

THE BROOKINGS INSTITUTION

SAUL/ZILKHA ROOM

URBAN GROWTH AND ACCESS TO OPPORTUNITIES
IN LATIN AMERICA

Washington, D.C.

Thursday, February 8, 2018

Introduction:

HOMI KHARAS
Interim Vice President and Director, Global Economy and Development
The Brookings Institution

Presentation:

JUAN F. VARGAS
Principal Economist
Development Bank of Latin America (CAF)

Panel:

ALAINA HARKNESS, Moderator
Fellow, Centennial Scholar Initiative, Project on 21st Century City Governance
The Brookings Institution

EDUARDO LORA
Senior Fellow, Center for International Development
Harvard University

PABLO SANGUINETTI
Corporate Director of Economic Analysis and Knowledge for Development
Development Bank of Latin America (CAF)

JUAN F. VARGAS
Principal Economist
Development Bank of Latin America (CAF)

* * * * *

P R O C E E D I N G S

MR. KHARAS: Good morning, everybody. Thank you all very much for joining us for this discussion on "Urban Growth and Access to Opportunities."

My name is Homi Kharas. I'm the Director of the Global Economy and Development Program, and we are very honored to have today, a discussion about a really quite path-breaking report, I would say, on "Urban Growth and Access to Opportunities, Focused In Latin America", produced by the Development Bank for Latin America, or CAF.

I still don't quite know why you guys have changed your name. I mean, you know, after years and years of branding, and then suddenly there's something new. Yeah, it's really confusing.

So, you know, I just wanted to start off by saying that, at least for me, I do a lot of work on the Sustainable Development Goals, and when we think about the Sustainable Development Goals, and the development agenda more broadly, at the end of the day you start to understand that the real battle for sustainability in development is actually a battle for how cities and urban areas will really develop.

And that is the consequence of two things that I hope you keep in the back of your minds. The first is that, just in terms of the rate of urbanization, there are now more people moving to urban areas than ever before, and more people moving to urban areas than ever will again. In other words, we are in absolutely a short window of probably about 15, maybe 20 years of absolute peak urbanization in terms of absolute numbers of people.

Why? Because you still have large chunks of the world that are urbanizing, although Latin America, who has already urbanized quite significantly, but then after, of course, when everybody is already mostly urbanized the number of -- the

rate of urbanization now falls down. So, partly because of that huge expansion of urbanization there's a huge need to finance urban infrastructure and urban development.

If you get that right you have a chance of sustainable development. If you get it wrong, game over. And as we think about moving economies towards decarbonization, low-carbon pathways, it really means: how can we actually have sustainable development?

The reason I emphasize the "development" part is because the way in which the urban areas are trying to develop is not just about making them, you know, low-carbon places, it's about giving access to a range of opportunities, because at the end of the day urban areas are where people can effectively earn better livelihoods. So, better opportunities while at the same time reducing their carbon footprint.

That is the big key. So, it's got the social dimensions of opportunities, and fairness and access, it's got the environmental dimensions of low carbon, and it's got the economic dimensions of being places where, thanks to agglomeration economies we can really generate prosperity.

So, it's actually -- you know, it's really interesting, because when you think about access in that sense you start to realize that access is not the same thing as congestion. I mean, I came into work today and there's some event happening up at the Hilton Hotel with the government, so they closed off all the damn roads and you get stuck.

So, you can have congestion in cities, but at the same time actually very good access, in places like Washington, places like New York in the United States have very good access to opportunities even though they are also very congested.

And that in some sense is the real sort of, you know, meat of this report. And then we are going to have a discussion about the way in which cities finance

themselves, that's always difficult. A little bit about the way in which the governance of cities is arranged, that's always quite difficult because metropolitan areas are not the same as, you know, individual cities, and how they tie up to national goals and strategies is always quite different.

We are going to have a bit of a discussion about new data, one of the really exciting things now in all of the urban development areas, is the ability to define cities now in a consistent way across countries using new metrics, particularly geospatial metrics; so, all of this, I think leads to a very, very rich discussion.

What we are going to do is the following: there's going to be a short presentation of the report, and then we are going to have a panel. The panel will be moderated by our own Alaina Harkness. She's working on the project on 21st Century City Governance, and is on leave from the MacArthur Foundation. She served on the City of Chicago's Community Development Advisory Committee; and the Board of Chicago Women in Philanthropy.

Also on the panel, we will have Eduardo Lora, Senior Fellow at Harvard's Center for International Development. He's been Chief Economist of the Inter-American Development Bank, and Executive Director of Fedesarrollo in Colombia.

Pablo Sanguinetti is the Director of Economic Analysis and Knowledge for Development in the Development Bank of Latin America. So, he's basically the guy in charge of the report.

And Juan Vargas is the guy who actually wrote the report, and has done all of the work. He's the Principal Economist in the Development Bank of Latin America.

So with that, let me turn the floor over to Juan, for a short presentation of the of the report. The report -- is the report available?

SPEAKER: Online.

MR. KHARAS: Online, so the report is available online, it's this; it's called *Urban Growth and Access to Opportunities, a Challenge for Latin America*. There's a lot of meat in this report, so I would not recommend that you think that you can just lightly skim through it. If you want to get into it, get into it, otherwise pay attention to Juan. Juan?

MR. VARGAS: Thank you so much, Homi. And I'm very thrilled to be here, I'm very excited. I'm thankful to Brookings for the invitation and for hosting this event. So, if you want to learn about the report you won't be doing much by listening to me for 20 minutes, it's a very short period of time. So, I do encourage you to read it. I will just briefly summarize the main contributions of the report. And then, as Homi said, Pablo Sanguinetti is the guy in charge, so he will be answering most of the difficult questions this time. Okay.

So, let me just start by repeating something that Homi raised here, which is that Latin America is a region that is nowadays very urbanized, so urbanization rates in Latin America are almost 80 percent on average, which is a figure that is very close to the urbanization of the U.S., and it's even higher than urbanization in Europe, and not only that, but Latin America is the region of the world that has urbanized more rapidly, and the rate of urbanization in the last 15 years has been the highest in Latin America. And there are countries in Latin America that are still being, or going through a very rapid urbanization, such as Bolivia,

So, why does it matter that Latin America is already very urbanized, and the rates are very similar to those of the U.S. and in Europe? Well, because we all know, and there's a lot of research, both historical and contemporaneous research, on the fact that there is a strong positive relationship between urbanization and development.

So, that means, you know, it's difficult to establish causality, and

economic historians have said that the causality goes in both ways, but that means that urbanized, more urbanized countries tend to be more developed. Well, that is not the case in Latin America if we compare it to the U.S. and Europe of course, right?

And that's important, because then the question, the big question of the report is, okay, why is Latin America -- why has Latin America not reaped all the benefits of its high urbanization rates? And there are many answers to this, some of them have to do with the kind of urbanization that happened in Latin America, and the rest of the developing world, and the timing of that urbanization, so it was urbanization that was not necessarily related with industrialization.

But it also has to do with the kind of policies that are in place in urban areas in Latin America. This report emphasizes the second type of answers. It's not that we don't believe that the type of urbanization and the timing matters. It does matter a lot, but there's been, already, a lot of research about that by economic historians and urban economists.

So, when you write a report like this the first thing you want to do is to compare Latin America with the rest of the world, right. And when you write a report on some other topic it's very easy to do because there are, you know, datasets available that compare countries across lots of dimensions, but there are no datasets available that compares cities across so many dimensions.

