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THE IMPACT OF GLOBAL VALUE CHAINS ON RICH AND POOR COUNTRIES

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P R O C E E D I N G S

MR. DOLLAR: (in progress) and research and a report on global value chains, and all the different partners are listed there, the alphabet soup of OECD, WTO, IDE, also University of Business and Economics in Beijing, and World Bank.

And very happy to have a panel to discuss this today, I've got two of the co-authors of the report, Aditya Mattoo who is a research manager for Trade at The World Bank; and Zhi Wang who recently retired from ITC, and is the director of the Research Center for Global Value Chains at UIBE in Beijing.

I'm very happy to also have Maggie Chen, who is one of our outside reviewers on the report, who is the director of the Institute for International Economic Policy, at George Washington University.

And then my friend, David Wessel, who is the director of the Hutchings Center here at Brookings, agreed to moderate the panel, and try to keep us trade economists grounded in reality, and try to make this comprehensible.

So, the game plan here is, I'm going to give a very short presentation just showing a few key results from our research, and then we are going to bring the panelists up, and spend most of the time talking about the implications, and of course, we'll open up for Q&A from the audience after a little while.

So, first, you know, what we mean by global value chains is when the production process crosses at least one border. Traditional trade, you know, you make a product in one country, you send it to another country, that's traditional international trade, value chains, global value chains means that during the production process some parts or components cross the border.

You know, a classic example is the iPhone, it starts with value added in the United States, gets parts from Japan, South Korea, Taiwan, a number of locations; it's assembled in China, and then mostly gets marketed in Europe and the United States. Two-thirds of world trade now takes in global value chains, and as a result, in some cases the gross value of trade, the traditional measurement of trade can be misleading, and I'll show you at least one good example of where this can be misleading.

And in this project, we have new data on the value added in trade going back about 20 years, and it's been a large global effort to research various issues. So, I'm just going to highlight three findings. Okay?

The first I think is, we have some good visual representation of value chains, for example, and this is Wang Zhi's work: this is the value chain for China's exports of electronic and communication products, so iPhones, computers, TVs, et cetera. And a lot of these value chains have this smile curve shape, but not all value chains do. The way you read this, is on the horizontal axis you are going from the beginning of the production process all the way to the consumer on the right. The vertical axis is compensation per hour, and that's an index of what are high value-added activities, what are low value-added activities. The pink bubbles are the amount of value added, coming from different locations. You can see there are a lot of pink bubbles; we've only identified the ones that meet a certain threshold.

So, one point to take away is the production of a global good like a computer or a phone, TV, these are extraordinarily complex value chains with lots of different inputs. The general shape over on the left at the beginning of the process, you often have service sector inputs, design, financial services; there's also a little bit of metal in these products, so basic metal is there.

China 14 is the Chinese industry that produces these products, it's got the largest value added, the size of the pink bubbles is the amount of value added. It's at very low wages, so it's at the bottom of the curve, and then slightly upstream from that, you see the same manufacturing industry in Taiwan, Korea, Japan, the United States, Germany, so there are manufactured inputs coming from those more developed economies, and the wages in some ways index the stage of development. So, Germany and the U.S. are very high-wage economies, putting the most sophisticated inputs into this production process.

And then it curves back on the right, because at the end of the production chain you have more services, you have transportation, retail distribution. You also have things like after-sale care, but that wouldn't actually be incorporated here, but the general point is these value chains often start with services, go through various manufacturing processes, and with services before they get to consumers.

Now, one of the things Wang Zhi shows, is a lot of these value chains have deepened over time, have widened and deepened and become more complex, and we argue that they affect the demand for different factors of production in different economies. So, I'm just going to emphasize the

U.S. and China to illustrate this point.

This is looking at the U.S. manufacturing industry, the same electronic communication industry, so 14 on that last chart, and it's looking at the distribution of hours and the compensation. Now, as background, what's not in this figure is this is an industry that's had a lot of productivity growth over the 15 years, about 200 percent labor productivity growth, but it's also had a decline in employment, and it's a good example of a lot of America manufacturing industries, where production is up, and employment is down.

And what's shown on the left is the distribution of hours among high-skilled with college education and above, and medium- and low-skilled. And basically, high-skilled workers have gone from about 30 percent to about 50 percent of the hours worked in this industry and the share going to medium- and low-skilled declining, and as I said, total employment in the industry has declined.

On the right you've got compensation per hour over 15 years real, and the red just jumps out, you know, you're getting more hours for the skilled workers in this industry, and you are getting significantly higher wages rising.

So, you know, I take away from this that skilled labor is one of the winners in the United States. You'll see sometimes this will be characterized as skill-bias technical change. You know, this industry produces a lot, it's using more skilled workers even though they are costing more, and so you'll see that sometimes it characterized the skill-biased technical change. Right?

But in fact it's part of a globalization process, it's breaking up the production process so what's done in the United States requires those high skills, and what's done -- the lower-skilled work increasingly is moving to places like China.

So this is the comparable chart on what's happening in this manufacturing industry in China. You know, again, as background, huge increase in employment, and we'll talk about that in the panel, 600 percent increase in labor productivity, so being involved in the value chain has enable this tremendous productivity growth in China. You know, I think -- you know, one way to think about this phenomenon, is that for developing countries, it's really an opportunity to get into manufacturing where you only have to start with one activity rather than producing a whole product.

But what you see on the left is even, over time, most of the labor input is low- and medium-skilled, about 90 percent, and that's stable. A little bit of increase in skilled workers in China, but most of the input is coming from low and medium. You know, the low is without a high school education, and the medium is with high school but no college.

And then when you look at compensation on the right, real compensation in Chinese currency, what you see is frankly everyone's wages are going up, right. But the increase for the medium skilled, it's about 100 percent real increase over 15 years, which is pretty good, but even more skilled workers, but recognizing that they are relatively few.

You know, what we also find, what's not shown on this chart, is when you look at capital share in this industry, in China it's risen quite dramatically, so about 70 percent of the value added is going to capital. So, I would say that looking globally, the big winners in this process are capital, particularly the multinational companies that organize the production process, and also skilled labor in advanced countries. But then, your basic labor in places like China, they've seen very significant wage increases and poverty reduction. So we'll talk about all of that more in the panel.

Now, we have a lot of results about developing country participation in global value chains, so I'll just mention a couple briefly; kind of at an intuitive point. Everywhere in the world tariffs are relatively low these days, and so the main impediments in terms of trade costs are things like infrastructure, bureaucracy, corruption, you know, there are ways of measuring these, and adding them up as the kind of trade cost.

And what you find is that countries with low trade costs, developing countries with low trade costs, do get involved in value chains, and not surprisingly, countries that have high trade costs, they are just shut out of this process, because that was always going to be a problem, but now with goods moving back and forth, the costs cascade. So, you're really shooting yourself in the foot if you've got poor infrastructure, corruption, and these kinds of issues.

I'm going to skip a couple things, in interest of time I'll just mention the last thing on this slide. It's one thing we find, is that deep trade agreements are very closely associated with development country participation in value chains. Deep trade agreements are ones that go beyond the WTO to include legal agreements on things like investment, services, trade, intellectual property rights.

So, for example, NAFTA is a deep trade agreement. Trans-Pacific Partnership which has been negotiated, that's a deep trade agreement. For developing countries, those agreements link them to more economies, and enable them to participate in value chains.

The last result I want to highlight, which comes from Aditya, and personally I found this one of the most interesting things in all this work. You know, David Wessel was asking me, you know: what have we learned? This is one of the main things I learned, is that when we look at trade in terms of the traditional statistics, we mostly trade things, right. So the vast majority of trade is merchandise, that's what's this figure is showing, and it hasn't changed much.

So about 80 percent of world trade is stuff, and 20 percent of services directly traded, that will be things like tourism, are all the foreign -- you know, we welcome all the foreign students going to American colleges, that's a type of exportive services. But I was struck by the fact that it hasn't really changed over 30 years, very small. Economists so often refer to many services as non-tradable, because they are not directly traded internationally.

Now, what you learn when you shift to value-added analysis is that more and more of the value added in trade in fact comes from the service sectors, that's increased significant. For a country like the United States almost 60 percent of the value added in our exports is from the service sector. So, it's also tied to development level, this is an average for the whole world.

It's already a couple years out of date, so I'm thinking that we are basically reaching a point where at least half of what we trade is services value added, and that's likely to increase. Now, I'm not going to explain why that's happened, because we are going to get into that in the panel, but it does have interesting implications.

