

THE UNITED STATES INTERNATIONAL TRADE COMMISSION

In the Matter of:)
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 EVIDENCE)

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 Trade Commission
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The seminar commenced, pursuant to notice, at
 10:00 a.m., before the United States International Trade
 Commission.

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Seminar #6

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P R O C E E D I N G S

(10:00 a.m.)

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3 MS. LAWLESS: Thank you for bearing with us,
4 everyone. I'm Martha Lawless of the Service Division at the
5 USITC, and I'm happy to welcome everyone either good morning,
6 or good afternoon, depending on what continent you're on.

7 Welcome to what is now the sixth and final session
8 of the Commission's 2023 distributional effect seminar
9 series. It's one of the events we're holding in the lead-up
10 to the next report that we're doing on distributional effects
11 of trade, and trade policy on U.S. workers.

12 We apologize. There's been some rescheduling so
13 I'm really glad that everyone has kept up with the changes,
14 and welcome you today.

15 Some of you may have joined us for the earlier
16 sessions, or for one of the similar events in October or
17 earlier this week, but for those of you who are unfamiliar
18 with this series of USITC reports on distributional effects
19 of trade.

20 The Commission put out our first report on the
21 subject in October 2022, and USTR has since asked us for a
22 series of five more reports on the same topic, and they will
23 be put out at regular intervals over the next 15 years. The
24 first report will be due on January 2026.

25 You can see in the chat there's a URL to our web

1 page on the distributional effects investigation. And it
2 will also give you information about the previous seminars in
3 the series.

4 A few ground rules and comments on timing for this
5 morning. Before I introduce Florian Dorn, our speaker today,
6 I wanted to go over how we'll conduct the session.

7 Professor Dorn will present for about 60 minutes,
8 and Tamar Khachaturian and Ross Jestrab, our discussants from
9 the USITC, will follow with about five to ten minutes each,
10 and that will leave us about 20 minutes at the end for Q&A.

11 Please put any questions you have in the chat, or
12 use the raised hand function, so that we can get to them
13 during the Q&A session. And if you have any other questions,
14 obviously put them in the chat.

15 So our speaker today is Professor Florian Dorn, and
16 he will be presenting his paper coauthored with Clemens Fuest
17 and Niklas Potrafke, all of the IFO Institute papers
18 entitled, "Trade Openness and Income Inequality," new
19 empirical evidence. It was published in August 2021 in
20 Economic Inquiry.

21 Professor Dorn, we're very happy to welcome. He's
22 the Director of Econ Qual Europe, and Senior Secretary to the
23 president of the IFO Institute, and he's also a lecturer at
24 the Ludwig Maximilian's University of Munich.

25 His coauthor, Professor Clemens Fuest, is president

1 of the IFO Institute, and Director for the Center of Economic
2 Studies, and the other coauthor is Niklas Potrafke, the
3 Director for the IFO Center for Public Finances and Political
4 Economy. So we appreciate all the work that the IFO
5 Institute does. It's always top notch, and has been for
6 decades.

7 So this paper examines how trade openness
8 influences income inequality within countries looking at 139
9 countries over a long period, and so I'm going to let Florian
10 tell us how, and why. Thank you, Florian.

11 DR. DORN: Okay. Thank you. Thank you very much
12 for the nice introduction, and yeah, I hope you can see my
13 screen, and everyone can hear me well.

14 So yes, you already mentioned our topic with my
15 coauthor here. You can see them again on the flight. I
16 would like to start why do we care about the relationship of
17 trade openness, and income inequality?

18 So I just started here with some data of the world
19 inequality database showing the income distribution before
20 tax and transfers, and the development of this income
21 distribution, and we can see that in the western world here
22 for some countries; U.S., Germany, Italy, France, Sweden, and
23 the U.K. The share of the top one percent income is
24 increasing in almost all countries, and the bottom 50 percent
25 is decreasing.

1 Okay. Why do we care about it? Because a lot of
2 politicians, and although the public debate is about, okay,
3 we would like to favor, for example, protection isn't because
4 of, and they argue that, international trade and
5 globalization, and the global integration, is one of the
6 factors which is driving these trends and developments.

7 And yeah, so the impact of globalization of global
8 trade integration is relevant for the public debates, and so
9 it's very relevant what does the evidence show, or evidence
10 say, and what do we know about this relationship.

11 So we examined how does international trade effect
12 the income distribution, and if you look at the literature,
13 and the data, we can see that as far as we think about global
14 inequality between countries, the global trade integration
15 seems, indeed, to foster convergence among countries, but we
16 have global trade integration is also widely discussed as a
17 factor of rising inequality within countries. So as we -- as
18 I have shown you on the figure before.