Of course, there are exceptions, such as the Atlas of Urban Expansion, of NYU. But the problem with the Atlas of Urban Expansion is that it has very limited coverage, it only covers 200 cities in the world, about 20 of which are in Latin America. So, in terms of drawing conclusions from cross-country comparisons, it only has -- it only helps so much. So, what we do is that we measure the extension of cities in all the world, cities about 100,000 inhabitants, using nighttime light, satellite pictures.

And let me just summarize very briefly what we do. I'm not going to go through the technical details of our measurement, but this is how the world looks like when you take a nighttime satellite picture of it. And if you zoom up to the U.S., this is how the U.S. looks like, and of course night light activity has to do with the economic activity. So, there's a lot more economic activity in the East Coast and in the Midwest, than in all -- I don't know if the pointer works. No? Not in the screen -- that, in all the area, left to Midwest if you want.

But this is not enough to measure the size of cities, because if this was enough to measure the size of cities, then you would conclude that there is one big city from Chicago today, its coastline from Florida to Maine, and that is not the case.

Of course we need to apply a lot of technical sort of qualifiers, and technical corrections to this measure. I'm not going to go through them, right, because this is not a technical talk, but let me zoom up to the D.C. area. And basically what we do after applying all these corrections, is come out with a measure of the extent of the metropolitan area of D.C., as measured by the reach of its economic and social activity.

So, the D.C. (inaudible) is kind of in the middle of it, and then you have lots of the Greater D.C. Metropolitan Area to the right, Maryland, and to the left in Virginia. And then, as Eduardo will argue, you could even, if you relax a little bit, the thresholds that you need to make for the cities not to be super big, then you could also have the Baltimore area in the north, but then later, we'll talk about that.

So, this allows us to measure cities, and to draw conclusions about cities, and compare cities of Latin America with cities of the rest of the world. So, let me just give you an example of that, we can compare the size of Bogota Metropolitan Area, with Lima, Paris and Chicago, and this comparison is very telling of what actually happens in the data on average, right.

This is an example of an average result that we find, which is that Latin American cities are quite small compared to cities in Europe and the in the U.S. By the way, this picture also shows how we can measure the extent to which the city grows -- cities grow over time because we have these measurements for 2000 and 2010. Okay?

So, it turns out that Latin American cities are smaller in terms of sprawl, but in terms of population they are very similar to cities, on average, very similar to cities in the U.S. and in Europe. And the two things combined, what they mean is that densities, population densities in Latin American cities are pretty high. This is something we find in our data, so this is something also that the Atlas of Urban Expansion has found, and this is actually data from the Atlas of Urban Expansion, just to show you that there are similarities in the two datasets.

And this is the density, the density at the city level, and you see that in the right panel, is the aggregate of cities. And Latin America has a much higher density than Europe and the U.S., and this higher density is even -- the gaps are wider if you focus on megacities, which are defined by the Atlas of Urban Expansion, a city of about three million inhabitants. Okay?

So, this is a finding that is interesting, Latin America has densities that are very high. So, why does this matter? Because densities and urbanization are good for development and well-being. In what sense? Well, cities offer what urban economists call, agglomeration benefits.

And those agglomeration benefits have to deal with the fact that in cities -- cities occur, cities are there, because firms want to be closer to other firms, and closer to people because they want to hire labor, and exchange inputs, and sell their products. And people want to be closer to firms, and other people because they want to serve the labor, and they want to socially interact, and there is these agglomerations of course

enhance productivity and well-being. Right?

So, cities are good news because there are agglomeration economies that are good for (inaudible). So, in that sense what happens in Latin America could be very, potentially very, very good news for development, but I already told you that there's a huge development and well-being gap, and opportunity gap between Latin American and the U.S., and Europe, despite of the fact that densities in Latin America are very high, which means that something else should be happening in Latin American cities.

What is it? Well, it turns out that this agglomeration in addition to benefits also creates a lot of potential costs, which seem to be very high in Latin America. These costs, which we, as economists, call congestion costs, have to do with a lot of traffic, pollution, housing prices, criminality, and all sorts of costs that are related to high urbanization rates and density.

So, it seems then that what's going on in Latin America in terms of policy is that Latin American cities have not solved the balance between the benefits of agglomeration and the costs of congestion in a way that favors the productivity and the well-being of cities. That means that there's a lot of room for policy in cities in the whole world, and especially in Latin America, if you compare Latin America with the U.S. and Europe, which is kind of an unfair comparison, if you will.

Because we can also compare, and we do it in the report, Latin America with Sub-Saharan Africa, and it turns out that cities are much better in Latin America than in Sub-Saharan Africa, but we want to we want to reach the goal of what's happening in the U.S. and Europe.

So, what were the policy goals? Well, solve these externalities, so promote agglomeration economies and reduce congestion cost, and this is what we call in the report, promote accessibility. Okay? Access to opportunities; and that can be

done by increasing agglomeration benefits and reducing congestion costs.

And what are the policy dimensions that help us doing that? Well first, accurate land use, regulation and planning. Second, infrastructural regulation for mobility and transport; third, making the housing, the formal housing market more flexible. And finally, follows all of these policy dimensions need a better metropolitan governance, in the sense that cities, as I showed for the case of D.C., cities are much bigger than administrative municipal boundaries.

And in terms of the conceptual definition of cities as, you know, the concentration of economic activity, they go beyond the city boundaries so you need, in order to have successful policies, you need a lot of coordination at the metropolitan level. Okay?

So, let me just jump into those policy dimensions. The first one is land-use regulation and planning. So, there is a debate among urban planners which is: do cities have to be compact, or can they expand? And there's a lot of criticism among urban planners of cities in the U.S. because they are very, very wide, and that's probably not what's well for maximizing.

Well, our take is that cities naturally tend to grow. Why you do they tend to grow? First, because income is growing, and people with higher income want to live in bigger houses so they go to the suburbs, second because there are improvements in transport technology, and rural infrastructure. And third, because there are overall improvements in technology that allow people to work home, they don't have to go all the way to city center, they can, you know, connect on Skype and work from home.

So, people just tend to go away from the city center, and cities tend to grow, so it's kind of unavoidable that cities are going to tend to grow. And, does it matter that cities grow or not? Well, maybe yes maybe not. What we think matters the most is

that cities are accessible. It's not that there should be compact, they should grow, they should be accessible.

And expansion in terms of physical expansion is not -- is compatible with accessibility if that expansion -- if there is a flexible land-use regulation for that expansion to be planned with the infrastructure of transport and services, or if these planning and regulations allow for the creation of different sub-centers, so that not all the people have to go to the same center, right, but they can go to different sub-centers, and so they don't have to go -- they don't have to have a lot of commuting.

So this is important, and the conclusion of this is, that accessibility is compatible with various urban structures, not necessarily with denser cities and more compact cities, but accessibility it's also compatible with bigger cities. And it seems, in the case of Latin America, that there is still room for growth in terms of physical sprawl in Latin American cities.

So, this is kind of a provocative conclusion of the report, let me just jump to that to the second policy we are on, which is mobility. So, the first thing that we do is show that Latin Americans mostly use full commuting, public transportation as opposed to Europe, but mostly as opposed to the U.S., 90 percent of U.S. citizens use private cars to commute.

