

IN CONVERSATION WITH:

**DR. ABHIROOP
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He received his master's degree in economics from Delhi School of Economics in 1997 and his doctorate from Pennsylvania State University in 2004.

Dr. Abhiroop Mukhopadhyay has held various esteemed positions throughout his career, including the Sir Ratan Tata Senior Fellow at the Institute of Economic Growth and a visiting researcher at various institutions around the world. He was awarded the Mahalanobis Medal by The Indian Econometric Society in 2018.

Editor: Sir, with reference to your paper, 'Mass education or a minority well educated elite in the process of development: The case of India', how can policies be formulated to ensure that those with primary education or lower aren't excluded due to their limited access to tertiary education?

Dr. Abhiroop Mukhopadhyay: It is important to understand that lower education is an important aspect of the education system that feeds into higher education. So the main point of the paper that you referred to is that, if lower levels of education are such that you get stuck in that lower level and cannot move up, then what is the worth of such an education? And the answer in the paper that you allude to is, that this kind of education is not very useful, so just to clarify, it isn't that a lower level of education is not useful, it's just that a lower level of education that leads to not moving up, is of no use.

In India, levels of education at the primary level especially for young children are quite abysmal. If you look at other loopholes, the quality of education is not very high, so one of the ways that you can connect and contribute is by improving the quality of primary education in India in terms of learning levels, basic math competency, language proficiency, etc.

It has been extremely tough, in the last 20 to 30 years to achieve the same, especially trying to balance increasing numbers because we want higher enrolment while simultaneously maintaining good quality education. In every institution, as we increase the numbers, quality dips, especially in fields like teaching and infrastructure which don't catch up to the increasing numbers. While this is expected, this is also something

that requires us to have some serious conversation. The second answer which is less obvious, is to think about the nature of growth that we have incentivised this economy to pursue. Back in the 50s and 60s there was a lot of push on agriculture. Lower levels of education are more suited to contribute to growth through agriculture. But agriculture is not a very productive sector, and it does not really contribute as much to the value added in terms of growth. So it's hard to think of very low levels of education such as primary or less than primary education to really have any sizeable impact on the economy.

There was a time when people moved from illiteracy to some levels of education and you may have expected that to contribute to growth, but now, we know that everybody knows a little bit of letters, a little bit of math, so it's harder to think of how they would contribute to growth if they were to remain at the primary level. At slightly higher levels, say secondary education there is a possibility that this is the level of education that corresponds to what you require from the labour force in manufacturing. China for example got a lot out of its upper primary or middle school education. They used their assembly lines, they needed to understand the basic designs. So, this is the level at which you could expect some contribution towards growth. Unfortunately, India does not have a very vibrant manufacturing sector, so in terms of future policies and existing ones such as Make in India and so and so forth, we could actually boost manufacturing output. Then at least upper primary or secondary level educated people could contribute to the manufacturing sector and that would connect to growth any day. So, this is a tough one, since a lot of people are stuck in primary education, so the only solution is either we get the primary sector going which is really hard or we find some way of graduating people to higher levels and then have the right sector for them.

The countervailing force that should also be pointed out is that if there are not enough jobs for people who are tertiary educated, higher secondary educated, diploma educated, etc, then as it has happened in many developed countries, people will move down the quality ladder of jobs. So it could well be the case that if good jobs are not there for university educated people, you will find them working in manufacturing factories. And you can imagine, that as the owner of a manufacturing factory, though you know secondary or middle school education is enough you still want to hire, if possible, someone with a university education even though that's overqualified for that level. And that's the crux; If you don't take care of the top, it affects the other rungs too. You cannot think of any one level in isolation. Given that youth unemployment rates are quite high now, this is a genuine fear. I don't have a very simple answer for you. It is such that there are clear indications of what will help but one can't be certain of whether they will evolve or not.

Editor: Thank you for your answer, sir!

Editor: What specific policy measures can be adopted to make tertiary education more accessible to the economically disadvantaged; how can the cost and barriers to entry be reduced to enable broader participation.

Dr. Abhiroop Mukhopadhyay: There seems to be this implicit notion, that tertiary education or university education largely, is an urban phenomenon. You'll be surprised to know that if you look at the age group 25-34, tertiary education rates of people living in villages of India, have moved on from about 5% to about 12.5 percent, implying that 12.5 percent of rural youth are actually tertiary educated. So, it's not as urban as you think it is. In fact, if you look at all university educated people in India, a large portion

of this tertiary educated youth is in rural India because rural India is huge. So, even if it is a small proportion, it's a large number, in absolute terms.

