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Washington, D.C.
Friday, June 25, 2010

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PANEL TWO: THE MICROECONOMICS OF GROWTH -- ISSUES IN MEXICO:

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P R O C E E D I N G S

MR. CASAS-ZAMORA: Thank you very much to you all for being here. I'm Kevin Casas, senior fellow at the Foreign Policy Program and the Latin America Initiative at Brookings.

I had written in my notes that we were going to be focusing on a different set of issues from those that were tackled on the first panel, but that's just not the case. Because apparently from the word go, there seems to be agreement on the notion that the basic problem that we're tacking in Mexico is a problem of productivity.

So -- and actually I found some of the figures and the charts that were presented to us in the previous panel quite striking. A few weeks ago, Mauricio wrote a very good and, frankly, terrifying piece on development strategies in Latin America. And I say terrifying because it included a comparison over the past 40 years or so of the evolution of the productivity per worker in Latin America and East Asia. And that comparison, as we just saw, is simply dismal, from the standpoint of Latin America. I mean, in 1960 output per worker was more than 1-1/2 times greater than in East Asia. It is now 50 percent smaller.

So, I guess what I would like us to do in this session is to scratch a little bit more, this issue of productivity. Why is it that productivity has remained stubbornly low in Mexico and what can be done to improve it? And I guess it would be good to bring a little -- you know, a few more elements to the table. I mean, we've heard Santiago Levy making a very compelling case for informality being a crucial part of this story. But I guess it is worth also focusing on things like education standards, infrastructure, research, development, and innovation investment. I mean, what is it? Is it a question of revamping a legal framework that allows monopolies -- both public and private -- to operate undisturbed in Mexico?

And finally, I would like us to discuss these questions in the context of two critical trade relationships that Mexico has today. I mean, one of them is obviously with the U.S. and also with China.

Has NAFTA had any significant effect on the productivity of Mexican firms? And on the other hand, does Mexico have any strategy to increase productivity in order to cope with the onslaught that the emergence of China has meant for many manufacturing activities?

So, these are, of course, vital questions for which there are no simple answers. It is, therefore, a great fortune to have here a couple of very, very distinguished speakers that I hope will unlock for us the mysteries of Mexican productivity in 10 minutes.

To my immediate left we have Dr. William Maloney. He is the lead economist at the development economics research group at the World Bank. Before that, he was professor of economics at the University of Illinois Urbana-Champaign. And then he joined the World Bank and worked, again, as the lead economist in the office of the chief economist for Latin America until 2009. And on the extreme left we have Manuel Molano, who is the deputy director of the Mexican Institute for Competitiveness. And before that, he's had a very interesting career sort of going back and forth between the private sector and the public sector in Mexico, which I think it's a great vantage point to gauge the challenges that the Mexican economy is facing regarding productivity.

So, without further ado, Dr. Maloney? We're all ears.

MR. MALONEY: Thank you very much. Thank you to Santiago, the IDB. Thank you very much to Brookings.

I'm not going to live up to the expectations of explaining productivity growth in 12 minutes. I did want to raise an issue which is the role of innovation in Mexican productivity growth and why I think it's been an enormous missed opportunity for 300 years that will become increasingly important -- we need to talk about. Santiago demonstrated that there'd been a lag in what we call total factory productivity, which is the part of growth that we can't explain with the accumulation of physical factors like labor, capital -- and even innovation, actually.

A large chunk of that is exactly what he was talking about when he was talking about the misallocation of factors across sectors and across firms, okay? And the number he gave -- which is something like 36 percent of GDP if you had a better allocation of factors is an enormous number that we have to pay attention to and it puts the competitiveness agenda and the distortion agenda firmly in the -- at the center of the discussion.

But there's also a large chunk of that total factor productivity which is commonly attributed to what we call -- well, to the management and generation of knowledge. And that's what I want to focus on. And I think it's really central because of Mexico's position right below the United States, which is actually very good at managing and generating knowledge, and yet it has had a tremendous fall in total factor productivity over the years.

So these guys think they're talking long-term, 50 years. I want to go back 200. I want to look at one case 200 years ago, and one case that's pretty much going on as illustrative of some of the issues we need to talk about.

Oops, that's not what I want to do. Sorry.

Okay. 1800, Mexico, as we all know, is one of the largest exporters of mining products in the world, certainly in Spanish America. What probably didn't know was that actually it probably had the only university in all of Latin America that taught mathematics, chemistry, physics. And is probably the only university in the entire hemisphere that taught hydraulics, which was critical to getting the water out of mines, okay? Mexico is the vice president of the World Mining Association, okay? It was the intellectual powerhouse for mining in the western hemisphere.