19 I think most of you are quite familiar with the
20 trade theories, but one just to do a short recap on some
21 relevant trade TREs are relying on our research. So when it
22 comes to the classical Stolper & Samuelson mechanism, so it's
23 based on the Heckscher-Ohlin trade models.

24 That predicts that countries specialize in
25 production in their relative abundant factor, and then the

1 countries throughout the abundant factors gain from openness
2 why the scarce factors of a country lose, and that would mean
3 that skilled workers, and capital, for example, are relative
4 abundant in advanced economies, and the less skilled workers
5 are the relevant abundant factors in the developing
6 countries. That's based on these theories.

7 So the mechanism would predict that income
8 inequality would increase in advanced economies, and should
9 decrease inequality in developing countries. But in the last
10 25 years there is a lot of more new trade theories focusing
11 on vertical specialization, or the impact of offshoring and
12 outsourcing, for example, emphasizing that outsourcing of
13 less skilled production from advanced economies, for example,
14 could be relatively skill-intensive for developing countries,
15 and the same predictions come out of technology transfers
16 because of -- yeah, the more capital-intensive, and
17 skill-driven technologies are, the more skill demand is for
18 the workers also in developing countries.

19 And based on these new trade TREs, we could say,
20 okay, they predict income inequality could increase in
21 advanced economies, but it could also increase in developing
22 countries because there's also a higher demand for skilled
23 labor in developing countries because of these technology
24 transfers, these outsourced activities, and so on.

25 I just added one more theory discussion because so

1 far we discussed about what would be predictable of the
2 market outcome, so before taxation and transfers, but what is
3 the influence of globalization and international trade on the
4 ability for redistribution of country, let's say, two
5 competing theories.

6 On the one hand side there's the compensation
7 hypothesis on the welfare states saying that, okay, even if
8 international trade increased inequality within countries
9 before tax and transfers, the state has the opportunity to
10 compensate the low-skilled workers for the higher risk in the
11 market inequality, and then the inequality after tax and
12 transfers would not increase.

13 On the other hand there's the efficiency
14 hypothesis, so it's based on the race to the button saying
15 that because of globalization, and global trade integration,
16 the governments have less opportunity, less taxation, and
17 fiscal space for redistribution, and we would see erosion of
18 the welfare state. Then we would even see higher inequality
19 after redistribution because of the global trade integration.

20 Okay. That's just for the introduction, which is
21 based on which theories we base our empirical analysis, but
22 before I come to our empirical study, I would just take a
23 look on existing studies.

24 So we have two strands of literature in the
25 empirical evidence. The first one is several studies used

1 micro data on how trade openness relates to income
2 inequality, and it's based on micro data for -- it's a
3 country level, and the findings are actually quite mixed, and
4 when we take a deeper look on the different studies we see
5 that the different findings often depend on, let's say, first
6 the measures of trade openness, or globalization, on the one
7 hand side, or inequality on the other hand side, but often
8 also because of, say, they are using different country
9 samples.

10 So if more advanced economies in their sample,
11 others are a more full sample, a more sample of developing
12 countries, then the result are different, and we try to
13 account for the different findings that we examine different
14 sub-samples of countries.

15 And another interesting finding is that most of
16 these studies using micro data at the country level how to
17 report any causal effect because, as we all know, there are a
18 lot of endogeneity concerns, especially when it comes to the
19 relationship of trade and inequality.

20 For example, there could be some reverse causality
21 in the empirical findings because it's wide logic that, for
22 example, there's a high inequality in a country if the
23 government would like to address inequality. These policies
24 could also have an impact on trade policy, as I showed you at
25 the beginning of the slides when some politicians say we need

1 some more homeland economies, economics, or protection as to
2 help the people who feel left behind.

3 Maybe we have also some omitted variables, so
4 confounding factors which could influence trade on the one
5 hand, and inequality on the other hand, and these factors
6 would drive, or would buy us our results.

7 So another group of studies is much better in
8 controlling the causal mechanisms because they use micro
9 data, or case study evidence of single countries, so they
10 identify how trade openness influences local incomes across
11 regions of workers within individual countries, and
12 interestingly a lot of empirical findings -- the empirical
13 findings, although quite mixed, and it's often differs, for
14 example, depending on the context. So for example, a
15 regional industry composition.

16 Especially there are some studies, for example,
17 showing that some regions with some industries which benefit
18 from export orientation, the workers in these regions are
19 reaching all the benefits while other regions in declining
20 industries also decline in their incomes.