Rural-Urban categories are becoming increasingly hard to define. It is a thorny issue, and it is not always easy to make out whether these categories make a lot of sense beyond the most desolate villages. So, I think there are barriers which are less geographical in nature and more in terms of social categories, economic categories, linguistic challenges and so on and so forth. Higher education rates are lower among the scheduled caste and scheduled tribes of India, as also among the other backward classes. Some of it is addressed already through affirmative action policies which have been successful and will increasingly be more successful in the future. This is because essentially, we are still not seeing the full-fledged impact of the wave of reform, such as the Right to Education. Thanks to these efforts, enrolment certainly went up, so there will be a lot more people from backward and disadvantaged communities like SCs, STs and OBCs. So, affirmative action will take care of requirements on that margin. But less so, on the margin of economic deprivation.

If I say poor, we don't have a quota as such. It's very hard to classify who is poor in contrast to social categorisation, which is stable. So, if you categorise one person as scheduled caste, that person falls under the category of a scheduled caste for as long as they live. However, it's hard to classify someone as poor, because in 10 years that person might not be poor anymore. Therefore, it's very dynamic and the only way out is public education. But as you know, one of the biggest things that everyone is talking about is private education picking up, especially in the university space which is always thought to be elitist. That is, it is the creamy layer that tends to go to private

universities. There is less thought on the fact that, if private institutions are the way that higher education is given, then this will be a real problem.

Now having said that, private institutions are still small players in higher education. Higher education institutions are still largely governmental in nature, central universities make up a very small proportion. Given the state universities with their provisions and low fees are low, the main constraint binding them, in my opinion, is whether to give quality to education. The market will decide on private institutions and central universities will continue to have the best resources because they're offering better jobs. In reality, the state government institutions are the institutions that are in very poor shape in India. Therefore, while we will have a large proportion of people who are disadvantaged, joining state government institutions, it's not clear whether quality of education is actually enough for it to make a difference. I think that there are many aspects in the new education policy that try to address the quality of education in terms of recruitment, in terms of having rankings and so on and so forth to at least bring out the fact that some of these institutions are not doing well. I think beyond that, it's very hard to think about ways to reform institutions at the top.

You just hope that state government institutions get reformed through political pressure. As more and more disadvantaged groups come in and observe that the quality of these institutions warrants improvement, they will start demanding that these universities become better. That's the only way politicians will react and put more resources into it.

The sad thing is that there will be a demand for admissions into good central universities and more so, in private universities through subsidies etc, but these universities can only accommodate so much. There's no reason why private institutions

should necessarily accommodate the poor beyond some corporate social responsibility kind of idea. So political pressure is one feasible solution. If 12% of the rural poor are in university education, then there will be a demand at some point from their children and upcoming generations, for better education. But I'm guessing it will be something in the long run.

I just want to add one more thing pertaining to linguistics which is the current debate. As you know, one interesting feature of Indian education is that you start with the predominantly vernacular base education to university education. By the undergraduate/postgraduate level, you're predominantly English speaking and this is a barrier for many children. The new education policy also talks about that but it's not very clear that there is a concerted strategy to deal with it, but the fact is that it is being talked about and whenever it's talked about, it means that something will hopefully happen to reduce that risk.

Editor: Thank you so much sir for this insight. This question has been around for ages, but it hasn't been able to translate into something concrete, but your insights were really helpful.

Editor: Can policies incentivize tertiary level-educated individuals, who are mostly concentrated in cities, to contribute to growth in less-developed regions?

Dr. Abhiroop Mukhopadhyay: I think this is connected to the previous question, no? This idea that it's an urban phenomenon is not true anymore. There's been a large expansion of universities and state-run government colleges in India. Largely because, higher education was something that gave very large returns, and it was increasing in

the nineties, while the relative supply of university graduates was low. So as a reaction, between 2000 and 2010, there has been a large expansion in universities all over India.

The distance to university for people, even in villages, has fallen. Some results show that this has aided women to attend universities in some of these areas, since people are apprehensive of sending girls long distances away from home to study. Now that universities are closer, higher education is more attainable for women. It's not perfect (higher education rate), only 12% among the youth, but it's a large number.