So, why does it matter that Latin America uses mostly public transportation? Well, because it turns out that they are very dissatisfied with public transportation, and that varies across cities, first of all. And in Bogota nowadays for instance, four out of ten commuters, they say that public transportation is really bad, right, and they don't like it.

So, they use these kinds of transport the most, but they're really dissatisfied with that. Also, we can show that part of the dissatisfaction has to do with a

lot of congestion that there is in Latin America, okay. And this congestion can be measured, and we do it right here, by georeferencing the place in which people live, and the place in which people go to work.

And then in an automatic way with like -- with a script that you can write and program in an automatic way, ask Google Maps to tell you how much does it take to go to the place. The people work to the place, that people live to the place, that people work at different times of the day,

And by doing that you can sort of plot what are the congestions in a city, depending on the hour, and you see these kind of by moral distributions, which show peak hours, which are much bigger than Mexico City and in Buenos Aires, for instance, are relatively very flat in Montevideo; so, a city with very little congestion. And then --

SPEAKER: (Inaudible 01:11:56).

MR. VARGAS: Okay. So, in terms of policies to promote accessibility through mobility and transport, the first type of policies that we emphasize is that users of private cars should internalize the negative externalities that they impose on society in terms of congestion, accidents and pollution. But if you want to make them internalize through price policies, for instance, congestion charges, you need to improve the quality, and the extent of public transportation, and equality issue seems to be very important in Latin America. And one of the reasons the quality issue is important in Latin America, is because there's a lot of informal public transportation in Latin America that is not regulated.

And, of course, you not only need to improve the quality but being more -
- infrastructure for public transportation. So, I'm going very quickly through these, because I don't have much time, less than five minutes. So, let me just tell you what we have in the report, briefly, about housing markets and urban informality.

The first thing is that houses, the affordability of houses is very, very, very low in Latin America, so houses are very expensive relative to the income of people. We did the following exercises: suppose, so we make a lot of household service in Latin America in 13 cities we make household services there a representative of the entire city, and we ask people how much they earn, also measure income with consumption, and in different ways, and then we make the following exercise.

Suppose people or households save 30 percent of their income every month to buy a house, so how many years of continued saving would they need absent any credit market, for the time being, to buy an apartment of 15 square meters -- I don't know how much that is in feet, sorry. I'm Latin American, as you can note by my accent.

So, an apartment of medium value. It turns out that that saving -- that the required them spending 70 years in Mexico City; and in Bogota it's almost 50 years, and then there's a lot of variation in Latin America, but therefore the reality is very low, and that's a problem.

Why? Well, that's a problem because one way of solving this is like enhancing the mortgage credit market, and the mortgage credit market is very thin in Latin America, so only 8 percent of GDP on average. Only 8 percent of GDP on average, there are superstars like Chile which they use 20 percent of GDP; well, in U.S. and Canada is over 70 percent, so there's a lot of room for improving credit markets, credit markets in Latin America.

But the reason of the low affordability is not only that people don't have enough money, and they don't have access to credit, but also the fact that houses are very expensive, because there are a lot of restrictions to the construction of new, and the development of new houses, so there is also a supply problem. So, these constraints on houses plus the low affordability, make it so that in Latin America there is a dual housing

market, and lots of people about a third of Latin Americans they live in slums. Okay?

And this is important because it turns out, I don't have this slide here, I have to cut it, but it turns out that by different measures of accessibility the difference between the informal settlements or the slums and the under formal settlements of cities, so we also make representative survey -- of household surveys in slums, are huge. Right? So there is very little accessibility in slums, and part of the growth of these slums is because of these dual housing markets in Latin America.

So, what do we need to solve this? You need to make the housing supply more flexible by simplifying regulations, promote demand by promoting access to mortgage, and there are general aspects such, for instance, the fact that not necessarily you need -- I mean you need accessible housing but no not private housing, right, so you need also to promote the renting market.

The last thing that I want to mention -- and I already know that my time is almost up -- the last thing that I want to mention is the fact that I mention about metropolitan governance; so, metropolitan governance is important because as I said, the actual size of cities in terms of economic activity, is much bigger than the administrative limits of cities, we saw in the case of D.C. Right?

So, let me give you an example. In Sao Paulo, for instance, the metropolitan area of Sao Paulo as measured by our database covers 172 municipalities. The metropolitan area of Mexico City covers 65 municipalities. Out of the 41 cities in Latin America with over one million inhabitants, half of them cover at least 12 municipalities.

So this is a real issue, and it's an issue that if you compare that -- if you compare the availability of metropolitan governance institution in Latin America versus the OECD, it's very low in Latin America. So, there's a lot of room for making

metropolitan institutions.

So, these institutions have to have -- three components are very important. First, they have to have access to financial and human resources to be effective. Second, the institutional design of the metropolitan governance body has to be according to a complexity of the coordination problem. So, it's not the same coordinating like the trash collection and coordinator now, an integrated transport system. And, it has to have political legitimacy, and we have lots of examples of these in the report, that I don't have to go through.

So, this is pretty much it. Remember that I said that there are relatively high densities in Latin American cities, but they do not imply more accessibility, in spite of the fact that, in theory, high densities are consistent with big agglomeration economies. So, what seems to be happening in Latin America is that the congestion costs are too big.

So there's a lot of policy room in the areas that I mentioned. The other thing that is important is that accessibility is consistent with different city structures, and letting cities grow is an option if you plan it in the right way and create sub-centers and infrastructure.

So, we are not saying that cities in Latin America should grow, we are saying that they can grow if the policy is right, and there's a lot of need for articulation and coordination at the metropolitan level.

So, I just want to say that this is the link from which you can download the report and also you can download part of the data that I have mentioned in terms of household service, and the satellite nightline -- nighttime pictures. Thank you very much for your attention. (Applause)

MS. HARKNESS: While they are getting mic-ed. I'm going to go ahead

and start with some opening remarks, so we don't waste any time. There's a lot here to cover.

So, thank you, Juan, for a terrific overview of many of the key themes that you surfaced in this important report.

I guess, what I'd like to focus on, first of all, is just emphasizing how much, even though this is a report about Latin America, and the challenges that Latin American cities are facing, Homi underscored, this is clearly the challenge that the world is facing, getting this right for cities couldn't have more dire consequences. You know, it's game over, if we don't get it right, I think he said in no uncertain terms, and I would agree with that.

I would also say that the themes you surfaced here actually will be very familiar, some of those policy challenges could be ripped straight from the playbook of concerned urbanists in the United States and elsewhere around the world.

So, I just want to underscore that I think these challenges around the interconnected housing, and infrastructure, access to jobs and opportunities, all of those would be just as familiar for those of us here in Chicago, or D.C., as they are in Bogota, or Buenos Aires, or some of the other cities that you've highlighted there.

This report, one of the key conclusions that you said it was a provocative one, I would agree, is that urban policy has been focusing on the wrong end game that all cities need to be compact, and dense, and that's what we should be planning for. And I think it's really an important flip to say that accessibility can be accomplished through a range of different approaches, and that actually a lot of different development patterns might work if we were paying attention to accessibility, and opportunity as the critical driver right away.

What you call in the report as this phenomenon of "triple informality", so

housing, jobs and transportation, really important to highlight the way that these three things go together, both as sort of the three legs of the stool of a strong, stable foundation of cities, when one of them is out sync they have reinforcing effects on each other.