So, increasingly, you should think about manufactured products as a vehicle for trading services. That's the underlying value added that's actually being exchanged among countries.

So, some takeaways for developing countries, you know, some of this is common sense. If you want to be involved in this global production effort, cutting down trade costs, improving infrastructure, deregulation, trade facilitation, all these things are important, it turns out there is more and more service content in the products traded, and so one of the thing we'll talk about is the importance of opening up the service sectors.

A lot of developing countries are open in manufacturing but relative closed in the service sectors; that's increasingly going to be a self-defeating strategy. And then of course that's a tough agenda. How can you move on that agenda? Well, frankly, the easiest way is to get involved in a deep trade agreement that links advanced economies with developing economies, Trans-Pacific Partnership is a great example. We'll talk about what's going to happen to that.

For developed countries, you know, I come away with a strong impression that this expansion of global value chains has created winners and losers. The big winners are multinational companies, capital more generally, skilled labor, but this has definitely put downward pressure on jobs and wages for low-skilled workers.

We have adjustment policies, we have trade adjustment assistance to help workers displaced, but frankly it has not worked very well, and we have not done a good job of redistributing, redistributing the benefits from this process more widely. And we could talk a little bit about, you know, why that is, and why it isn't.

And last, there are a lot more results. This was just a very short, highlight of some key points, so feel free to download the whole report, either from the WTO, from The World Bank. It should also say, David Dollar's website at Brookings, has got the whole report.

Thank you very much. I'm now going to invite the panelists to come up here, and we'll get into what a lot of this means. Thanks. (Applause)

MR. WESSEL: Thank you very much, David. I'm glad you are all here. And, you know, these days in Washington you have to be grateful for what we have. I just want to express my gratitude that the Brookings' air conditioning system is working today. (Laughter) Otherwise, this would be a very short panel and we would be wearing a lot fewer clothes. I just want to wait a minute to finish with the mic-ing here.

So, I think that David did a great job of skimming the cream off of this report, which is extremely needy, and it's one of those reports that reminds me that you can't absorb it all at once, but then you have some questions six weeks from now, and you discover that the answer was in here. So, I commend both the report, and David has done a couple of blog posts on this on the Brookings site, which are also good.

Wang Zhi, I wonder if I could start with you. I mean, clearly, if you think about what has happened in the world economy over the last three decades, you know, at the top of your list would have to be what happened in China. And if you look for a moment at China, and the people of China, what has the spread of global value chains, the ability to get a piece of this pie meant to the people, the ordinary workers and peasants of China?

MR. WANG: You see, I think global value chains, mostly in policy for developing countries bring the opportunities to quick industrialization. So, traditionally developing countries, basically export for primary products, like coffee beans, like the cotton, those kinds of, agricultural material on mineral products.

The reason is, in order to produce and manufacture products, especially the complete products you'll need a complete industry system. For example, if you want to develop the car industry, you have to have steel, you have to have plastic, you have to have electronic, so everything you can do to produce a car. That's in the past, so that's the popular in the '50s is the important substitutions, but it's the Latin American countries that follow this strategy, no one successed, always failed.

MR. WESSEL: Right. Do you mean in Brazil in order to participate in the prosperity of the manufacturing you had to build a whole car industry.

MR. WANG: That's right.

MR. WESSEL: You couldn't just build --

MR. WANG: Like in Malaysia they are trying to build their own car industries.

MR. WESSEL: Right. And it didn't work?

MR. WANG: But it doesn't work. But in the '80s, you see, because of the segmentation of global production, so the production process it's left up to different segmentation, so the developing country can find just a niche in the value chain. Then you'll see their comparative advantage to engage in this niche, so they can quickly industrialize.

So, like Thailand, the car industry, they basically Toyota investing in Thailand, then bring the capital know-how, and the knowledge, and the management, and you couldn't go there. So, China is really a beneficiary for this globalization -- production globalization.

Thirty years ago, China is very poor, or 40 years ago, in the early '80s, so they don't have any exchange, they don't have capital, they don't have market channels, they don't have knowledge, what they have is the cheap labor. So, the Chinese leader made a decision at that time, to have foreign direct investment that go into China, initially from Hong Kong, Taiwan, then from Korea, from Japan, from the United States.

So, basically they are using the special economic zone using processing, so to engage in the low end of global value chain. That's the lower end because that time you have nothing, you have to rely on all the global resources to bring the know-how, bring the market channel, bring the capital technology into China.

But in the 30 years prior, then you say, a lot of Chinese agricultural labor, rural labor is moved from countryside to coastal area, like Shenzhen, like Fuzhou, like you say, all the coastal area. Then China quickly becomes a factory economy, and the Chinese laborers initially is 80 percent in rural area, but then now is more than 50 percent is in the industry.

So that is the major reason that China, from a low-income country, less than $800 per capita GDP in the '80s, so right now -- last year it's more than $80,000tenfold during this short period.

So when the Chinese girl move from the Sichuan Province, and go to Shenzhen, go to Dongguan, working in the electronic factories, they learn what is the civilization, what is the industrialized world, they learn those new experience.

Then when they come back to their home, they develop their new forms, so that is the underlying stories where China can quickly get the poverty -- absolutely poverty reduction. So, that's the global value chains, is a very, very useful tool to help a developing country to more quickly become industrialized, and become -- move from a low-income country, and go to middle-income countries.

MR. WESSEL: Right. Okay, we'll talk about the risk that that poses in a minute, but I want to -- Aditya, David ran very quickly over this notion that somehow I should understand that this is embodied services. So, I want to unpack that a little bit. So, I understand that as we get more efficient at bending metal, and making plastics, and producing semiconductors, but the actual cost of the stuff in here is not anything like it was when they built the computer that flew the man to the moon, which probably had less power than this.

But what does it exactly mean to have services embodied in manufacturing, and why this gap between David's chart of the gross value of trade, and the value added, in 25 words or less?

(Laughter)

MR. MATTOO: You know, when you think of value added in a firm, for example, typically there were lot of activities that used to happen within a General Motors factory. You used to have an accountant, a bookkeeper, a driver, a cafeteria worker. And I think in the past when you measured the value added in manufacturing, whether it was in General Motors, of any of the other manufacturing firms, the activities of employees within those firms, regardless of what they were doing, whether they were beating metal into shape, or doing sophisticated designing, or software, was counted as part of manufacturing value added.

Now, when a lot of these activities, due to the fragmentation of production that Zhi was talking about, it hasn’t just liberated components and parts from the confines of a factory, it's also liberated a lot of services tasks which are now being performed at arm's length. So rather than being produced within the firm, you are buying accountancy services, you are buying bookkeeping services, sometimes within your own country, sometimes you are outsourcing them to other countries.

And that that's why the measured value added now in goods, is shrinking because a lot of what used to happen within a factory is now happening at arm's length. So, that's the most obvious reason, but there are other reasons why the shared services increased.

MR. WESSEL: But that suggests that we have the same diffraction of value added in a particularly product that services in manufacturing hasn’t changed much over time, it's just that we've disaggregated; we are buying outside the firm. But I had the impression that it was something more than that, that actually if you look at the value of world production in general, services are a larger part. So, that it's also a change in evolution of technology, and --

MR. MATTOO: Right. So, I think your 25-word constraint limited my answer.

MR. WESSEL: You were not to take me literally. No one else here does. (Laughter)

MR. MATTOO: So, I think, you know, it should step back from and see what's happening. You know, regardless of global value chains there are big changes in the world. For example, demographic changes, the aging populations, and it's very interesting, if you look at the composition of consumption of different age groups as they started doing recently, there are big differences across goods and services, and within services.

You know, for example, the young consume more education, they have more fun, they consume more recreational services, while the elderly want more personal care, health care, and so on. So, I think, those, first of all are big shifts which are adding to the fact that as people grow richer anyway, they start consuming more services. They buy more education and health care, so those are the big trends which, as the world is growing richer, the world is growing older, so the demand for services is shifting.

And because you have countries growing older, your ability to supply those services domestically is shrinking. So you need to buy them more from other countries which have more youthful population. So that's one big thing. The second big thing is digitization; the whole ICT's revolution has done wonders for services trade.

And again, David, if you allow me to compare what happened in goods trade. The big boom in goods trade came after the Second World War, then you had an increase in trade according to comparative advantage, where countries could do more of what they were better at, and they could also do intra-industry trade with economies of scale. So, the boost that Zhi is talking about post '90s in goods trade, is essentially breaking up the production of goods.