The overall higher education rate among the labour force in India around 2001, was just 5%, and much lower in rural areas. This rapid development in 20 years is because of the increasing penetration of colleges in rural areas. But we must be careful here, because although attending universities enhances knowledge, it more importantly, adds to many other components as well. You step out into a new environment, interact, learn how to deal with your peers, all these have huge impacts on production processes.

Getting a university education is not just about what you're learning in class but also, what you're learning about yourself, how to argue in big spaces, and you're not as protected by your teachers anymore. All this contributes to your development as an economic worker. When you join firms, they're not looking at demand, supply, price and quantity. They are looking for a way of thinking, and many other non-cognitive things that you pick up in universities, that contribute to economic returns. However, you would also want people to pick up knowledge and skills at these institutions, and that has proven to be more difficult.

It's not just about access to higher education, but also about access to quality. Earlier, only a select group of people went to universities, so they were already likely to be very

good. As this margin grows, you'll see many people at all levels, at all kinds of institutions, and then the concern will be how to improve the quality. It will depend a lot on the political economy and on where this higher education is used. If it is used more in service-sector driven jobs, it's not very clear whether that will lead to growth. For example, many UBER drivers in India are university-educated. That requires you to be confident in transacting and the basic skill of driving, however it is not very clear that the university education itself has contributed a lot in the way they do their job. So, you require the production process also to change at the same time, so that the industry requires skills that these institutions may provide. If not, people will not get any returns from their university-education. Then, through political-economic processes, they will force these institutions to improve. So it's a gradual process. But it's a great thing.

You know, this is a country which had 12% literacy at independence. As I said, in 2001, only 5% of the labour force actually had a university education. So, these are great steps for education. We have a great opportunity because we have a full buy-in for the concept of education. And it is important for economic mobility and economic remuneration. We just have to figure out how to give the right kind and quality of education, for it to actually make a difference to the economy. It's connected to my previous answer, so I don't want to say more about it.

Editor: Thank you so much sir.

Editor: Your paper 'Does access to secondary education affect primary schooling? Evidence from India', analyses the impact of geographic proximity to secondary schools and primary schooling outcomes. How would you suggest policy makers use this information to optimize schooling location and infrastructure planning to enhance

access to both primary as well as secondary education, particularly in remote or underserved areas?

Dr. Abhiroop Mukhopadhyay: That's a good question. I want you to step away from the paper and its focus on 'primary' and 'secondary'. The general message of the paper is that you cannot think about any level of education in isolation. The reason is, India has a very convex return to education. If you have a linear return, it means that at every level, one more year of education will get you 8% income. A convex return to education means that as you go to higher levels of education, an additional year gets you much more than one. So going from class 4 to class 5 might increase your income by 8%, but going from, let's say, class 11 to class 12 will increase your return by 15%. So, the returns all accrue, and the marginal returns are much larger at the top.

Everyone has an opportunity cost to study, right? And when you are at lower levels of education, you have some other things to do. Now, if you think that your highest level of education is a very low level, then education doesn't make sense because you are giving up something to get educated. And the fact is that the real returns will come at a much higher level, but you have to survive through all the education system to reach class 11 and class 12. Now, you might have your own circumstances which make you drop out. But institutional supply will be an important factor, for sure.

So, if you are in a region where there is no possibility of continuation, then you don't see class 11. You feel you will never reach there. But then it doesn't make sense to be just a class 5th pass. You're dropping out of many activities that you can otherwise do like labour activities, working in shops, working on the farm etc. It wouldn't make sense for you. In that sense, the policy advice is, don't just think about primary education, about primary and co-ed. Don't just think about middle school education, about middle

school and co-ed. Think about whether the different levels of education are synchronized so that everyone has a shot at a level of education that makes all investment worth it. If you think like that, then there are a few things that you could do. One of the things that happened due to political economy reasons, especially in the 70s, and which had a very important role at that point in time, was the expansion of primary schooling in India. In a large number of Indian villages, typically, medium-sized villages, you will see that there will be a small school, manned by one teacher. These are typically these isolated primary schools that we worry about. The next level of education is maybe 10 kilometres away, the next level even further. So, in that respect, it is harder for people to see the whole continuation. Now, of course, policy makers haven't thought of it like that.