Again, highly relevant for places like cities in the United States that are grappling with new ways of measuring accessibility, the Center for Neighborhood Technology in Chicago trying to put forth a housing and transport index to show how much the costs of affordability are exacerbated when you live farther away from your job.

The second thing that I think will be very resonant for U.S. audiences and others, just as the problem of creating a policy environment that enables a robust market to produce physical infrastructure. So, I'd like to hear more about that and unpack some of that in our discussion today.

You talked about a mix of sort of incentive-based policy levers, so congestion pricing, off-day driving, things that actually intervene, and the individual consumption decisions of urban residents, but there were also some of these bigger picture planning frameworks, deciding how to think about transportation investment across municipalities that we need to push at the same time. So thinking about what that playbook is, and pulling out some of the ideas from the report about, in particular, how to finance these investments; is something I'd like to talk about.

The implementation challenges you described will also be incredibly familiar to those of us living in the United States for sure. In particular, you talked about the effect of, sort of, short-term market thinking, and also short-term political cycles. So this is something that we've struggled against here in this country as well, trying to figure out how to finance infrastructure, investments that are going to be much longer-term than the political cycle of one mayor, two mayors, of any political administration.

And then these questions around metropolitan governance coordination,

we have not necessarily been able to tackle anymore effectively here, and I think we'll be looking for lessons from Latin America and other places that have thought about the right kinds of vehicles to get this done.

So, I think to turn this over, I'd like to really start to dig into lessons on the ground. So, Eduardo you have a lot of experience in Colombia and Bogota, and I'd like it, if you could share some of your experience bringing this report's recommendations to ground there. And in particular, if you could comment a bit on the methodology, and some of the other ways we think about measuring accessibility.

MR. LORA: Yes. Thank you. Well, first of all I have to say that this is a great report. I found it very well informed, and very well thought all over. On Bogota, I have to say that I learned a lot when I read the report, actually I wasn't aware of many of the findings that were highlighted in the report, obviously, I was very aware of all the congestion problems that Bogota faces, but I wasn't aware that Bogota was the densest city in the whole of Latin America.

And one of the few, or probably the only one, whose density increased in the past 15 or 20 years, which is exactly the opposite of what is happening everywhere else, so that was very interesting to me, and it was a complete discovery. I had no idea that that was going on.

I also discovered, and that it was interesting, that Bogota, like other Latin American cities, have very relatively low space -- radius per capita. The typical dwelling in a Latin American house, in a Latin American city, is 26 meters, or between 26 and 30 meters per capita. Bogota is 26, but what is very clear about Bogota is that there is no social gradient in that.

So, rich people live as cramped as poor people, and obviously there is a reason for that, which is congestion and access. Rich people buy access, buying very

expensive places close to work, even if they have to sacrifice the space, and that tells you the drama of a city like Bogota. So, all those things were very interesting for me to read in the report because it sort of gave me, like new angles to look at the old problems of Bogota.

MS. HARKNESS: Mm-hmm.

MR. LORA: On the issue that you mentioned about how to measure cities, and that was also in a way announced by Juan. I don't know if you could pull the graph -- the map for Washington. I like very much the way they use the data and, I think that there is a tremendous promise in this big data to analyze the urban problems, but I'm not quite sure how it was operationalized, and I don't think that you can get around the problem of commuting times. I think it's very difficult to define a city without taking into account commuting times. And let me tell you why.

MS. HARKNESS: Can I just pause, just for clarification?

MR. LORA: Sure.

MS. HARKNESS: So, the big data you are talking about in this case, and the novel methodological intervention here is the use of satellite data on luminosity and the nighttime --

MR. LORA: That would be so, exactly, the luminosity data which I wouldn't --

MS. HARKNESS: We are talking about the nighttime data and the satellite data?

MR. LORA: Yes, the nighttime data that Juan showed, and that is going to appear on the screen in a minute.

MS. HARKNESS: Yes.

MR. LORA: They basically measure cities as the cluster of a stable data,

and I'm citing it.

MR. VARGAS: It's there.

MR. LORA: Thank you. I'm citing: the cluster of the stable nighttime luminosity pixels, only considering contiguous pixels. Well, if that is so, I don't clearly see how you define what Washington is, because obviously you see a contiguity of luminosity pixels going northeast along the corridor from D.C. to Baltimore, and obviously you continue the map, and probably you'll have to go further north and further north.

While at the same time, just so you see you are cutting there with no clear reason, but at the same time you are including places that are not so clearly connected to the area, and that are as far as Baltimore would be from D.C., such as, for instance, Leesburg they are equally far away.

So, so I don't think that you can get away with the problem of imposing a threshold -- a threshold of commuting times. When is the city a city? Well, they define it, they say a city is -- actually they say the luminosity, as a measure economic activity, allows us to clearly identify integrated labor markets which is consistent with the conceptual definition of a city.

A city is basically an integrated labor market, that's what it is. Okay. It doesn't matter if the areas are not contiguous to each other, that's irrelevant, I mean, the areas can be separated, but you can travel easily from one area to the other, that's a labor market, and therefore that's a city. And that has to be solved in terms of commuting times.

MS. HARKNESS: Mm-hmm. Right.

MR. LORA: So, there is no way around that. Actually I made the calculations for Colombia, and if you consider, let's say, cities -- a city as an agglomeration of more than 50,000 people, then you would say that Colombia has 100

cities, roughly.

But if you say no, let's consider also cities, those that are within a radius of 30 minutes of those municipalities. How many seats do you have? Well now you don't have 100 cities, now you have about 70 cities. Okay?

But if you say, no, no, no, no, no, no, 30 minutes is too short a time, people are prepared to travel an-hour-and-a-half, that's it, to go to work.

MS. HARKNESS: Right.

MR. LORA: Okay, in that case you don't have 70 cities, in that case you have maybe 35 cities. So, the point that I want to make is, you cannot get around the problem of commuting time, that's essential to the definition of a city. If you want to stress a little bit, you could say, cities are relative concept.

MS. HARKNESS: Correct.

MR. LORA: You cannot define cities in a definite way, so a city is for me, where I can really operate.

MS. HARKNESS: Yes.

MR. LORA: Maybe a city for you is a different thing, and it depends on the activity we are talking about. So, that introduces an approach that is probably not so common, but I think it's important.

MS. HARKNESS: Yes. And I think you're pointing to something really important here, which is that the experience of the urban resident is critical to the definition of not only what a city is, but of what accessibility is.

So, I know you've been thinking about this a lot, Pablo, so you've raised in this report this very important conceptual reframe that accessibility is what we have to focus on. Now, how should we be thinking about measuring that? You've raised, you know, a host of housing affordability, access to jobs, commuting times, the experience of

a resident on the ground, just the sort of friction of life inside that city. Can you share a little bit more, pushing beyond the report I guess?

MR. SANGUINETTI: Thank you Alaina. Alaina?

MS. HARKNESS: Yes. Perfect.

MR. SANGUINETTI: Thank you very much for Brookings for hosting us for this quite interesting, very impressive event. So, yeah, this is a kind of difficult question. So, we actually operationalize the idea of a city in terms of productivity and welfare, and related with this conceptual issue of accessibility. So, after writing the report, let me tell you what we think about now, what is the accessibility.