Fast forward to 1900. Mexican mining firms are slowly going bankrupt, and they are bought up one by one by U.S. interests, okay? This is a process going on in Spain; it's a process going on in Chile. It eventually moved to mines to the processing part of -- smelting, and the like as well. All that was bought up by Guggenheim and other firms.

Why was this? I think it was this. However good they were in 1800 in terms of knowledge, if we take a proxy for sort of your applied ability to manage technology during the second wave of the Industrial Revolution, which is sort of 1870 to 1920, Mexico was pretty much surfing without a board, okay? What we have here is a number of engineers per 100,000 people. And the darker you are the better. So, we see Massachusetts and New England way ahead of the curve, lots of engineers. About 120 -- actually Massachusetts would be more like almost 200 per 100,000 workers. You get to the Midwest it's a little bit lower. All this big block over here to the left, that's western mining. That's the opening up of mining and that's just engineers going frantically to parts of what used to be Mexico.

The thing is, look at Mexico. It's nobody, it's got nothing. It's got 15 engineers per 100,000 people on average. It is systematically below even the deep south of the United States, which had 66 engineers per 100,000, okay? Nothing. You want to know why they couldn't manage the new technologies, why they couldn't manage the Bessemer process? Why they felt so dependent on foreign companies for technology and the like? It's because they were, okay?

This is important because a large chunk of that TFP is that management of knowledge. It's also important because there are models out there -- for instance, one by Peter Howard at Brown and David Meyer at CIDE in Mexico -- which say, look, if you're really good at managing knowledge, you're going to be one of those inventing types. You're going to grow really fast, have a really high level of income. If you're okay, you can adapt, you'll grow at the world rate but you're never going to be as rich as the United States. And if you don't manage, you go out of business. Okay? And that's what happened in Mexico here.

So, let's fast forward to now, 1982 to the present. If you look at two countries, Korea and Mexico, and their exports of computers -- HP and -- Hewlett-Packard and IBM set up in Guadalajara in about 30 years ago. Let's just take as a measure of management of knowledge and the generation of new knowledge, patenting, okay? If I take Mexico's share of patents, yeah. Computing patents -- patents in computers as a share of its total and divide it by the worlds -- if that's greater than one we say it has a comparative advantage in innovation in computers. That's to say, you're producing relatively more patents. Mexico started ahead of Korea in 1982 at about .5. That's to say it wasn't actually relatively producing many patents, but it was ahead of Korea. Right now, it's at .2, okay, and Korea is at 3.5. Okay?

What does this tell you? Well, all this stuff about what you export matters? Chuck it out the window. They're both producing the same stuff, okay? But somehow in the process Korea made this into a dynamic industry that managed knowledge, generated new knowledge, and was able to spin off new firms that could actually really stimulate growth. That' hasn't been the case in Mexico.

So, then the question is, why is this? We're sitting the closest Latin American country to Silicon Valley and yet we're not putting out patents in computing. What the heck? Okay. Let's just -- I want to go quickly through some slides that kind of benchmark where we are.

Math scores, okay? This is a Latin American problem. We're spending as much per capita as a share of our GDP as anybody else, but we're way below in terms of mathematical literacy. We're way below competitor countries like, say, Czech Republic or Ireland, countries who should be -- we should be comparing to. We're not.

Just take a look at a very bad proxy for innovative effort, which captures a lot of stuff. But research and development expenditures at a share of GDP. Our dotted line here, as you see, is the average across the development process for countries, okay? That's generally -- as you get richer, you invest more in R&D, and most of that comes from the private sector.

We have our superstars: Israel, Finland, and South Korea. They're just breaking with the trend, breaking with the pack. They're investing hugely in research and development across the board.

Latin America sort of noodles around the average. Okay? And those are the big countries of Latin America. You don't want to talk about Guatemala. And Mexico, you can see has increased up to .5 over the last couple years. But China is already at 1 and it's a much poorer country. And India is an even poorer country and it has been close to 1.

Now, is this the whole story about innovation? No. There are a bunch of dimensions which, if I had another 12 minutes we could talk about. But this is saying something. It's saying that if we're thinking about, okay, we're manufacturing and these are high tech industries and we should be -- we're not making the investment as a country in research and development -- and in innovation effort more generally -- that we're going to have to make.