But what policy makers have realized is that these small schools are not functioning. And they require a distribution of resources. As a student of economics, you should immediately see that if there are economies of scale involved, then small primary schools don't make sense. You should have large schools where you can share infrastructure and fixed costs. So, on the cost angle, now, in India there's a big move towards what is called 'school rationalization'. Instead of having lots of schools, we are going to have a few schools which are large, which will cater right from primary all the way to the secondary level. Sometimes, even higher secondary. By rationalization policies, officially we say till middle school, but a lot of middle schools are already housed in schools which have secondary and higher secondary.

If you look back, in many parts of India, the district schools which were set up during the British times, are actually very good schools. A lot of people from non-metro cities, you'll hear, often come from some Zilla school, which is of very good quality. And these

are the schools which go all the way from primary to the higher secondary. So, we will have to move back to that model of having all the levels in one school, but these schools will have to be optimally placed so that despite not being in every village, they are not too far. Rajasthan, for example, has implemented this already. The Rajasthan government has set distance limits, I think it's five kilometres, nothing can be more than five kilometres to these schools, so that children still go. These are not only more functional schools but also schools which provide, what's called, K-12 education. If you see classes from nursery all the way to the top, you will be able to internalize. You will see your seniors graduate and do well, and that will make you want to study more.

Universities are slightly different because it's obviously not possible to have a university for every cluster of villages. But India earlier had a model where it tried to place public universities in particular places which were not so developed. Think about IIT Kharagpur. Kharagpur is not a very developed place. This is the US model, by the way. If you look at US universities, many of them are in godforsaken places. They are in the middle of farm areas, which cater to the local economy. Where you see a lot of people coming from many of these rural households to study. This is being done with an explicit policy in mind that this will lead to development of that area, and also lead to this land use, which is easy to expand. It's good because when people in, for example, smaller towns, see universities and see students from universities, it raises a certain aspiration for them to study in a university.

There's a very interesting paper based on a private university in UP. I don't want to name it, but it's a prominent one, something that you've heard of. You can see immediately that people around the university have started studying more, private schooling has gone up, there seems to be more investments, because it's a visual thing,

right? You see a big university, you see students, you see all that and you feel that maybe I can reach there. And that has a big knock-on effect, in the sense that all levels look accessible to the mind and as well as the individual.

Editor: Thank you so much, sir, for that answer. It certainly offers a much better perspective to things.

Editor: Building on the multidimensional framework in your paper “Is India better off today than 15 years ago? A robust multidimensional answer”, and the integration of mental health in the paper titled "Integrating mental health in welfare evaluation: An empirical application", is there potential to develop a more comprehensive index that reflects India's betterment more accurately by considering mental health along with other dimensions like individual consumption, literacy rate, crime rate, etc.?

Dr. Abhiroop Mukhopadhyay: In principle, I am very much against the index. I will tell you why, because an index basically is a combination of everything, right? It requires weighing in normative calls on what you think is important. So, let's say you have consumption and mental health, you have to decide on the weights of each parameter. What weights will you put? And if you look at all indexes, like all the ones in the world, the biggest controversy is about the weights. Who is deciding these weights? Who said health is two times, education is three times something else? It's arbitrary. This has always been a problem. If your question is, should we look at more components while making policy? Sure, I think that given the mental health issues that are popping up everywhere, at least recognition, I don't know if mental health issues are increasing, it could well be that people are more conscious of those issues right now. But, it is now important. I think that there should be multiple indicators of development.

You should not be economically naive to think that GDP is the only notion of development. One of the things that you learn, for example when you do statistics is multivariate distribution right? Multivariate distributions actually look at a different kind of problem. Let's say you have two attributes. Thinking about a person, say, the two attributes are their wealth and education. You are comparing two time periods in India; half of the people are poor, and half of the people are illiterate in both time periods. Now, to you if you are looking at individual indicators, these two time periods look exactly similar because half of the people are illiterate and half of the people are poor. What progress have we made then? But let's suppose, in the first period the rich are actually the ones who are literate, and the illiterates are all poor. Let's say now, because of lots of formative policies and so and so forth, we find that the rich are actually less educated, and the people who are poor are actually more educated. This can happen due to public policies, targeting them with particular policies and so on. Notice, if you look at each indicator, you will still get the same answer, that there is no change. But if you think about who's literate and who's illiterate in terms of the other attribute then you might actually say that we are doing better now. There's compensation; the poor are being compensated with education which has implications for their long-term mobility.