But in services digitization, your ability to digitize and communicate services at low cost has done wonders for all types of trade. You know, people couldn’t move so they couldn’t supply services, so even trade according to comparative advantage, intra-industry trade, and banking services, and then breaking up services themselves, you know. Architecture design is not produced entirely in the United States to, the crude, rough design comes from Colombia, bookkeeping, legal services, so that all that has grown dramatically.

And if I can then just ask your indulgence; so, apart from these big changes, there are these value-chain-related changes. One was, as David said, simply reclassification, that which happened within the firm is now happening outside, but apart from that there is also huge increase in the demand for communication, transport services, because all this breaking up of production across factories, across the world, requires much more coordination, requires things to be moved back and forth and across countries.

Plus, and this is I think one of the most interesting twists. You described the computer which sent people to the moon. Now you think of the car, these are essentially, refrigerators, televisions were essentially mechanical industrial products, and it's now as if they are increasingly being possessed by services. You know, the software component of a car has grown dramatically, so even what was a manufactured product is now largely a skeleton infused with sophisticated services.

And then final twist, which is your point, you know, traditionally people believed productivity grew much more slowly in services than in manufacturing. And therefore, services' prices tend to stay higher, so in purely measured value, services increase more.

But there is another interesting asymmetry. A lot of these manufacturing tasks like beating metal into shape, assembly, can be done at long distance. So they are much more easily outsourceable. Services still require face-to-face coordination, so despite digitization, there is a proximity bias. Now, that also asymmetrically affects the prices.

Goods prices have declined much more precisely because of what you said, services prices have declined less, so that's the final reason why I think measured value added in services has tended to increase. This has made up for my (crosstalk).

MR. WESSEL: It was worth every one of those words.

MR. MATTOO: Thank you.

MR. WESSEL: So, Maggie, you know, I was thinking as David was talking about how the world economy had evolved, the global value chains effect on the lives of workers in China, the benefits unevenly distributed in the United States. I admire David's optimism that he still can't bring himself to talk about the Trans-Pacific Partnership in the past tense, you know. (Laughter)

I think that must be -- among trade people that must be the definition of an optimist. But I wonder whether what we are -- what are the implications? I'm not sure the institutional framework is well equipped for what this report shows us, and particularly if we -- I've been just struck by some of the comments you hear from the leadership of General Electric, about how they are kind of thinking that the era of ever-lower barriers to trade is over, and they are going to localize.

If the value added is largely services, we have a WTO regime, and a mindset in the United States that what really matters is the merchandise trade balance. Is there a conflict between our current institutional arrangements, and the kind of evolution that's described in this report?

MS. CHEN: First of all, I would like to --

MR. WESSEL: Please.

MS. CHEN: -- join David about how I cannot use past tense either to describe TPP, but on November 8th, the night around 3:00 a.m. I think, on November 9th, you know, I realize at that moment that TPP is dead. But then, you know, recently I became a little bit more optimistic, and that is, you know, TPP seems to be moving forward even without the United States, right.

So, now we are talking about TPP 11, with the rest of the 11 countries. So, I'm gaining optimism again on TPP, but why -- so what we are seeing today, though, in terms of the institutional arrangement is that, you know, the withdrawal of the U.S. from TPP, is giving more leadership to Asia-Pacific, and developing countries in trade liberalization.

So, Japan is taking a lead in negotiating TPP 11. China has this rival agreement ongoing which is RCEP, and RCEP has a huge overlap with TPP, with a few exceptions. China, India and South Korea, South Korea can join TPP later on. So, you can see these two agreements are the leading agreements or initiatives being negotiated precisely because of the global value chains.

Previously what we have seen is this spegatti bowlof bilateral trade agreements. Right? So, two countries form trade agreements between themselves, and which isn't -- you know, what is worth noting is that most of these countries that we mentioned are SAP countries, or TPP countries, they already have bilateral trade agreements. It's not that they have not had any trade liberalization agreements between themselves, they do.

But this bilateral trade agreement is becoming so messy and difficult to navigate for all multinational companies like, you know, GE. So, they are looking for a solution to address the discrepancies across agreements on rules like, you know, Rules of Origin, for example.

So, now countries have increasing incentives to bring these agreements together to form this multilateral or regional, or plurilateral trade agreements. And that is why we are saying TPP 11 and RCEP. And with these agreements being negotiated, right, what is important to know that, is less meaningful for us to look at, you know, bilateral trade balance.

As you also mentioned just earlier that, you know, because these days to produce a product mainly in components, you know, have to be shifted across borders multiple times. So, looking at

U.S.-China bilateral trade balance is becoming less meaningful, even that it actually has a lot of confusion, because as David mentioned, we should be looking at the value added, not the gross trade balance.

So I think the growth of trade agreements, the growth of global value chains are challenging our views and perspectives of how we should look at trade patterns today, and how we should evaluate our trade policies going forward.

And just to give you one example, you know, for example, personally, right, I import services all the time, for my hairdresser, my drycleaners, you know, and nobody imports services from me. So, I ran a huge trade deficit with everybody, pretty much, I interact with my daily life.

MR. MATTOO: And the value in your teaching services.

MR. WESSEL: Yeah.

MS. CHEN: Well, I'm only exporting to one group. So, basically I'm running a trade deficit with most of the people in my life, except with my students. So, should I be worried about, you know, feeling guilty or feeling really upset with my hairdresser? Probably not, you know, and they have no incentive to import anything from me. Right?

Should I stop importing from my hairdresser because I'm worried about my trade imbalance, my trade deficit? No. I will never cut my hair myself. So, this is just telling us that because of the global value chains, because this is the global value chain, right, you import something from -- into my upstream service providers, and export something to my downstream customers.

But this is happening in our life, and this just illustrates how less meaningful bilateral trade balance is, and how important for us to look at the big picture, the global value chain.

MR. WESSEL: And looking at this metaphor, I think the right answer here is that you should have your students cut your hair. (Laughter)

MS. CHEN: I would not do that either. I mean, I love my students, but I not to trust them, you know, to cut my hair.

MR. WESSEL: David, I've heard you talk a lot about the frustration that you've had, that the Chinese have been so slow to open up their services industry. And it seems to me that one implication of a report like this, is that if services are becoming a bigger part of global trade, and you protect your services industry then you will find yourself in the Brazilian trap that they did with manufacturing, I mean --

MR. DOLLAR: Yes. So I think --

MR. WESSEL: David, go ahead (crosstalk).

MR. DOLLAR: But I think a lot -- China is kind of the poster child for this phenomenon of opening up manufacturing and remaining relatively closed in services. Now, if you look at wealthy countries like the United States, we are not open in the services like doctors and lawyers, but we are relatively open in a whole set of services that affect global value chains. That would financial services, telecom, transportation, retail.

So the developed countries standout, that they are quite open to trade and investment in these areas. They have very high quality services, and then a lot of that gets embedded in their exports. China, quite open in most manufacturing with some important exceptions, but extremely restrictive to both trade and investment in all of those service sectors I just mentioned.

And that has been a lot of the frustration of the United States with China in our dialogue is, you know, we have the self-interest in China opening up those sectors, because you would get investment from advanced economies in Europe, the United States, et cetera.

But I argue, in China we launched this report together in Beijing last week, and I argued one of the implications for the Chinese is that it's in their interest to open up those service sectors, because it will be hard for them to move up the value chain and get into more sophisticated production if they are not getting the best quality services. And a lot of those protected services in China are quite low quality.

MR. WESSEL: Do you want to add to that, Aditya?

MR. MATTOO: I think just two things. First of all, I think David is exactly right. But I think that we have to see how much China has changed. In the last 15 years -- and there's a difference between whether you are comparing the change or the levels of openness. Big changes in openness on the altar of the accession to the WTO, they are pre-committed to opening up sectors where they had the public monopolies like finance, transport logistics.

So there is no doubt that they have benefit hugely from this change. But it is also true, as

David said, that they are still both not as open as other countries, and they are penalizing and connectivity within China. A lot of the Western parts of China, which now the One Belt, One Road, through the sheer weight of investment is seeking to connect better with the world, a lot of benefits could come just from the stroke of the pen, liberalization of transport services.

And the second point is the asymmetry that David alluded to is actually worse, because even the United States restricts investment in transport services. In fact, these deep agreements that we are celebrating, one of the ironies is that you are investing huge negotiating energy on customs reform and trade facilitation, but the Prince of Denmark which is transport services, has never been seriously addressed.