21 These studies are useful to understand these
22 cultural mechanisms, and the most recent studies are using
23 such micro data, but there's one large limitation with these
24 studies because they cannot predict external validity. So we
25 know about the mechanisms, which factors could drive, and

1 which context could drive the results, but we do not know
2 whether this is developed for the overall effect of trade
3 openness on income inequality for all countries.

4 That is the reason why we decided that we would
5 like to examine the relationship once again using micro data
6 at the country level, and our contribution, and our findings
7 in a nutshell.

8 So what we are doing is we reexamine how trade
9 openness influences income inequality within countries. As
10 already said, we use a sample, a panel of 139 countries over
11 the complete period of 1970 into 2014. And we employ, let's
12 say, not a new, but an established identification strategy,
13 but it's new for the question on how trade influences
14 inequality, and this identification strategy uses a predicted
15 trade openness as time varying exogenous trying to deal with
16 it endogeneity concerns I already mentioned.

17 And as I also mentioned is that we consider
18 heterogeneity across countries by using several subsamples,
19 and our main findings are if you use a full sample of all of
20 139 countries, our empirical results, or regressions, do not
21 really show evidence for any significant effect of trade on
22 income inequality, neither for inequality before taxation and
23 transfers, nor afterwards.

24 But interestingly, we see that trade openness and
25 deep benefits is very poor, not necessarily all poor groups,

1 but the very poor in emerging and developing countries, which
2 is actually predicted by the classical Stolper & Samuelson
3 theory, and this is all in line with some other literature
4 showing that globalization and international trade is good
5 for fighting poorness in developing countries.

6 And for the advanced economies, first we can see
7 that the upper deciles actually gained from trade as expanse
8 of income shares of the bottom deciles income distribution,
9 this would also be in line with Stolper & Samuelson theory,
10 but when we take a deeper look in the individual data, we can
11 see that this overall effect is actually driven by some
12 outliers, and if you exclude these outliers, we cannot
13 confirm that the relationship, and the effect, holds for all
14 countries.

15 And at the end we also see a very nice, or a very
16 interesting result, which should be evaluated even more in
17 future research because we see that there's a very strong
18 effect of trade openness, and opening to global integration
19 on income inequality in transition economies. So transition
20 economies, which open from social planned economies to market
21 economies, and there we can see a very huge impact of
22 inequality.

23 Okay. So let's go into the study. Let's jump into
24 some more detail. So what is our data, and then I would like
25 to show you some trends.

1 So we use five-year average periods. We averaged
2 the data for five years to reduce, for example, the impact of
3 some outliers in the data of some years, or to reduce the
4 impact of some missing observations, or measurement errors,
5 and so on, which is especially important for emerging and
6 developing countries wherever data quality is not always the
7 best one. And, actually, we have -- even if we average to
8 five years, we have an unbalanced panel.

9 And we use to elaborate on different samples we use
10 four samples, so our full samples are 139 countries, but the
11 other use we call it a benchmark samples, which includes 82
12 countries, and we decide within the benchmark sample we use a
13 world classification in which we excluded the very low income
14 economies because the low income economies, the literature,
15 shows that these economies a high lack of data availability,
16 and also quality. So even different studies show different
17 income figures for these countries.

18 And that's the reason why we would like to control
19 these countries, and we did the same exercises for the
20 benchmark sample as we did for the full sample to compare
21 whether these data quality issues drives the results.

22 And yeah, as I already mentioned, so we also use
23 the sub-sample for the advanced economies, and the emerging
24 and developing economies, so the advanced economies are 34
25 countries. The developing economies are 105 countries, and

1 here we use definitions by the IMF. I will show you later
2 slides on the definitions of the IMF.

3 Our main variables are trade openness. It's just
4 the simple measure of trade openness as percentage of GDP, so
5 we sum up the exports and imports as percentage of GDP to
6 measure a country's openness to the global trade integration,
7 and for income inequality we use two different measures.

8 The first one is released from the standardized
9 world income inequality database, which provides pretext
10 transfer, and post text transfer Gini measures for household
11 income inequality.

12 And a second one is from the Global Consumption in
13 Income Project, which provides the relative income shares by
14 these to measure whether there are some more -- to overcome
15 the limitations of the Gini index actually, and to see
16 whether there are some specific groups who benefit, or who
17 does not benefit, from the trend.