There are two features, one is that the city has to have opportunities, so large cities will have -- a larger city will have a large amount of opportunities, and what we call about opportunities, of course, job quality, amenities, services, you know. These are opportunities. So, first of all a city has to have these kinds of opportunities, and we'd say that the larger cities, in general, have much more open opportunities for people to have jobs, and all these important things, that are important for well-being, including amenities.

So, I mean, a lot of us are saying that for us a city of, "we" economists, it's a large labor market. That's okay, but people come to cities also for other things, not only for labor but, you know, to enjoy cultural life, to enjoy interacting with other people, parties, et cetera. So, I totally agree with him but, you know, some of the guys will tell me, oh, Pablo, what about park, what about culture, what about --

So, that's the problem, what we -- But anyway, so the first thing is opportunities. The second thing is a large city may have all these things, but you have to be able to reach those things, you have to be able to, you know, enjoy these opportunities. And this will depend on many things. First of all, it will depend on, okay

there is an opera theatre, okay, that's nice, but I had to travel, you know, two hours, or it is very expensive, you know.

So, this idea of being able to enjoy, if I want to, you know, many times I'd say to people, I live in Buenos Aires. So I said, you know, I like Buenos Aires, because it has so many theatres, it's not because I go every week at the theatre, it's just to know that they are there. To me, it is my well-being, because if I choose to go, I could go, but other times I go just two times a year, or no more -- maybe more, 10. But do you know the thing is, you have to be there, okay, I should be free to -- you choose it or not.

So, the second thing is, you have to have the opportunities, then you have to be able to reach these opportunities, and this includes traffics, it includes, you know, infrastructure to get there, time, prices. And also it should be inclusive, in the sense that it should be enjoyable by all the -- many, you know, poor people, middle-income, and rich people. That was another dimension of accessibility.

So, if I want to measure accessibility, to measure, well first, and productivity in cities, I should have all these thing into account, and of course it's a tremendous task, in terms of methodology, date, et cetera, but we are on that, and of course Eduardo will help us. (Laughter)

MS. HARKNESS: So, building on that, say we all have an agreement about what it's going to take to build a healthy, thriving city for everyone, and that we can agree that accessibility is an essential measure. By all the, you know, pieces of the measures that have rolled up into this one macro measure of accessibility.

Whose job is it to help set the vision and get this done? And so this is a division of responsibility question that, you know, for those of us here in the United States, we know we need infrastructure investment at the Federal level, we still haven't gotten an infrastructure bill, meanwhile cities are levying sales tax increases, like the

County of Los Angeles has done to say, we need to do this on our own.

Talk about the division of labor from a Latin American perspective on this issue. How we can lead? Who does what? Let's save the metropolitan governance coordination for another moment, but who are the most essential, sort of, leading levels of government on this issue?

MR. VARGAS: That's a very important, that's a very interesting question. So, let me tell you very briefly what we found, it happens in Latin America, so it turns out that the division of labor is quite different depending on the context, and depending on the country, and the reason is that there's a lot of variation in the type of government that there is in Latin America.

So you have (inaudible) governments, such as Argentina and Brazil, and you have very unitary-centralist governments such as Colombia, right, and that matters for who does what in cities, because for instance in Brazil, the Federal Government actually -- beyond the existence of provinces, the Federal Government actually creates these metropolitan authorities that you said we shouldn't talk about them --

MS. HARKNESS: Okay, when we get --

MR. VARGAS: -- but the Federal Government creates these metropolitan authorities, and the metropolitan authorities then have a lot of legitimacy, because they are sort of imposed by the Federal Government. And the Federal Government essentially says, okay, you municipalities have to respond to this metropolitan authority, and it gives the metropolitan authority the capacity to, for instance, raise specific taxes. Okay?

The same doesn't happen in centralist countries such as Colombia, right. In Colombia what happens is that the Central Government passed a law allowing for municipality to endogenously, or according to their will, create these metropolitan

authorities, and this law has been there for about 20 years and no one has used it except a couple of cities, and the main example is managing it.

MS. HARKNESS: Yes.

MR. VARGAS: It is a very interesting and well-functioning metropolitan area, responding to exactly the same incentives that are there for every any city in Colombia, but no other big city, including Bogota, has done it.

MS. HARKNESS: Can I just pause you on that? Is that a capacity issue? What is it primarily responsible for maybe (inaudible)?

MR. VARGAS: That's a great question. So, it has to do with many things, and so for instance it has to do with the fact that, how big are the municipalities and the cluster of municipalities that are in the metropolitan area? So, sometimes smaller municipalities don't want to collude, let's say, with bigger municipalities because they fear that they are going to lose power and authority over the issues, the policy issues that affect their municipality.

Sometimes the bigger municipalities don't want to cluster with the smaller municipalities because they think that they are going to end up financing the entire investment.

MS. HARKNESS: Right.

MR. VARGAS: Right? So, it has to do with size, right, and the distribution of power, but it also has to do with, like, political economic things, so that has to do with something that you mentioned in your opening remarks, which is what are the incentives of politician out there to create this type of bodies, because it's going to take time, and whatever -- you know, whatever benefits these types of bodies are going to bring to the city. These are going to be materialized after I'm out of office, so I'm not going to get recognition of actually being the one that created it.

MS. HARKNESS: Right, right.

MR. VARGAS: So, you know, it's a big issue? I don't think so. Maybe my answer is disappointing in the sense that I'm not telling you exactly what should be the division of labor, I'm giving you more a positive sort of answer in terms of describing what's happening in Latin America, but understanding these experiences allows us to think about the institutional design, that you need to come out in different contexts.

MS. HARKNESS: Absolutely. Yes.

MR. VARGAS: In order to have that.

MR. SANGUINETTI: I mean metropolitan areas are social and economic construction, and many times institutional building is behind that, okay, would lax. So, you know, our federal and that political institution, is just, you know, Federal Government promises, and municipality. This thing has come out after nothing -- after economic and social forces that many times it's difficult to comprehend, okay, in terms of political thinking.

So, that's why it's us having so much difficult to do this in many developing countries, and you have flexibility because, you know, for example, in Buenos Aires, sorry, such as (inaudible) in Argentina. Okay. Buenos Aires, the thing about that's at least, I don't know, 10, 20 years, and now they are thinking about the huge metropolitan government that will do everything. It will do transport, it will do health, it will do --

MR. VARGAS: Right.

MR. SANGUINETTI: You know, it will do garbage, maybe you don't want to -- maybe you need to have more flexibility, you know, each service -- each problem you want to solve them in coordination, like transportation is a difficult, not really like garbage, so you need a different sort of agency to do with that.

MS. HARKNESS: Right.

MR. SANGUINETTI: So, you don't want to create a, you know, a new mega thing that, you know, it's difficult to -- bureaucratic, so many times politicians do not think like that, you know.

MS. HARKNESS: Yes. Well, it's a perfect answer because you did highlight the heterogeneity of leadership structures, which is a defining dynamics of metropolitan governance challenges around the world.

MR. SANGUINETTI: Yes. Sure.

MR. VARGAS: So, let me just add, give a two-finger on that Buenos Aires example too.

MS. HARKNESS: Yes.

MR. VARGAS: So, the Buenos Aires example, is also very telling of what I always mention about the political economy of making things happen in cities. So, in the Buenos Aires case, what happened is that for the past about 40, 50 years, it hasn't been the case that the municipal government, and the government of the province, and the national government, is aligned in terms of the being the same party.