MR. WESSEL: Do you mean like foreign investment or airlines?

MR. MATTOO: Not just foreign investment, there are also these bilateral air service agreements, David, which have basically converted most of international transport into duopolies, the only airlines that can service a particular route, are the airlines which belong to those two countries. So you don't have meaningful competition in air transport, and when you say, why not, everybody says air transport is special. But the United States is one of the parts of the world which has resisted introducing meaningful competition, and that's a big tax, not just on the United States and China, it's a big tax on Africa.

Because, you know, a lot of Air France apparently this is apocryphal, earns more profits from their African routes than they earn on their Trans-Atlantic routes. So one of the reasons that Africa, South Asia, Latin America haven't really meaningfully participated in these GVCs is because of the connectivity cost.

Part of it is self-imposed for the kind of things that you were referring to, but part of it is the international failure to meaningfully push through liberalization of transport services, and effective enforcement of competition policy in transport, often exempted from national antitrust laws. So I think those are the kinds of things which haven't occupied attention, and also completely missing from all these deep agreements.

MR. WESSEL: And Zhi, if you were speaking to the Chinese leadership, and you were cautioning them that: they've had a great ride for 30 years, there can't be any question about how many people have been lifted out of poverty, and when one visits a place like Shenzhen, and you see the pictures of what it looked like 30 years ago, and you are just -- your jaw drops. It seems like something that you could only see in a science fiction movie. But what are the dangers here, what are the risks of getting trapped as the low wage manufacturing hub, and not moving up to that Beijing?

MR. WANG: So that means if they stayed in the constraints or don't farther open up, so that's where we lost the dynamics of the upgrade in the value chain. So, if you say the data from the -- I think in the reportthat China in the peak of the day -- the peak year is 2005, 2006, 55percent is processing trade. That's trade that is without any tariff, 55 percent. Even China, before China joined WTO because of the processing trade region, using the -- will not be able to insert into the value chain; and so, imported material, intermediate goods and equipment with no tariff.

Highest year is the 55 percent, but currently only 30 percent. So, that's where we, since the 2012 I propose with Chinese authorities, I helped them to unify the processing trade, and the normal trade. That means, like all the firm you enjoy the -- it's just like Honda, Honda is from 2011, basically all the manufacturing intermediate goods and the equipment is no tariff(inaudible).

MR. WESSEL: I see.

MR. WANG: From the last (inaudible) for China to further move up the value chain; but in addition to the manufacturer inputs, but also the service sectors.

It's not only for China, this is for all developing countries in Latin America, in Africa, all those service sectors are much more protected. So, for the manufacture sectors, the liberalization, a lot of developing country leaders, accept -- they see the advantage, but just a few of them still not in the product.

Like, India has joined RCEP now, so open up, but service sector, generally across border is still very protected. So, for developing countries I think the real problem will have important implications for any developing countries want growth like China, have to start to liberalize to -- starting from manufacturing, but also important for services, especially for the global value chains, the connectivity that like Aditya mentioned, so the coordination, the communications, those things most important. You see, I remember when I come to this country in 2087, though in 2088 (XXXsicXXX) --

MR. Dollar: 1987.

MR. WANG: Oh, I'm sorry, 1987, 1987, sorry.

MR. WESSEL: Chinese technology introduced innovation; we are now able to do future time travel.

MR. WANG: So, that time, you know, in order to call back in China, to talk with my wife has cost of -- one minute cost about a few dollars.

MR. WESSEL: Right.

MR. WANG: but the rent now, it's really, really cheap, and you and you say, that is the technology development. Those also enable for the -- to say, for the coordinating cost to coordinate production in different locations become possible, become business -- feasible.

MR. WESSEL: Right. Right. David, as you pointed out this is just more evidence that the benefits of globalization to the United States have been very unequally distributed. And so if you happen to be in the professions that we are, or probably many of the people in this room, or if you happen to be a shareholder in multinational corporations, I think it's unambiguous that globalization has been a plus.

But we have learned here with the kind of level of rhetoric during the campaign, I think we saw the same thing in elements of Brexit, that those of us who benefited for globalization paid lip service to: we ought to compensate the losers. We didn’t. It turns out that a lot of these "losers" who don't like to think of themselves as losers, vote.

So, I think the political consensus for continued globalization and for the benefits that it bring in aggregate, whether it's lifting the Chinese or Indians out of poverty, or increasing productivity growth worldwide, depend on a smarter approach to spreading the benefits of globalization. I think that's both an economic policy question, how do we design policies differently, and I think it's also a framing question that we -- proponents of globalization for too long made globalization an end in itself.

And it turned out if you got laid off from a factory, it wasn’t obvious to you, that it's a good thing. So, I'm sorry for the long windup. But if going forward what's the answer to this? What should the political leadership of our country say and do to the large numbers of people for whom the cost of globalization are a lot more tangible than the benefits.

MR. DOLLAR: Great question, you know, critical question here in the United States. So, if you look among advanced economies, I think we clearly have this anti-globalization backlash in a number of places. The Brexit vote, and election of Trump, the Anglo-Saxon countries definitely seem to have a lot of angst about globalization.

I like to look at Germany and Japan, you know, to take some lessons about what can be done. Things are not perfect there, but you don't have a populist backlash against globalization in Germany and Japan.

So I would cite three differences. Each of those economies has a fairly significant trade surplus, so I do think the issue of the overall trade deficit of the United States, is an issue, you know, but I don't think it make sense to blame China and other developing countries.

Germany and Japan, they trade with China, they live in this GVC world, and they run -- you know, Germany is actually running an enormous surplus which is not helpful for the world. But Japan is running a moderate surplus which is appropriate for an advanced economy where the population is aging.

Now, if we want to deal with that, we have to save more. You know, we would have to do things like put a big tax on carbon, you know, and not remit it to people. You know, use it to pay down our fiscal deficit. You know, that's the kind of thing that would affect the trade balance. And then secondly, Germany and Japan spend a lot more money on infrastructure, Japan perhaps is overdoing it, and building some bridges to nowhere. Germany might be a little bit underdoing it, but we are seriously, seriously underdoing it.

So, just one of the most obvious things, to make our economy more productive and create a certain number of blue-collar jobs, would be sensible investment in infrastructure. And then the third thing is while we have these programs for adjustment assistance there's lots of research evidence that they don't work in the United States at all.

That somehow Germany and Japan, they’ve had much less increase in inequality during this year of globalization, and I'm not an expert on this, but I know he Germans have good programs that deal with retraining, and with, you know, training young people for marketable skills, and the scenario where we are not making it work. I don't know if it's a lack of resources, or if it's the way we've organized it, but if we don't kind of seriously deal with those retraining needs, then we are going to have a large share of the population that's anti-globalization.

MR. MATTOO: Just two things. I agree with everything that David said, except, you know, I think there is no doubt, if you look at the evidence that even to address the problems of this dispossessed class, you need both more globalization and more cooperation. First of all, on globalization we've done research looking at what these GVCs have done for productivity. And there are two big developments, there's trade is slowing down, and productivity is slowing down, and there is a connection.

And that connection is the growth of these global value chains made possible a finer and finer international division of labor. It's true that the Chinese and the Indians have benefited, but so have the Americans, because productivity growth is what makes the cake grow larger. And anything that turns its back on globalization means, you know, just because the cake isn't distributed equally, you don't throw some of it away, you try and make it grow more.

So I think on services, again, as he said, the gains from more globalization in health care, in education, there are big productivity benefits to be had, big cost reductions, so one of the biggest problems that confronts the United States about this escalating cost of health care, I think people have underestimated how much more meaningful globalization, at least by introducing greater portability of insurance, how much cost reduction. We have, again, done research which I'll be happy to share.

So that's the first question. But I think both on the side of productivity and the cost of living you have still unrealized gains from globalization. The second, I think the most compelling argument, is Larry Summers argument. That your ability to finance all these assistant programs, itself is being constrained by globalization, because if you look at the evidence, and this very interesting research by Peter Egger and others, which shows what's happened to tax rates. The top 1 percent tax rate comes down; the multinational tax rate comes falling down in 65 countries over the last 20 years. The middle-class tax rate is around there and increasing.

And so then, how do you deal with this? I think the only way you can meaningfully deal with this is by having more international cooperation on taxation. Otherwise unilaterally, it's very hard to generate the resources to provide this assistance.