18 So let's take a look at some correlation at the
19 beginning based on our data. So here we -- yeah, just take a
20 look at the correlation between the Gini market inequality on
21 the left-hand side, and trade openness on the right-hand
22 side. We have the measure of Gini net, so after taxation,
23 income taxation and transfers to the poor, and trade
24 openness, and it's for our most recent five-year average in
25 our data set for the years 2010 to 2014. And if you just

1 take a look on the figure on the left-hand side, we hardly
2 see any correlation among all countries.

3 So you can see the fitted values here in the
4 middle, the line it's flat, and interestingly, though, if you
5 take a look after taxation and transfers, we can see two --
6 we can release two informations.

7 The first one is inequality, it's decreasing after
8 taxation and transfers, as expected, but only for -- you can
9 see the green countries are the advanced economies.

10 So in advanced economies, inequality is decreasing
11 because advanced economies have the power to redistribution
12 by taxation and transfers. So they have a welfare state most
13 of them, especially a lot of the European countries, western
14 European countries, or Scandinavian countries, redistribute a
15 lot.

16 So before tax and transfers you hardly see any
17 difference between developing countries and advanced
18 economies when it comes up to inequality. Afterwards more
19 developed countries, advanced economies, redistribute more,
20 and then because the more developed countries are often the
21 countries which are more open to global integration, so we
22 actually see that the more -- so the higher the trade
23 integration, so the higher trade openness, then the lower is
24 income inequality just for this one period here. So that
25 would be actually an objective relationship correlation.

1 But it's just a screenshot of the last data,
2 although I think it's more interesting to see what other
3 trends and trade openness, and income inequality over time.
4 So what fits to our question whether within the country of
5 trade openness is increasing, what is the influence of income
6 inequality within this country.

7 And when we take a look, yeah, from the mid '80s
8 until our last data point, we can see within our benchmark
9 samples it's just a simple, average of the countries which
10 provide -- which have balance samples over the country, so we
11 use a mean of these countries, and we can see the mean of
12 these countries.

13 We have a rising trade openness during the 80s, the
14 '90s, and the early 2000s, and it stopped, and remained quite
15 stable since the last observation period. The same is true
16 for the advanced economies, and also for the emerging and
17 developing economies are at a quite lower level.

18 When it comes to the inequality we see at the same
19 time marked inequality based on the Gini measures also
20 increasing for the benchmark sample until the 2000s, and then
21 it remained quite stable when other trades is stable. But
22 interestingly, for net inequality, it is even decreasing in
23 the last periods.

24 We see for advanced economies a quite sharp
25 increase in market inequality during the same period, and at

1 the very lower level, and dynamic for net inequality.

2 Interestingly for the emerging and developing
3 countries the trend of market inequality, or the data for
4 market inequality, on average was already quite high during
5 the '80s, and it increased a little bit, but decreased in the
6 last periods, and it also decreased a little bit for the net
7 inequality in the last period.

8 So it's a different trend actually for the emerging
9 and developing economies than for the advanced economies, a
10 little bit indicating like what we discussed before from the
11 classical Stolper & Samuelson theory.

12 And I think what we can see here again, what I
13 already mentioned before, is a huge redistribution in
14 advanced economy, so we have a similar level in the average
15 level of inequality in advanced economies and developing
16 economies before redistribution, but because of taxation and
17 transfers the level of net inequality is much lower in
18 advanced economies.

19 Also showing that the size of redistribution in
20 Gini points even increased during that time. So since the
21 mid '80s until last decade redistribution even increased on
22 the average in these sample -- in the sample of advanced
23 economies.

24 In this figure we did another exercise. We used
25 the change in trade openness, and Gini inequality, since the

1 1990s until, yeah, before the outbreak of the financial
2 crisis. So it's actually the period when we have seen that
3 there's a lot going on in the rise of a trade openness at the
4 beginning of the '90s, so after the fall of the Berlin Wall,
5 and until the financial crisis, the global financial crisis.

6 We used this change in trade openness, and used the
7 same period for the change in Gini market, and next to
8 examine what is the unconditional correlation within
9 countries. And here it's a little bit different to what we
10 have seen in the first figure when we just focused on one
11 cross section period.

12 Here we can see indeed -- so if we take a look at
13 this line, there's a posit correlation that if trade openness
14 increased with higher percentage points, then the Gini market
15 index increased to a higher extent. The same is true with a
16 similar correlation for net income inequality.

17 But here again what we also can see is that there
18 are some outliers. For example, here Hong Kong, Luxembourg,
19 Singapore, or the red ones are transition economies from
20 Eastern Europe, which all experienced a high increase in
21 trade openness during this period, and a high increase in
22 inequality, for example, during the same period.