Why is this? Well, this gets back to a lot of questions. We could talk about, for instance, the overall business climate. If I have a monopoly on some particular sector, I don't really have to innovate very much because no one's going to challenge me, all right? You open doors to NAFTA, all of a sudden you've got a lot of competitors. Well, you're going to have to manage the best knowledge out in the world. Otherwise, you're going to have your lunch eaten by China. In that sense is, my guess is if we looked carefully at firms that were exposed to NAFTA that their productivity would have risen. And we know from study after study that firms that are more outwardly focused tend to invest more in innovation.

We could also talk about labor law, okay? Not a particularly segmentation -- I think Santiago and I are in agreement that there's not a huge amount of segmentation in the labor code. But it is, however, the case that if I want to lay off a worker, if I need to lay off a worker for -- then for economic reasons, it's very costly and very litigious. And if I do it because I'm introducing new technologies, it's even more expensive. Okay? And then you combine that with a political economy where unions and -- where firms and workers are not exactly on the same page, okay? We're going to work together to increase the productivity -- it's kind of a zero sum game. Dudes, we're growing at 1.5 percent, it's a question of whether I get some of that or you get some of that. If you're growing at 8 percent you could be a little bit more generous.

The Finnish unions, the Swedish unions, they're the ones who are saying, look, you've got to get rid of this old technology. We'll retrain that worker and put him somewhere else. That's not how it is in Mexico. That's very important.

Let's look at some other things. We spend a lot on Unam; we spend a lot on universities in Mexico. But this is just a measure from the World Economic Review of interviews with entrepreneurs on the quality of scientific institutions and the degree of collaboration with scientific institutions, okay?

And we see that the quality is not so high -- or, not perceived as so high in Mexico. In Latin America, in general -- as usually the good -- as usual, the good boys -- Israel, Finland -- yeah, all right, superstars. That's great. We're not there. And because the quality is maybe not so high, that's maybe why the firms don't find a big premium in going to work with the universities and saying, okay, what have you got for me? What can I do, how can we be more productive? Well, maybe those guys don't have the right set of incentives and the like. That's critical when we're talking about a national innovation system; we need to have both the best quality people possible, and the incentives for collaboration with the productive sector of the economy. That's not happening in Mexico.

Another thing, you'll remember, I'm sure, Old Willie Sutton. Willie Sutton was the guy who was -- when he was asked, why do you rob banks? He said, well, that's where the money is. Okay? Well, let me ask you why Taiwan and Korea study in the United States, so many students. This is the students studying in the United States for their share of tertiary graduates in -- tertiary enrollment in these countries.

Taiwan and Korea are not coming to the United States because they're learning

English. It's because that's where the knowledge is, right? They're parking in Silicon Valley; they're parking at MIT, that whole area. Okay? Look at Mexico. Mexico is next door, okay? We're both quasi-romance languages, okay? Flights are cheap. We should have hundreds and hundreds of thousands of Mexican students at MIT, at Harvard, at Illinois. At Illinois and Berkeley -- Mauricio will tell you -- we had thousands of Brazilians. Very few Mexicans, maybe one. So, okay, so what's happening? We can talk about, okay, historical problems, you stole California, cool. The Vietnamese are here, okay? The Vietnamese are a much poorer economy, and they know where the money is, okay? They're sending their kids here, all right?

So there's this (speaking Spanish) -- I don't know if that's the correct way to do it -- which continues in Latin America, all throughout Latin America. Now, we could do it ourselves. Okay. Well, as the Finns will tell you, very proudly last year we generated .4 percent of globally knowledge. We need the rest, okay? So, they're out there. And Nokia, very small fraction of Nokia's workforce right now works there.

Just before I get to this point, the question about whether NAFTA did anything for these issues. As I've already said that more open firms are more productive -- I'll be done in a second. But I also want to say, it's very recently Nick Bloom at Stanford and John Vanree at LOC have been conducting a series of standardized management surveys around the world. And we commissioned them to do it for Mexico and for Argentina; we have it for Brazil.

So, Argentina and Brazil are terrible. We're talking India; we're talking among the worst in the world in terms of management quality, all right? Mexico's not. Mexico is a notch above, it's in the lower -- it's just below the middle for management quality. And as we go through these data, I'm sure that we're going to find that firms that are more exposed to U.S. management techniques and are working more with U.S. firms are going to show that they've absorbed a lot of those management practices.