When you do statistics, this is captured by correlation, and I am essentially talking about the correlation between the two indicators. When you have things like this, especially when there's public policy involved, it makes sense to look at a full joint distribution instead of looking at multiple univariate distributions. If I just look at the poverty rate and literacy rate, these are just two univariate distributions. But when I look at the joint distribution because I want to also capture the correlation, now I am

looking at a bivariate distribution and it tells me something more than what you would get by looking at just one distribution at a time. So instead of making indexes you can actually do that, and it requires knowledge of statistics and things like stochastic dominance.

Since India has been growing and there are many compensating policies, you might find that there are many interesting things like this, where it looks like nothing has changed but actually the profiles have changed and therefore, actually the country has evolved without your realizing. So don't make arbitrary indexes for sure but take into account multiple indicators.

Editor: Thank you, sir.

Editor: Sir, your paper titled "Income Guarantees and Borrowing in Risky Environments: Evidence from India's Rural Employment Guarantee Scheme" considers the potential crowding-out effects of income guarantees on informal credit markets. Could you please shed light on its implications for informal lenders (and borrowers) in regions with higher NREGS (National Rural Employment Guarantee Scheme) coverage, and how might policymakers address any adverse effects on these financial systems?

Dr. Abhiroop Mukhopadhyay: The first thing I must tell is, that in India if the informal sector for credit disappears, we will be the happiest people ever. Think about Premchand's stories, this has been the bane of the Indian economy, right? That you have these money lenders who are basically buying people through these loans and so and so forth. On that, the argument is rather unambiguous. The smaller the informal sector, the more you get the formal sector, the less extortionary it is and the better it

is. But I want to highlight something else that people actually talked about, which I think is important for us to understand when we are doing simplistic analysis.

When we are looking at credit markets, what is the way that a policy maker would look at it? It would say well, you are giving some income support, conditional on work but still an income support, people should be less indebted. That's some sort of notion that we have that there is welfare improving, there are less people indebted in the economy, and therefore, indebtedness has gone down. It's a great thing that people don't borrow money. But actually, this paper that you mentioned pointed out two kinds of things, that you can take loans for multiple objectives, especially in rural economies. You can take loans for things like shops, you have some death in the family, widowhood, ill health things like that. You don't want people to take loans for these, you want people to be rich enough to be able to afford these kinds of expenditures. So, if your lens was these kinds of expenditures, for sure you should be very happy that people are less indebted. However, some of these income supports are not small, I mean, if you have many people working in the household, you know it's a government scheme so it's kind of a guarantee that you will be earning a certain amount of money if these analogies work.

Of course, there are issues of payments and so and so forth but there were eras in India when the payments were actually more assured, so you would know that you can earn this amount of money later. But when you can do this, you can take in a lot of risky investment. Typically, investment in agriculture is fairly risky. You are very hesitant to take loans and you will not get loans, because what collateral do you have? If you have no income guarantee later, if your harvest fails, then both, the lender will not get the money and you basically lose something as part of that extortion. However, if you have

some guaranteed income possibility then this might make you take more loans because then, you can buy some seeds, some fertilizers, some new technology and invest into a more productive but slightly riskier province. Then what would happen is, particular schemes like this would see a rise of indebtedness because people would take loans.

Now in a rural economy, both are growing. In fact, loans are supposed to be fundable, so it is very difficult to find out what purpose people take loans for. If there are both of these effects happening at the same time, then you should see no effect. But no effect is really hiding a lot of things. In our paper, when it looks at Orissa, we see that there are people who have bad health shocks and so on and so forth. And we actually see loans falling. That's a good thing. But for some slightly more landed households we actually see an increase in seeds and fertilizers, not fertilizers but actually seeds, given that the seeds have more nuances. There are some seeds that are riskier than others but have higher yield. So, we see that in those households, the loans go up.

So, when you ask, did indebtedness rise or fall in the short run, this question is nonsensical if you think about all these forces at play. So, you need to think about them slightly differently, and think about the market, long term incentive, productivity and investments plus this consumption smoothing, to be able to understand what exactly is happening.

Editor: Thank you so much sir, will certainly bear this in mind, going forward.

Editor: "In the area of medical diagnostics, India is currently under-equipped with medical devices and advanced technologies with respect to treating cancer". Having worked on issues specifically related to the economic effects of HIV-AIDS and Cancer,

what policy initiatives do you think the government should undertake to foster the health sector in India?

