen what we should really be asking is what kinds of intermediaries are useful who are the useful too similarly what kinds of material artifacts are useful in how we financially transacts this might include cash for a variety of reasons, right.

So, thinking carefully about the nature of mediation and the nature of materials that we used to transact is much more productive than aiming for disintermediation or dematerialization. Finally, this is linked to the point about financial equity or justice, we have to confront the sources of social stratification right.

So, it is people who are least likely to have financial footprints might also not have digital footprints and if your credit score in algorithms. For example, are focused exclusively on digital footprints what happens to these kinds of groups of people write women have been a classic case there their credit is trees were not known earlier, but now given how mobile phone access to them is restricted in many communities for a variety of social norms or financial economic reasons what is this mean for the credit score going forward right, these all things that we need to keep in mind if of primary goal is to look at social stratification and to change that.

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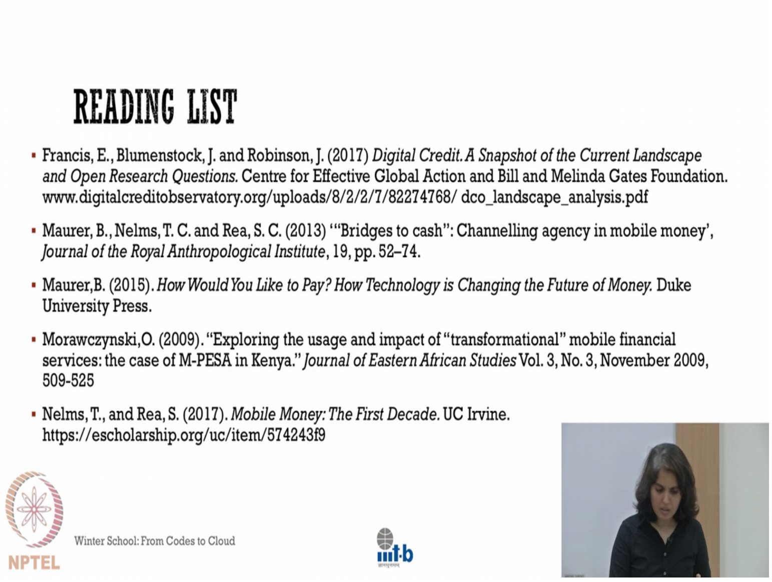

Like said earlier, this is a was space people have written a lot about this I just have an indicative reading list here, I have drawn material extensively from this in this presentation, I am happy to answer any questions that you might have about the session or about digital credit or payment in particular. But I hope these are issues that you continue to engage with I hope you found the session productive when thinking about algorithms privacy and identity in a very specific domain of activity that we call digital finance.

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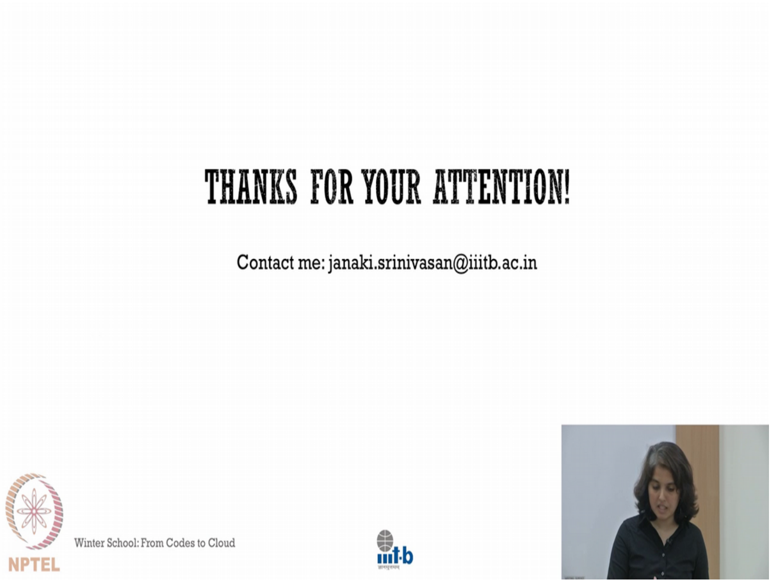

My email is on the screen. So, feel free to write to me. And thank you for listening this, listening to this long monologue, I would have preferred for it to be more interactive, but unfortunately that could not happen that is all from here.