I think the question is, we need to be -- have a much broader based effort across all levels of the economy. Basic learning by doing organizational technology and SMEs -- all sorts of different ways of transfers, better linkages with universities -- we need to do it across the board to take advantage of something which is very basic. Which is, Mexico is still very far from God -- that's not going to change much. But it's so close to the most dynamic generator of productive ideas in human history, okay?

This is a gift. You don't have to like the Americans, okay? Don't like the Americans, but take what they're generating, for God's sake and bring it to Mexico and become much more productive. Let's get the TFP numbers up.

I would say, poor U.S. It's losing its traditional leadership in Latin America. You can't talk about social policy at all when our inequality numbers are going through the roof and -- but we're still there in innovation. Okay? We're still in ideas. Okay? And I would say that if the United States really wanted to somehow connect, if we talked about an alliance for innovation or something where we really said, okay, look. We all -- as Mauricio said, we all have this TFP problem, okay? Let's figure out how you're going to use knowledge better than you have been in the past.

Thanks. (Applause)

MR. MOLANO: Okay. Well, after so many remarkable presentations, it's going to be rather hard to say anything new. But I'm going to try.

I give this the title, "Hinder the Winners, Lose the Losers." Because that's exactly what we've been doing in Mexico for the last three, four, five decades. Mexico intervenes in economic sectors, and it does it really, really badly. And I think many other things that have been said by Dr. Levy or by Dr. Werner pretty much tells us this.

So, to not spend time with chitchat, I'd like you to take a look at this one. Usually in Mexico when companies seek some sort of government protection, support, help, subsidy, or whatever you want to call it, they say, hey, I'm profitable and I hire a lot of people. So, the government official will look at numbers, yeah, this guy's profitable, he has a lot of people, so right, let's help him. But we're not looking at where do those profits come from? A lot of the time, these profit comes from market power. And it doesn't come from competition that leads you to be productive and, like Bill said, then would lead to profits. It basically comes from extracting something from somebody else. And when you're extracting things, you're extracting value from somebody else, you're destroying value, you're basically leaving society worse off. And this happens a lot in Mexico.

So, because government officials won't stop doing this, at least we economists should be giving them a road map about how to go about it. And this is what I thought. What we asked -- well, it's okay. Let's ask if companies are profitable, if -- the more profitable, the better. I think that's a good idea. But how about if you also ask if they're exposed to competition and those two questions are easy questions to answer.

After that, you would have to ask, okay. Are you en route of becoming bigger or specialized? Because if you don't become bigger or specialized, you're probably going to fail in the global landscape. And then you would have to ask, okay, how is innovation there? Are you going to become a world player? Are you going to change the world? And those are really hard questions to answer. So, I'm not going to leave that for my 10 minutes. I'm going to stick to the first two questions.

Profitable and exposed to competition. So first, we took from the latest census -- we took some manufacturers and services. Most of it is in the private sector. We don't have here all the mining and energy. We don't have here some of the government services, medical services provided by the government. But we do have private. And if you divide it and you take the gross margin of companies, you will find that there is a gap. That the non-tradeables make a larger profit, which is the difference of 23-something percent, you see there. Difference is probably some sort of rent extraction.

And why? Well, I agree with Dr. Werner. When we integrated into NAFTA being roughly the side of the Florida economy, well, we integrated with the U.S. economy. So in manufacturing, we do pretty good. We could do better -- recently *The Economist* reported that the trade between the bricks and the developing world is growing at twice the pace of world trade. And Mexico is really disconnected from those trade flows. So, we could improve that and we could be importing fibers from the Far East to do textiles, and we could be doing other things that we are not doing currently in North America.

Right now, we are kind of inheriting the second order complications of sectors that are also protected in North America. And all the agro-industrial sectors that Dr. Werner mentioned are a fine example of that. We have a horrible sugar market, where I worked for a while. Why?

Well, because the sugar market is also horrible here in the United States, so we pretty much have exactly the same thing.

But when you look at sectors and the problem with dealing with census data at the level that I have access is that swarms of information get lost in the averages. What you will see is that the services are the best and the worst of a Mexican economy. And when you see sectors that are destroying value, a lot of those sectors that are destroying value are associated with sectors that create value in the other side. So, you have a sector that provides, nurses, and doctors for hospitals and then you get some hospitals that lose a lot of money, like houses for the elder or orphanages, or basically low added value medical services. And these things act both as a fiscal shield, but also as a social lever to extract grants from government.

I mean, if you are in the sugar sector, again, the only thing you need to extract money from government is you say, look, look at the poverty of the people that work in the fields. And the government will throw money at these things. They just do it.