So I think those are the other two reasons, I think, we really do not -- think more carefully about the direction the United States is taking. Is it expanding the cake? And is it generating the kind of cooperation which is necessary to sustain the redistribution that we think is important.

MR. WESSEL: Maggie?

MS. CHEN: One thing to add to this. I think, what we are seeing in terms of the increase in division between globalism and localism, is a result of many things, but one of the things is, we have not been able to really disentangle between the roles of globalization, the role of globalization, and the role of technological progress in our income inequality.

So, how much of what we are seeing is a result of globalization, or imports or offshore? How much of this is actually just driven by automation, right? Automation is skill-based technological progress, which will raise the wages of the skilled labor and depress the wages for unskilled labor.

Right now, you know, there's some new evidence showing that, you know, income inequality is a big result of the technology progress. You know, globalization also has its part, but does not mean we should stop globalization, because it is really unstoppable.

MR. WESSEL: Excuse me. Two things, one is obvious, which is it's easier for someone to blame the Chinese than to blame their iPhone for the fact they got laid off. So, it's always easier to blame the foreigner. But I thought that one of the subtexts of this report is, the line between what's globalization and what's technology is getting less and less distinct, because as more services get embedded to the things, and how much is design, and how much is manufacturing, and you couldn't do some of this global value chain without technological progress, and so forth.

I mean, I agree with your fundamental point, but it leads me to the one I was going to ask you about is: What role does immigration and labor mobility have in this whole conversation?

MS. CHEN: I think definitely has a big role, immigration. What you are seeing in the United States, I'm not an immigration expert, you know, I'm an immigrant is that you --

MR. WESSEL: In this world, this makes you an expert. If you have a brother-in-law who works in the Maschine 2 Factory in Ohio, and you are suddenly the expert on the American working class, so --

MS. CHEN: I think, you know, immigration increases labor supply, right, where you have an increasing labor supply, the wage would fall, right. But it's not as simple, because it depends on the relationship between your native workers and the immigrants, whether they are substitutes or company mentoring. So, what we are saying is that if you are competing with the immigrants because you are low skill, just like some of the -- most of the low-skilled immigrants, then your wage would have a negative impact.

But if you are a high-skilled native worker, you are a company mentoring to the immigrants, you hire them, you are enjoying lower prices of their services and the production, you benefit from that, and in fact you can hire them as workers as well if you are entrepreneurs.

So what we are seeing, this would actually, further feed into the income inequality you see in the United States. And how are we dealing with -- How are we dealing with that? So, what we are also seeing is this growing division in terms of skills specialization. We are seeing more and more native workers being specialized in, you know, non-routine tasks, as Aditya mentioned earlier.

The type of tasks and occupation that require languages, cultural background, interactions more; whereas, immigrants are specializing more and more at routine tasks that have less requirement about language and interactions. So, I think there are -- you know, we are definitely reacting to, you know, this immigration shock by changing our skills and specialization. And this is probably the way to go, you know, if you want to -- you know, get out of the lower income classes.

And the one thing I also want to mention is that, you know, these days we are talking about the China Shock, right, you know, China Syndrome; there is a paper being written every day about how China Shock is affecting, you know, United States and other countries. But one thing that has not been, I think, emphasized enough today, though it's very recent, is China had its own shock, not too long ago.

China joined WTO, in 2000, so China had its own shock, and it's not as -- you know, it's not less difficult than what the United States is experiencing, right. And we'll talk about the Rust Belt here in the United States. China has its fair share of Rust Belt. Right?

So, you know, I grew up in a cold-mining town, right. That sounds familiar in the United States, a coal-mining town, right, that was heavily dependent on the coal-mining industry. My father was sent to that town at the age of 14, to work in a coal mine from the big city, right. So, what happened, this town has been transformed from a resource dependent city or town, right, to a very diversified economy.

By the way, my town is actually not even on the map, because it has only a tiny 1.8

million population. (Laughter) But what you are seeing is, they can have structural transformation like that can happen to a small town like, you know, in China. And the town is doing, you know, a lot of services, which is probably why we are not opening up to service competition yet, because services, domestic service is becoming such an important component of our economy.

And my father who was, you know -- I don't know whether child labor is the right word -- but he was 14 when he was working at that coal mine, and he went out -- you know, he eventually got out at the age of 28 and to receive education in law. So, things can happen --

MR. WESSEL: So, he became a lawyer?

MS. CHEN: He became a lawyer, yeah. He has been practicing law for the last decades. So, things can happen, but what is needed is that -- Well, the message of this is, you know, China embraced globalization, right? And Chinese public and population embraced globalization and technology, partly because it's unstoppable. You know, there's no way around it. But it doesn't mean globalization is a solution to everything.

Globalization definitely cannot solve every problem alone. What we need is everything that David mentioned, right. We need supplementary policies to address infrastructure, to address connectivity, you know, to address social mobility. I think what is important, you asked about labor mobility, what I think is more important in this country is not about international labor mobility, it's about social mobility within our society.

You know, the fact that my father can, you know, change occupation in a matter of, you know 14 years, it's not impossible here. What we need is to provide people opportunities to achieve that kind of social mobility, right. And what -- the U.S. social mobility is very low. If you've seen the Gatsby Curve, right, the elasticity of moving up from one generation to another generation is very low in the United States precisely because we don't give people equal access to some of the fundamental services, like education.

MR. WESSEL: And Zhi, let me ask you one final question before we turn to the audience. So what is the message of all this for Africa, and for other countries that are still not yet part of the global value chain; what lesson would you take from this report for them?

MR. WANG: I think the basic recommendation for them is I think they should try to learn the experience of what China did in the last 30 years. As of right now some African countries, like Ethiopia, like Tanzania, they are really eager to learn, so what China did. So, I think they should use the global value chain as a vehicle try to -- acceleration of their industrialization process, and also transform their economy from -- agricultural economy, go to factory economy, like what China did.

MR. WESSEL: So what are the constraints that prevent that from happening?

MR. WANG: I think the first thing is the leaders have to liberalize their ideas, then they have to solve the infrastructure issues, logistics, the custom clearance. So, I just come back from Africa, at end of last month, you see, like the Nigeria, in Ethiopia, the custom clearance still takes a long time.

MR. WESSEL: If you want to -- So I'm trying to understand what you are saying, if you want to get in on the global value chain you'll want to have some, probably low value-added manufacturing. If it's just hard to get through customs and get the stuff from the factory to the port, no one will go there because there other places to go.

MR. WANG: That's right. That's right. And first you needed to solve the infrastructure logistics, you have to have road, in order to get rich, you have to build the road first.

MR. WESSEL: Right.

MR. WANG: So, right now, you see, Ethiopia build a railway connected with the Djibouti, so that's heavy cost there, so that's where I said, it will reduce the transportation cost. So, this report also indicated, it says, only low-wage is not enough, you have to have other things come out of it. You see, for all the African countries, is a low-wage economy, but there's no message with low -- labor cost, we need labor cost, because that will involve the -- like logistics, like the infrastructures, your institution --

MR. WESSEL: Right, corruption?

MR. WANG: Yeah. Like Nigeria, have some issues there. So, they have to solve their issues in order to use their leverage advantage. So that's the report, and so have strong implications about this. Yeah.

MR. WESSEL: David, I want to -- Just something occurs to me. So, is the famous Washington Consensus that was so widely celebrated, and now seems so widely denigrated.

MR. DOLLAR: Right.

MR. WESSEL: Is that different from the Chinese experience, and when Wang Zhi says

Africa should learn from China, what is it that they should learn that we weren't teaching them when we were preaching the Washington Consensus?

MR. DOLLAR: I'm afraid the phrase Washing Consensus, I don't think it's used for anymore, because it's come to mean so many things. If you look at the original list of things that my friend John Williamson wrote down, they are mostly things that China has done. It did not include opening up the capital account in the financial sector. It included things like opening trade, opening up the direct foreign investment which is the key part of it.

You know, macro-sustainability, you know, having sensible macro-policies, reducing inflation. So, I think if you go back and look at the original exposition of the Washington Consensus, and I've been in meetings with senior Chinese officials where they've said, we've followed the Washington Consensus, but they tend not to say it publicly because I think the phrase has gotten associated with a much broader agenda, particularly capital account liberalization, flexible exchange rates, you know, other issues.

MR. WESSEL: I see.