23 And the figure showed us again it is very important
24 to look at these different country groups, and whether they
25 drive the results of an overall sample, because what we can

1 see is that, for example, the other advanced economies, so
2 all the green dots they also experience some increase in
3 trade openness, but some of them decreased inequality, some
4 of them increased inequality.

5 So based on our descriptive figures we do not have
6 a clear picture what is going on. And that is the reason why
7 we said, okay, we need an empirical strategy to identify
8 whether trade openness influences income and equality.

9 And first we started with a standard OLS fixed
10 effects model, so running our "Y" as our inequality measures
11 in Country "I", and time period Tau on our measure of trade
12 openness, and a set of control variables, and country fixed
13 effects, period fixed effects, and you we also used standard
14 errors classed as a country level.

15 We included a set of control variables, for
16 example, a GDP level of a country, population gross, age
17 dependency ratio for young and old people, and also
18 indicators for social globalization, political globalization,
19 firm directed investments, and natural disasters, actually
20 because of our instrument, which I will introduce a few
21 slides, in a few slides.

22 And again, also for migrants, ICT capital stock,
23 and so on, and some robust tests.

24 I will show you the results for OLS in a few
25 seconds, but we -- because of the endogeneity concerns like

1 reverse causality, or some other confounding factors, so the
2 so-called omitted variable bias, we use this instrumental
3 variable abridged following our colleagues Felbermayr and
4 Groschl. They use predicted trade openness as instrumental
5 variable. Actually, this is based on an approach of Frankel
6 and Romer, which they used it for a cross-section approach.

7 But further, Felbermayr and Groschl modified the
8 model of Frankel and Romer to examine also a time varying --
9 to elaborate on a time varying component in this instrument,
10 and they used -- they included large-scale natural disasters
11 in this gravity model, so large-scale natural disasters in
12 foreign countries to predict trade openness.

13 So if you think about three countries, we can say,
14 okay, if we have a natural disaster in Country C, then we can
15 predict trade openness of Country A because of this exogenous
16 trade shock, and it depends on the size of the countries, the
17 proximity of the countries.

18 But although because of this time varying exogenous
19 shock, and then we have bilateral predicted trade flows
20 between Country A to B, which could be changed because of
21 this natural disaster in C, but also predicted trade flows
22 between A and C. So we get the predicted trade flows for
23 Country A because of a natural disaster in C. And that's the
24 basic idea behind this, to use exogenous shocks to protect
25 trade flows of another country.

1 Here's the model behind this. So we have bilateral
2 trade flows between Country I and J, and this is based on the
3 gravity model which includes large-scale natural disasters of
4 the other country, in Country J. A set of co-variants again
5 and interaction between the disaster in the other country and
6 the gravity model variables which include geographic
7 variables like the size of the area, the population, or
8 common borders and so on.

9 By using this approach we have instruments to
10 predict bilateral trade openness, and in a second step we
11 construct an exogenous proxy for predicted multilateral
12 openness of one country. So we sum up all these predicted
13 values by this importing country.

14 So for example if an earthquake would hit Haiti,
15 then we could have bilateral trade flows for the U.S. which
16 is Country I, and we sum up all these predicted values for
17 the USA's overall trading partners, so overall bilateral
18 country test as a proxy for multilateral openness for the
19 USA, and then we again average this over five years and then
20 we have constructed our instrument which is exogenous to any
21 policy of a country to any reverse causality to amount of
22 variables and so on.

23 For how it's true that this instrument works, we
24 need these key identifying assumptions that the foreign
25 natural disasters, for example in Haiti, do not have any

1 direct impact on income distribution or trade openness.
2 Income distribution in the USA other than through the channel
3 of trade openness, given other controls.

4 This instrument actually is relevant and although a
5 valid instrument shows our first stage so we can see it's
6 relevant for the full, the benchmark sample, the advanced
7 economy and at a lower level in significance for the
8 developing countries. But the F test also showed that it's
9 above critical values. So it's shown to be a valid
10 instrument.

11 Now we are done with all the methods behind our
12 results. And then I will show you the results for the OLS,
13 or the classical OLS model as well as the 2 stage, where
14 brought using our instrument.

15 Again, I just want to show the unconditional
16 correlations again in which we have seen various, some
17 correlation before we use any controls, before we use any
18 instrument. But if we include our controls, the baseline
19 controls and the fixed effects for countries and period fixed
20 effects, we do not see any significant effect for the full
21 sample, the redistribution is actually measured as the
22 difference between Gini market and Gini net.

23 We do not see any significant impact for our Gini
24 market and Gini net using the classic OLS approach, but we
25 also do not see any significant effect for the full

1 intervention mark sample if we use our instrumental variable
2 approach here.