So, if you take all the non-tradables, everything that you cannot bring from the U.S. -- from haircuts to whatever you can think of -- and you try to divide this between less contestable and more contestable markets -- and this is no small feat, because also the data doesn't help. What we're doing this is trying to approximate this with the number of establishments that we have in each sector, which makes us prone to errors. But a lot of the work is there.

So, what you will see is that in the bottom to your right quadrant, you have 24 percent of the total income of the services economy in Mexico. And those are very good winners. This is companies that deal in contestable markets, and you get there -- all the Wal-Marts and all the Oxos, which are convenience stores, and the 7-Elevens. Professional services -- and there you get very good profits and those profits are in contestable markets, so what we think is that these people got really productive. How productive? If you compare those -- you compare the labor productivity growth between the '04 census and the '08 census, what you will see is that productivity grew 10 times more in these more contestable sectors than in lousy, monopolized sectors like TV, or radio, or hospitals, which, by the way, are very important to spur things like political reform. I mean, government could easily intervene in the radio and TV sector to bring in more content, to bring in more media -- which is a commodity right now -- and that should spur a political competence in Mexico that should change things. So, there are things that government can do.

But also, in things like retail -- if you talk to the social and economic development secretaries at Mexican states and you tell them, well, you know people here are very poor. So, you should probably have a Wal-Mart here in Oaxaca because if people are poor they could benefit from really low prices. And what the guy will answer is, no, we won't do that. Why? Because that destroys the local economy. Where's the mom-and-pop shop going to do after that? And that's it. So, at the very local level of people who aren't making subsidy decisions, they cannot make distinction between the bad profits that come from the rent extraction and the good profits that come from productivity.

So, I probably have like two minutes more? I totally agree with Dr. Levy. What we have is a bad bed in where are we putting our factors of production. Bad resource allocation is the main culprit for Mexico's sluggish growth. We have severe distortions in markets which come from serious misconceptions of the role of public policy, and we're not -- go over that if I have enough time.

So, factors of production cannot easily find their base use. We create abundance of factors in some sectors and scarcity in others. And that induces a bad technological choice. This is the United Nations Industrial Development Organization data. The productivity in Mexico is not horribly low. I mean, if you look at China or India's, it's probably lower. It comes from very, very -- in China and India, it comes from a lower place. So that's what -- that was impressive. This has tripled in probably the last decade. And Mexico has, at best, stagnated. I assure you of that.

But why? I mean, if you look at China, where was China? China was in balance with their current account deficit? And in labor-intensive and low-tech things -- and they moved really fast to high-tech. Mexico stayed in the mid-technology things like assembling cars or doing large TV sets, like this, which is probably what we do best and our most high-tech thing. And we just moved a little bit. And why did we move just a little bit?

For this, I have an example. This comes from the services economy. If you go to Mexico City and you park your car in the airport, you will find that they have machines to collect money from the people who park their cars. But there's not only machines, but there's a union guy standing next to the machine. And the union guy has pockets loaded with cash, and he helps you to operate the machine. And the dispenser in the machine never works right, it never has change. It's -- by the way, the only place in Mexico City where this happens. Because if you go to every mall in the city, you will find that the machines work perfectly. But here, that just doesn't work.

And what happened here? Well, we had a labor intensive process, we tried to automate this labor intensive process because probably money was getting stolen or probably something was happening that was really bad. And we couldn't fire the union guys. So now we're using capital and labor to do the same process. So now it's become really expensive. Bravo, kudos. And that's really the story.

If Mexico can't make anything to move from point A to the frontier of possibilities of production to move that direction up, then we shouldn't be changing technology for -- at least for these kind of things.

What happens with human capital? Well, assuming that people who studied in Mexico have knowledge that's worth something, because our math skills are very bad, our English skills are very bad -- we are not giving a very good reward to talent. In the world, the ratio of these to goods unqualified labor to qualified labor is 4 to 5 times. And in Mexico, it's 2.2 times.

It probably has to do, also, with the lower productivity over talent. And maybe we are just paying exactly what this talent is worth. But looking -- where are these talented people working? They're in professional services and they're in social services and they're in government. They have -- there you have probably like social services 25 percent of the talented labor force? And there's 35 of the salaries that these people earn, which is really, really amazing.

And if these people were really talented, they would be all above the blue line. They would be getting more than the fair share, and the people who are uneducated would be getting less than the first shares. So you would be moving people from the lower left -- or to your right -- triangle to the upper right. But this is just happening.