Well, now it is the case after many decades, right, and so nothing else has changed other than the color of the party of the person in charge.

MS. HARKNESS: Yes.

MR. VARGAS: And only that, without any change in law, without any changes in incentives --

MS. HARKNESS: Alignment of vision.

MR. VARGAS: -- has helped, sort of, authorities to align into, what does Buenos Aires need in terms of improving quality of life, for people and infrastructure, and it's actually working. Right? So, there's a lot of things to consider.

MS. HARKNESS: So, on that point -- in five minutes we are going to open it up for audience questions -- but I want to bring it down -- So, that's a great example of an emerging coordination between multiple levels of government inside one country.

Zoom way down for a minute for me and unpack some of the examples this report has of the transactions, for financial vehicles or, you know, specific policies related to particular developments, that have helped to coordinate interest among actors, get some of this long-term investment thinking going, to help drive some of those investments.

You have a couple of really interesting examples I think, in the report, also from Buenos Aires, but I'd also love to hear examples from Colombia as well, and Bogota.

MR. SANGUINETTI: You'll go first?

MR. LORA: No. I don't really have much to say about that, I learn a lot on the book about that, about the way different financial vehicles can be put together to finance large projects, and projects of the times across metropolitan by municipality borders. And since, obviously, that's, I mean, financial business is the main reason why they wrote this report, probably Pablo should be talking about that.

MR. SANGUINETTI: No. Well, you know, when capacity that always local government have -- used to have, and have, is how to -- you know, is regulation of land use.

MR. LORA: Yes.

MR. SANGUINETTI: This is mostly in our, countries it's just a local thing. Okay? And this used -- if this is used in a, you know, an intelligent way. This is very powerful. People think they own property, but they don't. I mean, you don't know -- I

mean, the government tells you what you can do on the property so, you know, it's your -- not totally, you know, not totally the owner of the property, in that sense.

So, the idea is that government should use, of course, this power to of course, as we said in the report, you know, to increase the flexibility. You know, Latin American cities has, in part, this problem of informality because of this high cost of formal housing, because of this high restriction on land use, especially for housing.

In the sense that they're very restrictive, so you have a very, very high minimum lot size, you have restrictions on how up you can go and density. Of course some of these things are, you know, are there because they are truly, you know, things about you don't want to cause externalities, but you want to avoid, of course, congestion of traffic within this neighborhood, you don't want the public service to be congested, you know, water, sanitation, so there are some reasons for that.

But many times, many times these regulations are not for that, because they have, you know, interests there. You know, people that own this land they want the value to increase, or they want to -- you know, they want not to be very much building around.

But not only that, the second (inaudible) a separate issue is about how the city can you grow on the borders. So, many planners in our cities, they only want -- the fear of this thing of (crosstalk) --

MR. VARGAS: A sprawl.

MR. SANGUINETTI: -- because they don't want their city to grow in a disorganized way, or their infrastructure. So, they put limits on how can grow on the borders, and how you can grow up. So where then the people will go? So, this is one of the reasons, and there are -- a lot of evidence, not for Latin America, but for the developed countries, that this is behind the increasing cost of housing.

And this of course would create, the people that have middle-income earning could not go to this -- you know, could not -- I'd say to the formal house, unless you have this, kind of, the fundamental slums which are -- you know, people they are much more packed, and you have -- part of the problem of high density is because of the density you have in slums, there, they have like (inaudible) the people by hectare.

So, I would say that the idea to use land, to be flexible in land use is very important, and if you do it in a very smart way, you can get money out of that, because you can, you know, you change the value of -- you can change the use, the original plan, and you convert that from, you know, agriculture to urban, of course the value -- increased a lot the value of the land, part of that should be -- get by the government to finance the infrastructures anyway.

MS. HARKNESS: Right. And the key is to capture them and reinvest into public purpose.

MR. SANGUINETTI: Yes.

MS. HARKNESS: But did you want to respond to that, Eduardo?

MR. LORA: Yes. You know, I agree with most of what Pablo has just said, except that I'm not so convinced that the high cost of formal housing in our cities is a result of the difficulty of getting licenses, and construction permits, and all that. I'm not convinced of that. And you said there is no evidence for Latin America.

MR. SANGUINETTI: Little, little evidence.

MR. LORA: Yes. Or there's very little evidence. That's something that applied very well to the U.S., or to places where the codes are really --

MR. SANGUINETTI: Enforced.

MR. LORA: -- enforced. The codes in our countries are not enforced, so I don't know why you can claim that those are the causes for the high cost of housing.

No, I think that the high cost of formal housing is basically a result of the lack of mobility, basically the result of lack of mobility, because people want to get close -- want to live close to where they work or where there are other amenities, and so the pressure it gets completely captured by the price of land, not by the price of the construction.

MR. SANGUINETTI: No, no. You're right.

MR. LORA: It's basically the price of land.

MR. SANGUINETTI: No, no. I'm not saying about the (crosstalk) --

MR. LORA: Because why? Because the pressure is caused by the need to be closer, so in a way, it's the byproduct, or the other problem that you were discussing, those problems are not separate, and I think that in the report you make too much of a separation of the two, and saying that, well, the problem of housing, of informal housing is the problem or regulation, while the problem with transportation is -- No, no, no, no, those problems are very clearly communicated.

MS. HARKNESS: Mm-hmm. Yes, right. So, I think it's time to turn it over to our audience for questions, although we've only covered, of course, the first-twelfth of this report, I'm sure here. We have roving microphones I believe, and please await for the microphone, and identify yourself before you ask your question. And remember the questions end in a question; my favorite thing to remind everyone. Okay, right here in the front?

MR. RODRIQUEZ: Hi. I'm Martin Rodriguez with the Inter-American Dialogue. Thank you for speaking with us today. I want to ask a question related to governance. A problem that I see in not only in the federal, but also local level has to do with corruption, obviously, which detracts to economic development. So, can you comment a bit about how corruption, how that can impede trying to implement these policies that you've recommended? Thank you.

MR. SANGUINETTI: I could answer that. We'll take more questions or we'll --

MS. HARKNESS: No. I think we'll just go one at a time; we have time to do that. Yep. Mm-hmm.

MR. SANGUINETTI: Well, this is really related with what I was saying. I mean, in part the problem is why local governments have not been using their power to, you know, to use the land regulation as a tool for financing, et cetera, because sometimes the good money -- they get money but from their pockets, from some politicians' pockets. So, there was a lot of corruption about how to change land regulations, and this created, you know, a kind of very unsettling (inaudible), and many times they --

For example, there are many cases of cities that they allowed, say, they change the regulation in places where there is no infrastructure, or in places that are, you know, (inaudible), so it's not near the border of the city, so this is crazy. You see? And there's many -- behind that there are many issues of corruption that have affected the state capacity to do that.

MR. LORA: Let me add to that, that I think that one of the reasons why metropolitan areas don't work when they are left to the discretion of the different municipalities is the potential of corruption.

MR. SANGUINETTI: Right, you're, right.

MS. HARKNESS: Because of the divisions --

MR. LORA: Because of the smaller municipalities which are usually more corrupt than the larger ones don't want to get rid of the business that they have, working on there by themselves.

MR. SANGUINETTI: Yes.