3 So everything is quite close to zero and not
4 significant.

5 Okay. But this could be explained if, for example,
6 we have a group of countries like advanced economies, which
7 increase inequality because of trade and the other group of
8 countries, for example, the developing economies, wouldn't
9 decrease their inequality figures because of trade. Then on
10 average we would not see any effect while the countries
11 themselves would show rising inequalities.

12 But before we come to the fact samples, I would
13 like to show you the figures. Here on the right hand side we
14 again see on the columns 11, 12, and 13, the figures as shown
15 before. What is new, the 1 up to the 10, that is meant for
16 the income shares after tax country distribution for the
17 lowest income this side up to the highest income this side
18 within the countries, and here again we can see that there is
19 no significant correlation that any income share is
20 increasing or decreasing within the full country sample.

21 But if we exclude our very low income countries we
22 can see at least for the benchmark sample a slight
23 significant increase for let's say the upper middle class in
24 the benchmark sample.

25 So it seems that the upper middle class, or let's

1 say the skilled people seem to benefit from trade which would
2 be in line with some of these trade theorists saying that
3 trade's openness increases skill premium.

4 Again, what I already introduced, why these figures
5 could mask the different effects on the sub-samples like the
6 developing countries and the advanced economies. Then as I
7 already mentioned here, the definitions of -- we use the
8 definition of CMIF for advanced economies and emerging markets
9 and developing economies as of the year 2016. They were
10 introduced in one of these two groups. The groups are based
11 on the capital income level, export diversification, the
12 degree of integration into the global financial system.

13 And if we again run the regression with our
14 instruments, or the two stage square sheets approach with the
15 advanced economies we actually see again, a field gini
16 market, Gini net index over measures of the Gini inequality
17 measures. We do not see significant effects for both groups.
18 While there's a higher coefficient, network coefficient for
19 developing economies actually. So suggesting that there is
20 some decrease in inequality when using the Gini, but it's not
21 significant. But more interestingly and totally in line with
22 historical set in the arenas, if you can take a look at who
23 benefits and who lose within the countries, within the
24 advanced economies we see larger coefficients. So the
25 relative income share is increasing for up the decile, here

1 for the 7th to the 10th decile, even a very strong
2 significance again for the 9th decile, and who is losing are
3 actually the bottom of the income distribution, had a
4 significant effect.

5 And the other way around, we can be conceived for
6 the developing economies, the very, very poor seem to benefit
7 from trade openness. So if a developing country opens up for
8 trade, the very poor of the country seem to benefit based on
9 these figures. So it does not mean that in each country
10 every poor people are benefitting, but on average there seems
11 to be a significant positive effect. And following the
12 Stolper-Samuelson theorem, actually they benefit at the
13 expense of the richer people of the country when it comes to
14 the relative income distribution.

15 We did the same exercise just using three year
16 periods. Then we see having more observations because if you
17 just use here the five year periods, we only have 244
18 observations for advanced economies. Therefore we also did
19 this again for a three year period and we can see by
20 increasing our observations the figures become even more
21 clear for advanced economies. So the bottom of the income
22 distribution in advanced economies lose while the upper
23 middle class or the skilled class is even increasing their
24 shares within the income distribution.

25 So what I already said, here's just a summary

1 slide. So far, we have no effect of trade openness on income
2 inequality. In the first sample we have some heterogeneity
3 depending on the development levels. So far everything would
4 totally follow the prediction of this classical
5 Stolper-Samuelson theory.

6 But as I already mentioned and I focused on in the
7 figure, we have seen that it seems that some countries
8 totally are the driver of these results. We would like to
9 take a deeper look whether these outliers explain the total
10 relationship within our regression analysis.

11 Actually, if you just -- just a simple exercise.
12 We just excluded here, for example, the country of Singapore.
13 We can do the same for Luxembourg or Hong Kong. And when we
14 exclude just one outlier from the advanced economies the
15 complete figure here is not any more significant. So we just
16 decreased nine observations, excluded nine observations and
17 then the regression is not significant anymore.

18 Even more interestingly is the sign even changed
19 here, if you can see. Now here's a positive sign for the
20 lower deciles and an entry of one for the opposite sign
21 showing that it's very critical to conclude from that huge
22 country samples to make policy conclusion for your own
23 country if you do not examine the real context of your own
24 country.

25 The same is true if you just focus on the benchmark

1 sample so we have a higher group of countries just reducing
2 from 81 to 80.

3 What I would like to emphasize it's very important
4 if you would like to have some policy conclusions to really
5 look at what is behind the study and to compare what could be
6 the reason why the results look like I have shown before.