When you see the unqualified labor, which is most of the people in Mexico, what you will see then is trapped in things that do not add any value, like agriculture. So, sorry.

Being trapped in things like agriculture in a country that is in the same latitude as the Gobi desert or -- a lot of people think that Mexican agriculture would do exceptionally well. I think that's a fallacy. I think that -- and if we continue to throw money at corn production in Mexico and if we continue to throw money at other things, like water subsidies, diesel subsidies, we won't be able to give the signal to these people in agriculture they should get out of there and move to the closest manufacturing plant or miscellaneous services where they should be.

And the scale, of course. What you see here in the red bars is the small companies. And the pink line gives us the weighted average cost of capital. So these small firms do not cover the cost of capital. They suffer some sort of Peter Pan syndrome, they refuse to grow. And why is that? Well, because if they grown they'll come under the radar of the tax authority and of a large union, which will extract a rent from them.

Also, in the talent piece, you will see that these companies do not attract any talent. So, that also explains why manufacturing processes in Mexico do not move on. We are not attracting talent in manufacturing.

Many misconceptions comes from this. We think that by subsidizing sectors they will develop. That labor must be compensated for exploitation, that protective sectors will eventually grow. When they grow, they'll become competitive. The real people should stay off cities and should not create urban distress; that producers are boundlessly rich and we can tax them at infinitum. That the only efficient owner of natural resources is the state, that only a small set of regulations like opening up shop affect entrepreneurs and the monopolies are really not bad for the economy.

In fact, it's a headache to get a passport in Mexico or to hire somebody that is foreign. Our growth during the 1960s can be in a lot of ways explained by the fact that we imported a lot of talent from the European wars. And that's probably a best explanation for the Mexican miracle in the '60s than the oil.

So, we give them all of these distortions. And if we keep on having water with zero price for agriculture, we are going to continue having people invest in trying to cultivate in the desert, which is horrible. And just to end, I'm going to try to do some conclusions.

I think that markets need to be contestable in all services. And this means that I should be able to import (inaudible) into Mexico to work for a Mexican firm, because those are talented guys -- come from India -- and I should be able to import them. Right now, I cannot do that.

We need a more sophisticated triage process for industrial development policy. We're throwing a lot of money at that, and when we make bets on economic sectors we should be giving them public goods available for every firm in the sector and avoid subsidizing capital. If entrepreneurs cannot raise capital, they're not much of entrepreneurs. They're just people taking money from government, and we should do that.

Labor reform, of course. Strengthen signals and rewards to young human capital. Tax reform and functionability of capital -- bankruptcy laws could also help. Having a failed company in Mexico is a headache, and if we could expedite bankruptcy and have less consequences on people from bankruptcies, capital could be able to move from sectors.

Universal social security. This is something that Dr. Levy has said extensively. I think this could help a lot. If we will be able to finance a system of universal social security with value added taxes that should be generalized, then we would give a boon to entrepreneurial drive, risk taking -- because people do not have to stay in low value jobs just to have health covered.

And also, use every crisis possible to solve productivity problems. Right now, when an economic sector comes with a crisis to government, they just throw money at it. That should be the exact opportunity to try and fix it.

And I'm sorry, I took more time. Thank you so much. (Applause)

MR. CASAS-ZAMORA: Thank you very much for two terrific presentations. I'm just going to put on the table one very concrete questions to both speakers.

It is great when you get to hear academics and policy wonks, you know, saying these things. But that, of course, is no guarantee that they will get done. So my question for both speakers is of a purely political nature.

What's the social and political coalition that will advocate a more competitive and innovative economy in Mexico? Because in the end, you know, I don't see Mr. Slim or Mr. Azcarraga having a strong incentive to pursue the kind of things that you're mentioning here. So, (speaking

Spanish).

MR. MOLANO: I think that's one for me, right?

MR. CASAS-ZAMORA: But both of you. Feel free to --

MR. MOLANO: I will -- I'm not an expert on solving things in the political arena, and I was hoping to learn a lot from the next panel where Jesus Silva-Herzog and others will be talking about it. And this is probably the reason why when change has come about in Mexico, it has come in either weird, silent, unnoticeable ways or in abrupt, violent, and complicated ways. And we don't have a definite answer for that.

I think that it is not entirely true that the economy does not innovate. We don't do original patents or build planes like Brazil. But we do have a lot of industrial process improvements, and we've learned quite a bit from the U.S. and Japanese manufacturing practices in automotive and so on and so forth.