MR. LORA: They know that if they form part of the larger metropolitan area, they will have to become more transparent and they will be, in a way, (inaudible) by bigger bodies. So, that's a very important constraint, why metropolitan areas have not worked in Colombia, I don't know about all the countries, but this is case of Colombia.

MS. HARKNESS: Well, this corruption issue is also tied to bit more -- the sort of broader umbrella issue of accountability. And I know we've done some research on mayoral powers and how they are changing, and the clear finding that came up over and over again, is that regardless of your form of government having a clear line of sight to decision -- between decision making and the consequences of that decision making, was the most important thing. So, I think that ties into this idea that in a fragmented environment you can have a lot of finger pointing, and nobody is truly accountable.

MR. SANGUINETTI: And yes. We did a survey too on municipalities about what were the -- what serious problems they faced when expanding, you know, the supply of housing in their territories. One of them is that so much regulation and bureaucratic thing, and how many times it takes to change the regulation by land-use. So, is there's such (inaudible), of course, they do it in a, you know -- Formal regulation is so hard, so it's restricted, that they do it in a formal way, and through this kind of arrangement.

MS. HARKNESS: Let's take another question. The gentleman in the sweater, please?

QUESTIONER: (Inaudible), if you don't mind my reminding. A long time ago, I first went to Bogota, and I learned the word "kachako", which some of you may know means persons who dress elegantly, like Eduardo. I also got to go to Universidad de los Andes, and they have an office there, that was very lucky for me. From there I walked down to Carrera Séptima, and I looked at the number of people getting in a bus

going north along that road, and they were always full.

I now live over here in Georgetown and teach at Georgetown University, and the buses are always empty. What a shame? Why can't we be more like Latin America in this country? I think it's a failure in our system not to be responsive. A little later I learned the word "porteño" and I'm sure that Pablo can remind us what that means.

Here are my questions, really about policies that have been enacted. One, in Bogota the transport system is totally different from when I first got there many years ago, and that, I wonder, does that make it work better? Or are you getting your moneys' worth, so to speak?

A few places, I think in Mexico City, also have these rules that you can only drive with an odd number licenses plate on certain days in the, and even on the other. Do those pay off? Does that give you positive results? That's the kind of questions I'm wondering about?

MS. HARKNESS: That's perfect. Yes. Do you think you want to take that one?

MR. SANGUINETTI: The question on Bogota, and one on Mexico?

MR. LORA: No, no, no. Juan is the person who is an expert.

MR. SANGUINETTI: On Mexico, do you want me to answer to that one, or?

MR. VARGAS: Yes.

MS. HARKNESS: I think the clear -- one of the clear questions is about the evidence we have for the (crosstalk) --

MR. VARGAS: Sure. Yeah, there is a lot of evidence -- a lot of evaluations that have been made in Mexico, in Colombia, and so in Quito they also have the same type of policy.

QUESTIONER: Santiago too.

MR. SANGUINETTI: People with placards, you know.

MR. VARGAS: And Santiago, and so that policy is about, just to summarize it for the audience, that policy is about restricting the use of private vehicles according to the license number of the plate, so they cannot circulate on given days, right. So, the intent of the policy is of course, having less vehicles on the streets, and therefore having less traffic but what -- So these evaluations have all pointed to these being very ineffective in terms of reducing both the amount of vehicles in the street, and also reducing pollution, and the reason is essentially than in the medium term to long term, people just buy another car.

Because it's very -- so you know exactly when you cannot use your car, so you just buy another car, and in countries such as Colombia, or in Latin American countries you can actually say: I want to buy a car with -- even if the car was new, if you sell used car obviously, but even if the car is new, you can buy a car, and say what plate number you want that car to have, right?

And, in fact, they usually buy it, like old cars that are cheaper and they pollute even more, so pollution actually goes up.

So, the exception is Santiago, and the reason that it works in Santiago is because you cannot anticipate when you cannot use your car, and it's because there are like climate alerts, pollution alerts. So, according to when pollution reaches a certain level, they just announce in the radio and in the TV: tomorrow you cannot use your car according to a plate number, but you cannot anticipate when that's going to happen, so people just don't buy another car.

MS. HARKNESS: Right, right. You know, the flip of this of course is when you don't regulate something in the market, like the increase in ride share and

shared service, how much private-car use is up now in cities, this is something we are seeing acutely here the United States. So, you'd mentioned a bit talking about the transportation, sort of revolution and its impact in this space. Like your "empty bus" comment made me -- triggered this.

MR. LORA: Yeah, because that was the topic that I missed in the report. The report didn't mention vehicle-sharing systems at all, which I think for me it's an important omission.

SPEAKER: No, there are --

MR. LORA: Because that's the future of cities I think, to a large extent, as we are seeing in here in the U.S. And even in Latin America, I try to gather some numbers in order to illustrate the point. Now, there are 26 cities in eight Latin American countries that have bike-sharing systems. Uber is operating in 15 Latin American countries, and there is a couple of companies, I don't know if you are familiar with those names, Easy Taxi and Topsis, which operate in 11 countries, which are sort of Uber but for taxis. I mean you have the app, but they operate taxis.

However, as you know, there is a lot of resistance. Like in many cities in the U.S., in many cities in Latin America there are huge resistance about this new system. And another feature that is also interesting to keep in mind, is that self-driving car sharing is practically unknown in Latin America.

MS. HARKNESS: Mm-hmm. Right, and the (crosstalk) --

MR. LORA: And which is very (inaudible), and the Zipcar, which is the largest company in that business here, has just opened one, one establishment in Costa Rica this past September. Why? What's going on?

MS. HARKNESS: Right, right.

MR. LORA: You can really solve many of the problems through car-

sharing, because obviously a car that is shared use less space in the net.

MS. HARKNESS: Right, but it's also --

MR. LORA: So, it corresponds to roughly the calculations that one, one shared car corresponds to roughly fifteen owned cars.

MS. HARKNESS: Right. Much more to know about this, than --

MR. LORA: So that's the future especially given the fact that still vehicle penetration rates in Latin America are very low.

MR. VARGAS: Yes, yes.

MR. LORA: So, my question would be, shouldn't you just leapfrog to the future instead of discussing the whole -- I mean what should we do? What should we do to do that?

MS. HARKNESS: Certainly, we are going to get smart regulations on.

MR. SANGUINETTI: This is a very, very important point that Eduardo was making.

MS. HARKNESS: Yes.

MR. SANGUINETTI: Actually, what should we measure in our surveys, how much people use these kind of new things, and it's still -- as he was saying, very little, actually in Uber it's 2 percent, all this new thing, and you think it's still very little, and that's why in the whole report that's not such a big deal, but of course, when we talk about policies, they are there.

I mean, for example, all the bicycle thing in terms of infrastructure, et cetera, but the question -- the important question about, Eduardo, is the following: we expect as income increases, this is a kind of demand elasticity, we expect Latin Americans to, you know, to buy more cars in the future.

MR. LORA: No. That's wrong. No. That's wrong.

MR. SANGUINETTI: Well, let's see, let me see -- let me finish. Let me finish, let me finish. If we think --

MS. HARKNESS: A big passion point here.

MR. SANGUINETTI: If we think past elasticity we expect this; now, what I was saying, maybe given these new technologies, the elasticity of income with respect to cars, in the future will go down, and of course this is can be induced by policy. You know, you don't let market to do all along, it can be induced by policy, but this had to be done, okay, if not -- if not, you know, between 2007 and 2014 the number of cars in Latin America increased by 40 percent, 40 percent.