MR. DOLLAR: So, I think -- Zhi and I are doing some follow up research on movement of value chains from China to Africa and, you know, you are certainly beginning to see some of this in Ethiopia and some other countries, you know, but it's not easy. But I think China is a good model of a lot of the basic things. You know, investment in infrastructure, customs clearance in China is very efficient. You know, they nationalized what had been a kind of localized custom administration, they did a lot of sensible things, and I think Africa could benefit from that.

The one exception, and this is something I learned from doing this work is, it seemed to me initially it might make sense to kind of first liberalize manufacturing, and then liberalize service, but Aaditya has convinced me -- no, no, don't shake your head -- Aaditya has convinced me, it actually moved ahead quickly on the services liberalization because there's a lot of benefits in getting -- You know, if you can get international firms to improve your transport, and your logistics, and communication, you know, why would you not want that basically?

MR. WESSEL: Interesting. Okay, your turn. We have a mic. Please, when you ask a question, tell us who you are and try and remember the questions, and with question marks. The gentleman right here, start there, Chris, behind the stripe shirt.

MR. DOLLAR: And introduce yourself. Right?

MR. WESSEL: Yeah. I said.

MR. DOLLAR: We know, Carl, but.

MR. DAHLMAN: Hi. I'm Carl Dahlman, I'm with the Growth Dialogue, formerly with The World Bank. So I know some of the characters up there. I have a two-part question. The first one is, I think the report is fantastic, I haven't read it, but I sort of know what you're saying. But I think we have a real big political economy problem, with President Trump. So, you asked the panelists: what would you advise the Chinese leadership? How could we advise President Trump not to be so anti-globalization? And it's a big political problem.

So, the second part is, and you pointed this out, there is a problem with people who have been hurt, and the recommendations that we have don't go far enough in dealing with this increasing inequality because the voters are still supporting him, and they are still anti-globalization. So we have a real big issue. That was the first question.

The second one is, if you look at developing countries, and I think that the Washington Consensus is very good and it helps a lot, but it's not enough, especially now that China is preempting competitiveness in many areas because it is so efficient.

And secondly, we have automation, and so it's so much harder for developing countries to develop now using the old strategy of labor-intensive manufactured exports, and they have so many constraints. Not just on the infrastructure but on the whole institutional part, and then the ability to move and to do all those things. So, what is the new development strategy? How can we go and give advice which is going to really make a difference? Thank you.

MR. WESSEL: Okay. Who wants to take the job of advising President Trump? (Laughter) What about you, Maggie?

MS. CHEN: Oh, no. Okay. Where should I start?

MR. WESSEL: Think very basic, would be good.

MS. CHEN: This is a big question; it's a one-million-dollar question I'm sure. So, I mean, definitely the political economy played a huge role in our election, right, and whenever things are not going well internally, governments tend to point the fingers to the external side. It's easier to blame foreigners as mentioned earlier. And it is true that, you know, that we are seeing increase income inequality and increasing division within the society, and now we are going backwards in the United States withdrawing us, ourselves from globalization.

In this, how do we reverse the trend? I don't know whether everybody would agree with, but I think, you know, businesses actually are playing a big role, the role of businesses in influencing the policy might be useful to some extent. You know, we are seeing more and more, you know, CEOs and high-tech companies being invited to the White House and asked for policies.

I mean, you know, many of these companies are creating the income inequality we see, but if they are more involved in some of these policy choices, I mean, there might be some hope of, you know, having us stay in the global value chain, because it is their interests. Right now will try very hard to fight for policies that might do them favor, but also might keep us grounded in the global value chain.

And also, may I also add, you know, lobbying for immigration policies to have them get, you know, cheaper immigrant workers which can also help as some parts of our global value chain developments. So, I'd just --

MR. WESSEL: So, Carl also asked about, is there a new development strategy here given (a) the weight of China, and (b) the decreasing demand for low-wage labor around the world?

MR. WANG: I think the transformation is actually happens if you can see that the -- you can see that China's labor-intensive assembling job is transferred to Vietnam, to Bangladesh, to Laos, to Cambodia. And also part of this is go to Africa. So, and I saw -- food manufacturers, transfer from South China, go to Ethiopia, so if the employee does --

MR. WESSEL: (Crosstalk)?

MR. WANG: -- they employed more than 1,000 workers already. So, even the technology progress, but you see, even like sewing machines, I have an article, it's not completely to replace all the labor-intensive productions. You still have some labor-intensive segment in the production process that is better carried out in the labor (crosstalk)--

MR. WESSEL: So, the development strategy for an emerging market or a developing country is to figure out what are the low-wage jobs that are going to persist beyond Tuesday afternoon that the AI hasn't replaced yet (Laughter); that are getting too expensive to do in China, and take advantage of that?

MR. DOLLAR: Can I add? Despite everything that's happened, the total number of manufacturing jobs in the world is still rising, it hasn't peaked yet, and I'm sure will peak. So, you know, there's still a lot of manufacturing work, and an awful lot of it is in China, but now because of demographics, you know, you've got automation in China, and you've got rising wages, and so I do think a significant amount of that is going to move out of China. As Zhi said a lot of it is already moving to Southeast Asia; if Africa can just get a little piece of that.

MR. WESSEL: To the woman behind Carl?

SPEAKER: Good morning. First of all, thank you. I want to take this space --

MR. WESSEL: And so, you are?

SPEAKER: Oh, sorry. My name is Stacy, I'm a recent graduate of International Development. So, I'd like to take this space to touch base on connectivity and cooperation. So I'd like to hear your comments on the current situation on this meaningful multilateral relation. Would you can see in the relationships that originally, say, Latin America, Mercosur, to the potential role in promoting development, which can help Latin America be responsible for their actions and responsibility, and before partnering with China and set efficient trading policies?

MR. WESSEL: Do you mean, what is the role of these bilateral or small groups of countries --

SPEAKER: Not bilateral but multilateral.

MR. WESSEL: Oh. Multilateral but within a region these kind of --

MS. CHEN: Right -- Before we are partnering with China.

MR. WESSEL: Mercosur, is that a good idea, or should they just --

MS. CHEN: Okay, so I think as I mentioned earlier, I think, you know, Asia-Pacific and the developing countries, including Latin America countries are taking increasing leadership in trade liberalization, for instance, I think Peru, you know, has expressed interest in joining RCEP in fact, RCEP. So, I think, you know, because these countries have benefited more from global value chains, so they have all incentives to push the value chains going forward, and one way to do so is to form or expand their trade agreements to be multilateral or pluri-lateral trade agreements.

And these trade agreements, you know, it is economic trade agreement but -- however, it has also many other impacts, potentially. It will increase international cooperation between the countries which is one of the, I think, main goals of TPP -- you know, the regional TPP. And it would -- the need to increase the international cooperation, reduce the chances of conflicts, but also it can be a very useful external shock to push the governments to, you know, undertake internal reforms.

You know, that happened in China where, you know, WTO, China joined WTO. China had to go through a lot of internal reforms to put China up to speed, and up to standard with WTO requirements. And this kind of, you know, international agreement can put pressure on the domestic governments, to increase -- you know, for example, reform the SOEs, you know, to reform the labor standards, and things like that, that might not be happening with other trade agreements.

MR. WANG: You see, the Chapter 3 of the report talking about the Latin America and Africa. They are talking about the regional agreement; the whole regional agreement can promote globalization. When you see Latin America and Africa, the intra-Latin America, the intra-Africa trade is a very small share of the big cut of total regional trade. If you see Europeans, about 70 percent, and even Asia, and North America, it's much higher numbers than both Latin America and Africa.

So, promote intra-regional trade in Latin America, and in Africa, will be helpful to those countries to integrate into the global value chain.

MR. WESSEL: Do you want to add to that?

MR. MATTOO: I think you know, to blunt, Mercosur has been negotiating for 20, 30 years, they’ve achieved very little meaningful liberalization. ASEAN has been negotiating for 20, 30 years, RCEP that Maggie is speaking of with such enthusiasm is a little bit farcical in terms of substance. And Africa had COMESA, SADC, now the supposed diagnosis that the reason why this sub-regional hasn’t worked is because it wasn’t big enough, so now they are going to have a Trans-Continental African Agreement.

But for the most part, the careful work we have done looking at different elements of these agreements that largely are political photo opportunity, there isn't really meaningful integration happening. And what is worse, I think of a lot of this region with trade agreements, China is different, that was an unequal accession agreement where they were forced to make concessions.