Dr. Abhiroop Mukhopadhyay: I will actually expand your question because it is obviously based on HIV and cancer that I've worked on, but in India now the scourge is diabetes and hypertension which are very high. So, it's also lots of other things. All these require at some point, hospitalization, and access to hospitals. It's harder to address this question with a primary health centre, though you would expect that the initial diagnosis should be made in primary care. But it's even harder to deal with these because advanced cancer cannot be treated in primary health care. On these fronts, some progress has been made.

For cancer, you see AIIMS opening up in various parts. There are a lot more cancer hospitals that have opened up. Earlier, there were very few places for cancer treatment. Now even in districts you have cancer hospitals that are available for tertiary care. It's a little fuzzy for conditions like diabetes or hypertension because initially they start off as nothing, you have a headache, you are feeling a little dizzy, things like that. Actually, we are kind of lost, as there is no real government policy to look at these kinds of issues. These would require a better primary health centre than tertiary hospitals. The government has responded to it by relabelling them as wellness clinics, but relabelling is not enough, you will actually need people to be able to detect these things.

That's important but notice that I left HIV-AIDS out. I talked so far about diabetes, cancer, and hypertension, these are called non-communicable diseases, NCDs. They have a peculiarity; in that they are largely focused on themselves. There are cancer patients, of course your household economically can get impoverished but it's ultimately your disease. This is not true when it comes to diseases like HIV-AIDS,

anything communicable like COVID, infections like that. We are also lagging behind when it comes to illnesses like malaria, which still has a high mortality effect in India. On the HIV-AIDS front, India has not done too badly, because of the presence of what is called the National AIDS Control Organisation. There has been monitoring and there have been surveillance centres to catch where HIV-AIDS incidence goes up. But that's because in India, HIV-AIDS is thought to be concentrated in a particular population. So, it's easier to do surveillance.

Therefore, it's not an economy, society wide phenomena, hence it's easier to do. But infections like COVID and so and so forth, the only way out is actually a good primary health centre. The problem in a good primary health centre is to send doctors there. I mean which one of you wants to go and teach economics in a middle school in a village, as a career? Probably, none of you. It's not worth the investment you put in. It's the same thing with doctors. They don't want to go there and practice in these areas. One of the newer developments in healthcare and public health has been in recognising local health providers, sometimes of traditional medicine like ayurveda. There has been a move towards legalizing para-doctors. You can even think that nurses, people who have some basic education in healthcare, are good to man these places. For example, do you need a MBBS doctor for delivery? You don't. Only in case of an emergency you need an MBBS doctor to deliver. So, it can be done by a trained midwife. That's an easier healthcare provider to give and the government has recognised it, and you can see over the years there is more and more legalization.

Now with AYUSH there is this idea of recognizing Ayurveda doctors who are actually, in many parts of India. I will tell you an interesting story. I once surveyed a village in UP, where the primary healthcare provider was a guy who came from the district of Malda.

He used to be a pharmacy shop owner in Malda. He roamed into this village, these kinds of doctors, ironically are called Bengali doctors. Because there are a lot of people from Bengal who came and of course in English they are called quacks. But one of the interesting things was that he was providing healthcare. For many small things, you can go to the local pharmacy shops in Delhi as well, and if you are suffering from something and you say “bhaiyya kya lein” (What should we consume?), he will offer his suggestions. Sometimes he is telling you very standard things. If you go to a doctor, they will also tell you very similar things. I don’t recommend compounders and pharmacists to become doctors but it’s possible for people with some basic knowledge of healthcare, to provide this service instead of full-fledged MBBS doctors. I think there is recognition of that and that is the direction healthcare is moving and hopefully it has been instructed to them that anything that looks a little bit serious, should be recommended, to a district hospital. So, if they follow that, then there is no reason why this model of healthcare may not work in addressing many of these diseases that are coming in.

Editor: Thank you, sir.

Editor: Sir, I have one last question for you. The government of India has currently instituted a Standing Committee on Statistics to discuss the methodology of survey in India. Having worked extensively with survey data, what are the limitations therein from your perspective?

Dr. Abhiroop Mukhopadhyay: That’s a very good question. I think that is a very burning question right now. See, it is well known that as a country develops and grows, survey data becomes progressively less reliable, especially when it comes to descriptive data like poverty rates and averages. Basically, anything that’s an average.