But I think that what we need is a lot more of that. I wouldn't be more in agreement with Bill in saying that we should be sending all of our children to study to the U.S., and we should be trying to integrated much more with a knowledge economy that's happening here. That's the only thing that would bring a change -- a significant change -- that doesn't have to move through Congress. And I think that that should be a very important bet in Mexico.

So, Bill?

MR. MALONEY: Just very quickly. I think there's a lot in which any society doesn't know what it doesn't know. And that's a lot of what you see in the success stories of Finland, Japan, and Korea has been changing how people view the whole issue of how you make your economy grow.

Just trivially, in Korea they said, we have a problem with entrepreneurship. Okay? So, they made it so there's an annual prize for the best entrepreneur and you get, you know, everything. You know, it's televised and everything. Japan, when they started out this whole thing, trying to reorient the mindset, if you started a major company you got a samurai sword to generate the prestige associated with traditional values in Japan. Finland, every new elected member of the Parliament goes through like a month-long course where they learn about the Finnish model of innovation, okay? How Nokia works, how all the different parts of the national innovation system fit together, why education is so key, why the labor legislation is designed the way it is.

Everyone -- okay. So, this is higher level human capital in a very small country which you would presume would already know this stuff. But they don't, so everyone gets extruded to try to generate a consensus. I mean, I think I can look at my own country and it's -- you know, don't you get it? Don't you see what's going on in the rest of the world, where China and India are going to be in 10 years and you're doodling with your education system in the U.S.? We have a problem -- I think all of Latin America has a problem, too. It's all Spain's fault, fundamentally. (Laughter)

Actually, it is and actually if you take it further, it's Rome's fault. But -- so, yeah.

SPEAKER: (inaudible)

MR. CASAS-ZAMORA: And, I mean, just before -- I mean, I would like to interject. And what about things like reforming anti-trust laws? I meant that's a very specific political task. Who's going to do that?

MR. MOLANO: I think that that has been done to a great extent. I mean, there's just a good niche there in Congress right now to give forwarded powers to the anti-trust commission, and -- but there are many things that are embedded in our culture that avoid us to think in terms of competition. There is a very bad notion of merit in the Mexican economy.

And this starts in school. I mean, anyone who went to school in Mexico will know that people who study a lot are *el matado*. This is the way you call very much these people out, because they're nerds, you know. And academic fraud is rife in Mexican schools, even at the youngest levels. So, when these people go out in the labor market, instead of competing they set up cartels. And I think that we need to change that mindset. And that's probably a more long-term process, because you can change as many laws in anti-trust, in consumer protection as you want. If people do not have the competition culture embedded, it's not going to work.

MR. CASAS-ZAMORA: Okay, we're going to open it up to the audience. We're going to take about four or five questions. And I just would like to remind you to identify yourselves before you ask your question.

Over there.

MR. CROOK-CASTAN: Yes. Clark Crook-Castan from the U.S.-Mexico Chamber of Commerce.

Taking your point and Santiago Levy's point about all the reforms and all the counter-productive business practices, I would just like to say if we thought for a second that here in Washington, D.C., I can form a consulting company for less than $100 and less than 1 hour of paperwork, wouldn't help if the Mexican authorities tackled some of the more personal and smaller-scale problems, such as registering a company? And making it easier to handle without masses of lawyers and without having to have a personal accountant for every company and a whole staff of people to run the paperwork.

So, that's my question.

SPEAKER: Thank you. A question for Bill. In the previous panel, we talked a lot about the low productivity firms that are, you know, many of them informal and the strategies to bring them into formality and therefore make them more productive. But I wonder if there is a problem in the upper tail of the distribution as well? If the higher productivity firms in Mexico are truly world-class or if there is a problem with those firms as well associated with innovation, even capital -- all those things?

Because just focusing on these idea of making sure that the level of informality is brought down does not necessarily do the trick. Maybe we also have to think about these other firms. And we hear stories -- and I don't know if they are true or not, but we hear stories that these, you know, fast-growing firms in Mexico are really the *maquilas* that are not really doing a lot of innovation. And they're not really becoming, you know, the engine of growth.

MR. CASAS-ZAMORA: You have a question?

MR. STEIN: Yes. Armento Stein from the ADB. Question for Walter. There are all these policies that Mexican government is carrying out about the *incubadoras, aceladadoras, teclas*, and the *empresa acela*. I was wondering if you wanted to comment on -- how do you see those policies in that area?

MR. MOLANO: I -- probably you said "Walter" because you think I'm Walter Molano

-- Manuel Molano. We're unrelated.