7 In the second group, now I just excluded one or two
8 advanced economies from the advanced economy sample or the
9 benchmark sample. Another interesting group are this group
10 of transition economies. For example the red ones from
11 Eastern Europe who had a huge change of their economies not
12 just opening up for trade during the 1990s, but they opened
13 up for market economies. So this started for a totally let's
14 say statistically equalized economies to capital markets, and
15 they increased the trade openness and the income inequality
16 for sure during the time.

17 Again, similarly like China, China also opened up
18 for some market characteristics and some parts of their
19 economy. And if we use the samples, so Panel C for example,
20 excludes all these transition economies, so the 12 marked
21 transition countries with these red dots including China and
22 then again we see that the benchmark sample has no
23 significance anymore. Or here in Panel D we just included
24 interaction term of trade openness in these transition
25 countries and we again can see that in the baseline trade

1 openness, had no significant effect. But it has a strong
2 significant effect for these transition economies because the
3 very poor benefit less than the richer income groups. That's
4 the reason why for these countries we also have higher rise
5 in Gini inequality for market, Gini inequality as well as for
6 the Gini net inequality.

7 To sum up, we can see a strong effect of trade
8 openness for this group of transition economies but not in
9 the rest of our benchmark sample.

10 Here just one more figure just to show how
11 important it is to look at different countries. Those are
12 single countries. Here I just used the emerging economies,
13 here on the left hand side, the globalization index, all
14 emerging economies -- China, Brazil, Russia, Mexico, India,
15 Turkey for example. Increased share of globalization during
16 the time, the mid '80s until the 2000's.

17 On the right hand side the same group of countries
18 in which each country increased their share of globalization.
19 The Gini net income inequality has a different trend. Most
20 eyeballing is the trend of China. So when China opened up
21 for trade, world trade, or global trade integration in the
22 early 1980s, income inequality increased a lot during the
23 time.

24 At the same time other emerging economies had a
25 quite stable development in achieving income inequality.

1 So it is very important to look at the specific
2 context of different countries. I would not suggest to use
3 average figures to conclude in effect for policy-making in a
4 single country.

5 I already started with my summary and some
6 conclusions. I again want to summarize our findings.

7 So we can find a high heterogeneity. So the effect
8 of trade openness on income inequality differs across
9 countries. You cannot show a general relationship when we
10 come to the full benchmark sample.

11 We have shown the importance of outliers in such
12 figures, and also in regression. So we see a positive effect
13 in the benchmark sample in the most advanced economies, but
14 those effects, as I have shown you, were driven by such
15 outliers.

16 We can see actually that in our figures, in our
17 results, the very poor in the developing countries actually
18 seem to benefit from trade. So trade tends to
19 disproportionately benefit the income shares of the very
20 poor. And this is first on the one hand side in line with
21 the prediction of the Stolper-Samuelson theorem and on the
22 other hand side, also in line with previous studies,
23 empirical studies showing that the poor benefit from
24 globalization.

25 And again we show that that there is some very

1 interesting effect within these transition countries and also
2 within China which are driving some of the overall results.

3 For the conclusion in the discussion, I think it's
4 very important to discuss why for example a positive
5 relationship between trade and inequality in these transition
6 countries, but have also in the group of advanced economies.
7 And we come up with one idea that it's actually because of
8 the role of institution and democracies, especially in
9 advanced economies in the Western world because in the
10 established wealthier states we have often labor market
11 institutions or public education programs or redistribution
12 programs which -- we clear some people for both new world of
13 global trade integration. They develop the skills for people
14 or compensate some losers of these trends.

15 For example, Chinese reform programs actually since
16 the '80s first concentrated on economic growth, but only
17 growth. So they do not care about equal participation in
18 trade distribution as we have shown in the inequality
19 figures. So what we also see for country studies of China,
20 the growth of income. So most people participated in an
21 income growth but growth walls -- unequally distributed in
22 the speed.

23 And as I mentioned, the transition economies from
24 East/Central Europe, for example, had experienced a huge
25 systematic structure change towards these market economies

1 which could, for example, also be the driver of the trade
2 openness on the one hand side, because they were quite closed
3 economies before. And also quite equal economies before. So
4 inequality increased, but actually income also increased,
5 also among the more poor people in these countries.

6 So maybe some kind of increase in inequality is not
7 that bad for countries coming from a very equalized economy.

8 And in many advanced economies, on the other hand
9 side we have established tax and transfer systems and
10 institutions which might have moderated some effects on the
11 market inequality outcomes. But actually if we discuss about
12 these advanced economies we have also some differences.