For the most part other region agreements, including the TPP, they looked very carefully at what was being accomplished, supposedly in services, that was not an iota of meaningful new liberalization. But the biggest problem I think that focusing excessively on this potentially good, but practically hopeless task of regional integration, is that it distracts from other meaningful forms of cooperation; regulatory cooperation, infrastructural coordination.

If I can give just two examples on infrastructure, the Africans got together and invested East Africa on a common cable system, and saved dramatically on connectivity costs. On regulatory cooperation the most meaningful aspect of the TPP Agreement, the thing that's going keep data flowing was the commitment by exporting countries to protect the interest of consumers in other countries. That's what got the q*uid pro quo* of data flowing. That's the regulatory cooperation that has made data flow between the United States and the EU, it's not trade agreement, it's the privacy shield of what was previously the Safe Harbor, which is regulators getting involved in setting standards, and that's what needed for GVCs.

It's not just these trade agreements, because that is for the most part are trivially low, it's getting the kind of regulatory convergence which is needed for standardized production in an increasingly integrated world.

MR. WESSEL: Thank you. The woman on the aisle here, Chris; no, behind you?

SPEAKER: Hi. I'm Barbara Sterling, from Brown University. I have got some concerns for Wang Zhi, and his idea that what development regions should do, developing countries should do is learn from China. It seems to me there are three reasons for this topic we are talking about today: getting involved in global value chains and moving up the value chains. Three reasons why China may not be the best place to learn lessons: one is simply the size of the market, and the leverage that that gives China, which nobody else has. Second, the authoritarian government makes it much easier to adopt controversial policies, liberalization tends to be very controversial. And third, you all seem to think that the golden egg is service liberalization. Well, of course you just said China doesn’t do that.

So, are there better places that smaller developing countries, whether they be in South America, Africa, maybe even the Middle East, could learn from that would be more reasonable, more attuned to their own characteristics, as opposed to looking to China?

MR. WANG: I think it's a good question. And I agree with you, you see, China' experience, not all China's experiences can be redo- replicated, but the mostly important thing is China using processing trade, special economic zones to insert -- to lower the cost, you say, to lower the connectivity cost. Initially that China is very poor, starting from the '80s, but the special economic zone, and the processing trade, so those experiences, really can be learned by other developing countries.

Of course it's not everything can -- you say, because like you said, the size of China, and it's really, there's no country have the scale, because they have domestic economy as they -- that is really benefit for China, and also for the infrastructure development, because China is not provide -- they don't have the land -- provide ownership, it's much easy to get a piece of land and build the railway.

So those things cannot, you say, really, but the key thing, like the producing -- processing trade, to lower -- of the entry cost, you say, you import everything without any duties, then you have special economic zones, try to solve the infrastructure and the logistical issues in the beginning, that I think is good experience.

MR. WESSEL: So what's the second -- If you had to pick another country that you think has done well, that's smaller than China, what would be on your list?

MR. WANG: That would be Vietnam.

MR. WESSEL: Vietnam?

MR. WANG: Vietnam has done quite well, and also Cambodia, also did well. So, those countries basically learn what is useful experience from China, it's not totally copy, my no mean it's a copy, just to copy, culturally China model, but it's, you can share those kind of ideas and concrete the procedures. Like processing trade, it's really easy to follow. I know it's second-best, but you have to start something, then accumulate the experience and the human and the fiscal capitals, (crosstalk) --

MR. WESSEL: So there are two questions, I'm going to take three at a time now. There's two questions right here, and one behind him, and then we'll go more to the others.

SPEAKER: Good morning.

MR. WESSEL: -- who you are?

MS. SEGERO: Ladies and gentlemen, my names Rosemary Segero, I'm a President of

Segeros International Group. We focus on small and medium businesses and manufacturing here in the U.S., and in Africa. I just want to comment on China. China has done a lot of work in Africa for sure. And looking at transportation and what we are seeing is, China has found opportunity in Africa.

How can China work with the small and medium businesses? Africa is not poor, that's why they found the opportunity there. So, how do we make the globalization of small and medium businesses which are the crux of economies in the world? They can do a lot, and they can do more. I hear there are treaties, everything, all they can say, but I don't even hear where the treaty talks about small and medium businesses, and these are the crux of manufacturing. So, how do you put that, the SMEs into the treaties, or into the global chain regardless of poor or whatever? Business is business, manufacturing is manufacturing.

MR. WESSEL: All right. Thank you. Can you give the mic to guy on right, there?

SPEAKER: So, my name is Mateus Haas, and I'm with the Armenian Assembly of America, and my question is more domestic-based. So, of course you guys touched up on the growing inequality in the U.S., as well as unemployment among low-skilled workers, so a big part of that has been automation but another part of it has been the jobs that low-skilled workers in the United States traditionally occupied have had reduced wages, and reduced wages benefits, and so that's de-incentivized the native workers and has replaced them with immigrant workers in a lot of cases. So, do you think that one step we could take towards fixing this problem, is re-incentivizing native low-wage workers by increasing the wages of the jobs they used to occupy and increasing the benefits?

MR. WESSEL: Mm-hmm. Good question. And one more, behind you, there.

MS. MATTHEW: Thank you. My name is Renee Matthew, and I'm in the Trade Office at the Treasury Department, and my questions, I think, are pretty basic. Have you seen any move on the part of national governments to adopt value-added statistics? It seems to me that this is a really important tool and the statistics are very difficult to work with. The second question is, do Rules of Origin complicate the issue. The Rules of Origin were created for manufacturing and they are many years out of date. It seems to me that there is a need to update the Rules of Origin approach, and would you agree with that?

MR. WESSEL: Three great questions. So, if someone could take the SME question.

What role do SMEs play in this whole thing?

MR. DOLLAR: Well, if no one else is going to speak up. So, on that one, I think we do have some interesting results which, a lot of which are kind of common sense, but if you look, for example, on Latin America, you know, small and medium enterprises are fairly significantly involved in international trade, but it's almost all within the region, and it actually kind of goes against the fact that most of these Latin America countries, a lot of their trade is outside of the region, but then when you go down to the SME level, it's all within the region. In that sense they are not involved in truly global value chains.

Now, I don't think there's a simple answer to this but, you know, one of the policy debates that we've go into among the team, is this whole issue of special economic zones. You know, I'm a practical nonideological person, I'm willing to accept the value of developing a special zone to improve infrastructure in customs facilitation, but in China they very, very quickly expanded all the benefits of those special zones, to all major -- you know, all the capital cities, the 30-plus provincial capital cities, within several years.

So, I think we shouldn't exaggerate the role of those SEZs, except that they showed how effective this whole general approach could be, and then the benefits were quickly expanded. And so one of the striking things in China is, you do have a lot of SMEs feeding into value chains and involved in global production, you don't have that in Latin America and most other parts of the world.

MR. WESSEL: Let me, I'll take the wage question. I think that in part you are onto something, and in part I don't like the way you framed it. I think that the notion that somehow, we are going to screw a bunch of immigrants by raising wages for natives so the immigrants can't get the jobs, isn't a very constructive way to look at it.

But when we look at one of the problems we have today, the low labor force participation rates, especially among prime-age men who don't have college educations, the Council of Economic Advisers in the Obama administration did some work that suggested that if wages were a little higher at the bottom, more of those people might come into the market. So, I think that there is, that's why discussions of the minimum wage, or the expanding the earned income tax credit, or thinking about how do you provide health insurance benefits to low-wage workers, could have payoffs beyond just the simple ones.

That if you can pull more people into the workforce, those people will be more productive members of our society. Now it is definitely true that there are some cases farm workers and stuff like that, where the farmers tell us that the only way they can get labor is to have immigrants, and there are the challenges that come up with some politically acceptable way to have foreign workers come to the United States and not create the resentment against immigrants that is so disruptive.

So, Rose, I think you are onto something. If we paid people more at the bottom, we would probably suck some people off of the sidelines into the labor market, and that would have benefits to them, their kids, and the society as a whole. All right, so the --

MR. WANG: Let me address the statistical question?

MR. WESSEL: The statistical question, please.

MR. WANG: I think it's a good question. So, right now, the global -- the international statistical community has struggled real hard, the leader by the UNSD will very soon, publish a manual of the -- they call, the international -- Standard of International Account, and basically it's based on the value-added concept. So, WTO and OECD also make tremendous efforts on the process trying to assembling this global database.