But the thing with clusters and *acelas* and *incubadoras* is also a misconception in policy. Clusters cannot be created by government decree. Clusters grow indigenously. Nobody in the government of California said, well, let's create a cluster in the Silicon Valley. This just happened. And the general conditions for these things to happen are not in place in the Mexican economy.

If we are not forming the talent, we should be importing the talent, plainly. I mean, how many oil engineers do you think Venezuela has in idleness right now? We should be importing that people, and we're not. It's hard to do that. It's -- so, doing things like speeding up the regulations to set up shop certainly helps, but we -- what you need is a major overhauling of the public policy in doing things like generating and importing talent you need for the economy to move.

Trying to answer the question on if -- Mauricio's question -- if the problem of human capital and innovation is pervasive in all firms in the distribution, it probably is. But in the high value-added sectors, you can more easily overcome these problems. So, what you find is that where there's a lot of value added, you are able to capture talent and you're able to capture capital probably more expensive than at other places in the world. But in low value-added things -- which are, by the way, the things where most Mexicans can work right now due to their current level of labor qualifications -- you cannot. So, you're in a deadlock of what was first, the egg or the chicken?

But I think that also the problem is that the government has no clue in what total factor productivity is. Our productivity measures are totally labor-centric, and we don't sometimes even have productivity measures. We're just interested in having any company hire people in any job, and we're not worried if that is adding value or not.

So, we get confused in our objective. Our objective should be productivity and, in fact, is some weird form of poverty alleviation through the labor market. And that just doesn't work.

MR. MALONEY: If I can quickly segue on that point, I think there is a -- you look at China and you look at Mexico and how they approach foreign direct investment. And I have -- this -- I'm shooting completely from the hip. But I have this feeling that when the Chinese look at a foreign investor they say, okay. You've got world class technology, you're the frontier, we've got one of the world's cheapest workforces -- or had. Okay. Huge rent possibilities there. We're going to divide those rents. You're going to take home some nice profits, and I'm going to take technological transfer.

And you can see that in the recent dispute with Embraer. Embraer said, sure, we'll open a plant in Beijing or wherever it was, Shanghai. It's going to be the last generation plant for the last generation airplane -- fine, fine, fine, fine. Then they start breaking ground and the Chinese say, you know, actually it would be much better if we had the latest version. Of course, the Chinese don't want last year's technology; they want this year's technology. And of course, the Brazilians didn't want to give that technology. At that point, you realize they're working at the margin -- at the correct margin, right?

You kind of get the feeling that a lot of -- just to parrot Manuel -- that a lot of willing -- you know, the FDI was sort of viewed as, okay. You're going to provide jobs and taxes, and that's kind of how it is. And I don't know what I would have gone back and done when Hewlett-Packard and IBM set up shop in Guadalajara 30 years ago, but somehow you feel it should be, you know, Silicon West South. Right? By now. And I don't know what more aggressive government policies would have need to be in order, or maybe just better human capital policies or something.

But just on Mauricio's point, Santiago and I have been talking a lot about the informal sector and I think we have a similar view of it. What I'm struggling with a little bit is how much of a growth drag we can attribute to it. I mean, if you just plot self employment, which is a large chunk of informality, against GDP -- against productivity in the formal sector, it's linear. It's logged linear across the world, and it's logged linear in time in the United States and in Europe. So in some sense there is a process by which productivity rises in the formal sector and people get drawn in. That doesn't mean that the effects he's talking about aren't key, it's just -- I don't know that Mexico is particularly off trend in terms of its growth process.

Mexico clearly has some excellent high level firms. And as I said, management quality seems to be quite high by Latin American standards. Where I have a feeling that there's a lot to be done is in the middle tier. And the -- my graph with the big swoop on R&D. The sneaky thing -- and there's a -- Spain. Spain is a dismal underperformer in this. It's about half of what average R&D

is for a country of its level of development. But I have a feeling that somewhere in 1950, the late '50s, technocrats were saying, I'm not sure what's going on with this integration of Europe, but I think it's time for us to see how Germans are making cars. I think it's time for us to figure out how the French are making textiles. And they started sending people abroad -- and this is mid-level firms that are just getting best practice in organizational technologies and the like. So, it's not R&D effort, but a huge possibly gain in productivity from fairly un-sexy innovations, so I think that's really important.

MR. CASAS-ZAMORA: Well, thank you very much. We now move to the third panel, and the political economy of low growth in Mexico. Please join me in thanking our two speakers. (Applause)

(Recess)