So, a lot of it is optimistic in the sense that that can be changed, but the other thing I'm saying, okay, it can done but you have to work, cities have to do the work.

MR. LORA: Yes. Instead of trying to put obstacles on Uber, and all those change systems --

MR. SANGUINETTI: Of course.

MR. LORA: -- you should tax them very lightly, and tax on vehicles much higher, and especially because that's going to help you to do other things, like congestion charging.

MR. SANGUINETTI: Yes, yes. Sure.

MR. LORA: Congestion charging is much easier if you are driving your sharing car, than if you are -- that of course, say, basically you have own car. So, I mean there are many things that can be discussed, I don't know these are the solutions, maybe they are not, but what I'm just pointing out, we need to discuss those things, we need to discuss the future.

MS. HARKNESS: The next time you're at Brookings, the impact of ride share on Latin America transport economy. Right, this is fantastic. I'm glad to have that

spirited debate. Gentlemen in the tie, right here.

MR. ARMAYO: Good morning. Carlos Aramayo, from The Fuller Center for Housing Bolivia. I was just in my country 48 hours ago, and my organization has housing projects in Cochabamba, and in El Alto, and we are starting one in Santa Cruz. In El Alto, my question is the following. As you guys know El Alto has been growing exponentially, and without any sort of urban planning.

And just 48 hours ago, I found out there's Chinese investment coming into the country, trying to develop an industrial park. I don't know if your report touches on foreign investment, and how that affects social housing, and how that affects social policy in terms of urban planning, so on and so forth.

Because I can tell you, me, as an NGO, that builds social housing in a country that, well politically has dubious ties with other countries; it is an issue that I don't know if Development Bank's have touched on, and I would greatly appreciate it if you could comment on that. Thank you.

MS. HARKNESS: Thank you. Great question.

MR. SANGUINETTI: Well, this is again related with the regulation of land-use. A city has to have opportunities, within the opportunities of course job qualities, and of course these industrial parks, you know, if they are set in some places, in which of course they do not, you know, affect housing, the living -- you know, the residential areas, et cetera. Of course you have to accommodate those, but of course you need to be, you know, this had to add to a city, not a cost to the city.

So, there are many places, you know, it's cities, in many, that these things of industrial parks has been totally independent of the local government, totally independent, and of course, there is a lot of value there. I mean, the local government could get a lot of taxes from there, but they don't care about that. You see, many times

these national themes is not planned together with the local government because, you know, you need land for that.

And of course if the local government has something to say, well, you know, many times I have spoken with local mayor's, and telling them, well, but you have see this industrial park, which is, you know, first rate, and is (inaudible) in that. Well, you know, we don't, we don't care about these guys. I mean they don't give us any money at all, and in part this is because of the -- sometimes of the formal laws, et cetera, but sometimes it's just a problem of capacity of the government -- local governments to talk with these guys.

Many times they ask for money, you know, in not a very decent way, but you have to do it, you know, formerly. So, this is a good point, and I don't know what development banks could do about that, of course, helping out the governments to this planning capacity, to plan about the local taxes, in this regard, maybe we can help.

MS. HARKNESS: Right now we have a question in the back. Josh, do have the mic? Okay.

QUESTIONER: Hi. My name is Faria Erickson, I'm a student in urban planning in Georgetown.

MS. HARKNESS: Please speak closer to the microphone, thank you.

QUESTIONER: And I have two comments, and I guess a question. When you were discussing about sharing services of cars; I'm from the part of Mexico, Monterrey, and the biggest thing I experienced as a user, and one of the things that you did not mention, is security. When you get into an Uber and you can actually track that person back, it's more secure. So, for a long time I didn't take a taxi.

Monterrey, in particular has been going through a very difficult time security-wise, it's gotten better but it was a very rough decade. And so that's one of the

things that I didn't hear anyone suggest or consider, the fact that security really aspects when are we are using apps, and we are more interconnected.

I also am very interested in seeing if you can elaborate about the credit, about the access to the ability to buy a home. In my experience, I'm 44, my grandparents were the last generation in Mexico that could afford to buy a house with credit, both of them are diseased and my grandmother died at 97, so it tells you how long ago that was.

So, that is something that I think when you think about accessibility, and when you think about urban sprawl is really important, because the policy is: let's get both the lower-income people out of the cities, in this park places, that all the houses are exactly the same. You know, and you can say a lot of things about it, but that really affects the level of traffic, at least in Monterrey that has one of the highest index of pollution in the whole of Latin America is experiencing. And it is because of the policies of making affordable housing so far away from the center of the city where people work. Thank you.

MS. HARKNESS: Thank you. And I would just tack onto that, we did not spend a lot of time on the lengthy discussion of housing that you do include in this report.

MR. LORA: Yes, yes.

MS. HARKNESS: But you do point to rental housing as an important piece of the strategy, but of course also the wealth building, and equity portion of being a homeowner, is quite important. So please, this is an excellent question and a segue to an important topic we haven't touched on much.

MR. VARGAS: Thank you for your comments and questions. I totally agree with you that security, security is definitely one of the reasons why people use these platforms, such as Uber, it is also my case. In Bogota the regular taxes are really unreliable and hostile sometimes, so I cannot be more sympathetic about it.

As Pablo said, ah, so what? We found out these are people, in general, in Latin America are not using this platform so much, so far it's increasingly, it's increasingly so, so we don't spend much time in the report talking about this. But I agree with you.

In terms of the other thing that you mentioned, we in the chapter about housing, we do discuss, you know, at some extent these policies that are very common nowadays in Latin America, about the construction of social housing, right. So, as I mentioned, we take very seriously the incidence of slums in Latin America, and one of the -- probably the most important policy in Latin America, to reduce the incidence of informal housing or slums, is the construction of urban housing.

But, in most cases, as you suggested, for the case of Monterrey, the social housing is in the outskirts of the city we have -- with very little connectivity and very little accessibility, to put it in the terms of the report. So, what ends up happening, and we have lots of case studies of these for different cities and different countries in the report, what ends up happening is that the take-up of the social housing is very little.

And even for the households that do take up this housing, and end up moving to those houses, you see things, and there's a paper about housing problems in Rosario, Argentina, to show this. The participation and labor market for these people goes down, essentially because if you do want to move to the house, then essentially you cannot participate in the labor market anymore, because you just cannot reach there.

So, there are lots of evidence mounting up, showing that social housing projects that just move people up to the outskirts of the city, just do not work.

MS. HARKNESS: Mm-hmm. Great! So, unfortunately we are out of time for this discussion today. But the mark of a great report is that it sparks debate and engagement. So, I hope you will all download it, read it, continue to engage with the

authors and the community discussing it.

You know, the World Urban Forum is underway in Kuala Lumpur this week, and just another sort of place where I think carrying this message about building cities that are accessible to all is going to be underscored, as well as the conversation around implementation of the Sustainable Development Goals in other places.

But if there's anything that this discussion made clear, is that there is not one person or role or level of government that is charged with building this bridge and building this future for cities, it's really all of our jobs.

So, I would just, with that, please join me in thanking these panelists. They were terrific! And off we go. (Applause)

* * * * *

CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

Carleton J. Anderson, III

(Signature and Seal on File)

Notary Public in and for the Commonwealth of Virginia

Commission No. 351998

Expires: November 30, 2020