For example: an average number of air conditioners people own, how many proportions of people are vaccinated etc. Imagine there was an NSS enumerator coming to your house; ask yourself, how many of you would allow a random person to come in and ask you three hours of questions about your life. I'm sure, none of you would. This is standard, you are not different, people all over the world do this. This is besides the fact that you do not have 3 hours to give, right? You have lots of assignments, classes, you don't have three hours to answer questions. So, as countries develop, survey statistics become less reliable, when you want to describe the whole population. Now, to be honest, this was recognised back in the 60s and 70s already, but the population was largely poor and we were not interested in the average number of air conditioners in Delhi, we were interested in how many people do not get a meal in Delhi, i.e. the required 2,000 calories.

We were interested in rather specific things, which we know people would definitely answer. So, as far as survey data is concerned, it's well known that you are capturing 80% of the population. It may still be permissible to overestimate certain indicators like how many people dropped out of school, how many people didn't get a meal, because, if anything you will still provide more services and that's good.

The problem is when you want to measure something related to income. Whenever you want to look at income, of course, income is concentrated at the top, and increasingly more as societies are becoming more and more unequal. Now, if you want to say India is doing better, but actually India is doing better on an average, that's driven by people at the top. The fact that you don't survey wealth at the top, basically means that it will give you a very perverse result that you know, India is not doing well. That's where all statistics based on surveys fail. So I think that the first point to acknowledge is why

were these surveys set up? To identify things about the bottom. We must understand that politics aside, they will tend to exaggerate a little bit, some of the problems of India, but that is fine. We will just put in more resources, so we ensure that there are people who are just above the threshold to define. Think about some income category or consumption expenditure which defines who's poor and who's not. Of course, the people who are just above them are not that rich either, so if more money goes into the system, it's fine we don't care that much.

Of course, it may create this problem that, if a government is responsible to show you that they are doing better over time and these statistics come out and show that there is no change. They may not be happy because they may believe that they have generated wealth but that does not show up in your survey and that's the nature of the argument that is happening today. We are not pointing out the improvement that is happening, but of course, if you notice, implicit in this argument, we are saying that a lot of changes that happened at the top and you might as a social scientist, put more weight at the bottom but it's okay, its fine, but we don't care about that. Now, of course that is a completely normative judgment, you might also say that I don't care so much about the bottom, I want to care about the top because I want India to get rich first and then we will redistribute. In which case you care about the top and then the surveys are just completely off when it comes to the top.

Now secondly, we put a lot of resources as a proportion of what we had, when we started surveys. That investment, as a share, has slightly dropped over the years. But that's also dropped, because in India, the government generally collects data for their own running. For running particular schemes, for knowing where to target, but now the government has administrative data, which means that it has a lot of data to run

programs, it will see your Aadhar card, right from your birth to your vaccinations, you will be completely tracked. Of course there are serious privacy issues here, it has a way of tracking everyone in many areas of this country. This data is not there for you and me to analyse. So, we may not be aware of these datasets, but they are there and often the government formulates policies using these datasets. Now, why these are not always enough, is because, when you run a program, you care about whether you are delivering particular services or not. So, when you are delivering iron tablets, you would want to know where the tablets were distributed and how many tablets were distributed, but ultimately you want to know if people took them or not. That's what we care about when we think about welfare and on those fronts, we have very poor data because that would require an independent data collection from surveys that we look at.

However, these are only for descriptives, there is another aspect that people use surveys for and that is to basically draw correlations, that is the association between numerous variables. These associations are equally valid even now, in all the datasets. So, for example: if you were to run a regression of education on income, you could still run it, there is no problem in this as long as there are a few people captured of all types, that will tell you if you were more educated, would you get higher income or not. So, these are two different, distinct jobs of survey. One, to provide indicators which are descriptive, for instance. And second, is to draw associations between variables.

In research, typically we are interested in associations. So, we are often fine with all the surveys we see. But, if you were in the government or you wanted to make arguments based on just descriptive indicators, then this is a serious problem because these indicators may not reflect where improvements are for particular sections of the

society at the top. So, the moral of the story is next time when someone comes to your house and shows the NSS badge, please answer the questions so that you will get better data later. The Standing Committee on Statistics is looking at some of these issues on how to sample better, how to capture the top and is thinking of how to make a case for a higher number of resources. Hopefully they will get there.

Editor: That was really enlightening, sir! Thank you for your time and patience for the conversation today.