And some regional initiative like the APAC Initiative, which I'm participating in, we will have a database for APAC, all the APAC Members, delivered by the end of next year. In the meantime, the North America also has an initiative to do the -- Mexico, Canada and United States come together, they also develop their own database.

Parallel with this, the Eurostar also starting to working on this, so a lot of progress, a lot of effects have been made within the international statistical community trying to provide consistent and better information regarding the trade partners. And part of the Rule of Origin, my opinion is, I think, because that now is meaningless, if made in China or made in U.S., basically everything is made in the world, like the iPhone case. So, my personal belief is the Rules of Origin have to be revised, and it's out of date.

MR. MATTOO: I think you are taking the soft option but saying that you would revise, but the question is how. And I think one of the things about the TPP was that it was imposing restrictive

Rules of Origin, because the moment you negotiate anything preferentially, you have to find the rule by which the participants benefit rather than everybody else. And the irony of the Rules of Origin in the TPP, because TPP is an agreement which mostly followed lines of latitude, and in Southeast Asia all these GVCs that we are talking about follow lines of longitude.

So, the one interesting question was: how would those Rules of Origin create new value chains by disrupting existing value chains? So, in general, and this is what Brexit shows, and work by my colleagues in the Bank showing, that one of the biggest costs of Brexit is that if Britain has a different trade policy from the rest of the European Union, then the transaction's cost of establishing where products have originated will be severely disruptive for the GVCs which are flourishing across Europe.

And the final point is that, you know, Rules of Origin are seen as villains, but when you think of Rules of Origin and we've had questions about Africa, and AGOA, and other things, and what are they doing for -- If you had completely liberal Rules of Origin, you couldn't induce the benefits that you want, and the kind of local production. And if you are undergoing very restrictive Rules of Origin you have very low utilization of the preferences that you have.

So this question of, what is the optimal rule of the Rule of Origin, is I think a really interesting and important question, as long as we are going to have preferential liberalization of any sort.

MR. WESSEL: Chris, why don't come over here? There's a gentleman here, and there's one in the back and back there. Do we have another mic? Can you go to the gentleman in the back, raise your hand again? So, let's start here.

MR. McCRAY: Chris McCray, McCray Foundation. I wanted to clarify a little bit more about the scope of your report because it confuses me a little bit, because whilst you've sort of said that SMEs don't have a complete role in the global value chain, whereas someone like Jack Ma's work, would say, if you have a big data small platform, you have huge opportunities for small enterprises. Similarly, China has in many ways led the way at saying, if you take the sort of dynamic of infrastructure and sustainability goals and the sort of future sectors that need to be generated and work towards sustainability goals, then small enterprises have to be in the middle of all of your global analysis. Not sort of Global 2.0, and there's several summits on that, have had all sorts of nations looking at it from that point of view, which seems to be the opposite of the way you summarized your report. But maybe I misunderstood.

MR. WESSEL: The gentleman in the back.

SPEAKER: Phillip Seligans from The World Bank. I found that the panel was quite optimistic about the ability of countries to -- developing countries to following the "flying geese" model, the model of the past where, you know, as the wages start to rise in higher cost destinations than manufacturing jobs simply flow to the lower cost destinations.

And I would like to reinforce the question by Carl Dahlman, and respond to a comment made by David Dollar. Carl asked the question about: what then is the development model of the future if the "flying geese" model is losing its potency? And David responded to that, well, look, manufacturing jobs around the world are still rising. I don't think it's so much a question of manufacturing activity or the job creation, in total, around the world, being robust or not, but rather the distribution, the geographical distribution across countries.

And the concern I have here, is that globalization and technology are interacting in a way that may make the geography of production, going forward, more concentrated. It seems that manufacturing is becoming not only more skill-intensive, but also more ecosystem intensive, and the bar seems to be rising for developing countries to participate in that segment of manufacturing going forward; which then leads to the question, if manufacturing-led export growth is becoming less feasible in the future, then what will be the development model going forward for these countries to climb up the income ladder and reduce poverty, and all of that?

MR. WESSEL: Thank you. There's a guy in the white shirt, on the aisle there, the one finger up. Yes.

SPEAKER: James Sang, happily retired. We've talked about the effects of GVCs on inequality in the United States. Of course inequality in developing countries has increased tremendously, like China. Is there anything on how the GVC process can increase inequality in developing countries?

MR. WESSEL: Can increase inequality? Okay, I got it.

MR. DOLLAR: Increase equality or --

SPEAKER: Inequality.

MR. WESSEL: Inequality.

SPEAKER: Inequality has been rising in countries like China--

MR. WESSEL: Right. But I think that what the report shows is that there's a difference between an increase in inequality when the median is flat or falling, and increasing inequality when basically everybody's wages are going up. So, my experience in China is, absolutely everybody you meet can tell you how much better they are doing than their parents. That is not true in the United States.

Can we take the second question, which was good, and it's a bit over my head, but I think what he was challenging, the notion that there will be -- the two parts to it really, that: is manufacturing becoming more concentrated ecosystems, so it's not practical to follow them, and are we just overly optimistic?

MR. WANG: But I think the relationship in technology, in innovation, and the manufacture job, we have to -- that have a lot of research that needs to be done. I think have controversies. But the second issue of report, we have started technology innovation service trade under the workers in the globalized world. We were…we found all the institutions they continue to evolve, trying to answer such questions, such…so the question is still researchable.

But what I mean is, the globalization, like Aaditya -- mentioned in the beginning, it's not only the manufactured job sliced fragmented around the world.

MR. WESSEL: (Crosstalk).

MR. WANG: The Southeast-- also you say like the call center in India and the Philippines, so those --

MR. WESSEL: The Southeast, yeah. Okay. So Aaditya, do you think that the era of export-led development is coming to a close, or not?

MR. MATTOO: I think it's a nice question, because I think we are a little bit trapped with this manufacturing fetish. One exercise we did, thanks to the new database which looks at not just people who are directly employed in the sector, but people who are employed in sectors which served that sector, showed that even in a country like India, for every $1,000 of exports, services exports generate more unskilled employment than manufacturing.

If you think of, you know, Infosys export services, certainly their directly-employed people are mostly skilled, but think of the construction, the transport, the food, and everything. So, first of all, I think we need -- the second point is that I think manufacturing itself is, I think you said, David, is being threatened both by fact that you need higher and higher skills. And then there is this phenomenon of premature automation, it's not just automation in the West, even in low-wage countries the cost of automation is falling so dramatically, that this secure manufacturing platform is withering away.

I think second point, as Zhi was saying, that I think the distinction between manufacturing and services is also becoming less and less significant. And I would say, if I were to write a book ever, it would be called, you know: It's not what you make, it's what you do.

MR. WANG: Yes. Yes.

MR. MATTOO: And I think focusing more on tasks, and that's another final research point I would say, and that's the last thing I will say, one thing we haven't quite done, we are writing this book as believers, but there isn't yet compelling evidence, of whether participating in these value chains, really gives you much bigger productivity boost than not, whether it leads to much greater diffusion.

I think that's the research we need. For example, being involved in a services task which is tradable, is it going to be conducive to bigger productivity growth and innovation? It's still a question you asked right the beginning, then beating metal into shape, and assembly. I don't think we have enough evidence, and I think that that's the most relevant question.

MR. WESSEL: David, do you want to defend yourself on the SME question?

MR. DOLLAR: Right. So, maybe I didn't express myself clearly. But, you know, in China SMEs play a very important role in value chains, most of which then connect with the global market. And I'm less familiar with the data, but I'm pretty sure I can make the same claim about the United States and Europe. So, I think in the kind of major hubs that are deeply involved in global value chains, they create an environment in which SMEs can flourish, you know, they can get access to credit, and infrastructure, and they can connect. And they play a really important role in value chains, as far as I can see.

You know, we've emphasized a lot of developing countries are just not that involved, they'd like to get more involved but they are not that involved. We've tried to explicate some of the reasons, but I think a lot of those problems, particularly hit SMEs. You know, so if you've got poor customs clearance and the financial system is dysfunctional and all of that, you know, larger firms have ways of getting around, and corruption too for that matter, and small and medium enterprises I think get hit harder by all of those distortions.

MR. WESSEL: So, I think the measure of a good panel is you wish it could go on for another hour, but we are not going to do that. Please join me in thanking the panelists for their time and clarity. (Applause) I'm sure they'll be hanging around if you have more questions.

And if there are cups or papers at your feet, and you could put them in the receptacle at the back of the room, our global value chain would appreciate that. (Laughter)

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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.

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