13 For example, as we have seen in the figure before,
14 some Western European countries redistribute to a much larger
15 extent and some other countries, for example, we know from
16 the individual country studies, for example for the USA, that
17 indeed trade openness has the power to increase inequality
18 also partly because of the rising import competition as we
19 know, for example, from the import competition for low
20 skilled and medium skilled workers which destroyed some
21 protection, for example, also in the U.S. And we can do the
22 same distribution in some other advanced economies.

23 So overall, I would say our findings do not show a
24 general relationship, but such as that the effect is country
25 and context specific. So it is very important to make people

1 look for each country what is the industry composition? Do
2 they have some export orientation in some industries or is
3 this more an import oriented industry? About the industry
4 composition is it more service oriented or more -- yes. And
5 how is the composition of the wealthy institutions? How is a
6 country oriented in their education programs? Do they
7 predict new structural trends and can train their people in a
8 better way?

9 All these country-specific sectors which also
10 change over time are not well figured in our regressions and
11 that's the reason why we probably see these results as I have
12 shown you.

13 So far I hope it was an interesting overview for
14 our, about our results, and I am very happy if you have any
15 questions or comments. I hope you got some interesting
16 insights and some conclusions for your further development of
17 some policy strategies.

18 So thanks a lot for your attention to my talk, and
19 I'm happy for the further discussion and talk.

20 MS. LAWLESS: Thank you so much. That was very
21 interesting.

22 We're going to turn first to the discussants and
23 then open up the floor to questions.

24 Tamar and Ross, I'm not sure which order you two
25 want to go in, but I'll leave it to you.

1 MR. JESTRAB: Thanks so much, Martha. Let me share
2 my slides right now. Can you see my screen?

3 First off, thank you, Dr. Dorn for the
4 presentation. It was really interesting.

5 I'm Ross Jestrab. I'm an international economist
6 here in the Research Division at the USITC. I'll be
7 co-discussing your paper with my colleague Tamar Khachaturian
8 who is in the Services Division.

9 I'll start by covering two slides, and then I'll
10 hand it off to Tamar to finish the discussion.

11 Before jumping into the summary, like I said, I
12 want to say again that I really enjoyed the presentation. In
13 reading the paper I really learned a lot.

14 To briefly summarize, this paper examines the very
15 important topic of how trade openness influences income
16 inequality. The sample covers a wide range of countries with
17 139, over the time period of 1970 to 2014.

18 For the identification strategy, the authors used
19 an instrumental variable of predicted openness which I'll
20 talk more about on the next slide. And they also include a
21 series of control variables such as country fixed effects and
22 time period fixed effects. With all this, it allows them to
23 isolate the fact of trade openness on income inequality.

24 This speaks to one of the main contributions of
25 this paper which includes estimating the causal effect of

1 trade openness on income inequality which is no easy task.

2 Another contribution of this paper is that the
3 authors consider heterogeneity across countries as is
4 highlighted with the below bullet points here.

5 These findings include the effect of trade openness
6 on income inequality differs across countries. And to
7 mention just a few of the results here that were previously
8 mentioned. For the sample of emerging and developing
9 economies, the estimates imply that trade openness tends to
10 disproportionately benefit the lowest income individuals on
11 average. And for advanced economies, trade openness
12 generally increase income inequality where this effect is
13 mostly driven by outliers.

14 So moving to the next slide, this slide provides a
15 list of elements from the paper that I thought were
16 particular strengths of the paper. First, the figures in
17 Section 4 and these are the same figures that Dr. Dorn
18 presented in the slides, provide, I thought these provided a
19 helpful visualization of the empirical relationship between
20 trade openness and income inequality. They also highlight
21 important trends in the data.

22 Second, the authors do a nice job of using economic
23 theory to guide their empirical analysis. For example, the
24 authors discuss the Stolper-Samuelson theorem which implies
25 that the country's abundant production factors gained from

1 openness, while the various factors lose. This helps to
2 motivate the use of different subgroups in the data by
3 development status, since advanced economies and developing
4 economies have different production factors.

5 In general, we would consider that there's going to
6 be on average more skilled labor in advanced economies versus
7 more unskilled labor in developing economies.

8 This is connected with the third main bullet point
9 on this slide. Notice that the authors estimated effects for
10 different groups of countries, and having analysis by
11 different income groupings is helpful for the reader if
12 they're interested in particular groups of countries and not
13 necessarily just the average if that's for all 139 countries.

14 As previously mentioned, the authors used an
15 instrumental variable approach to estimate the causal
16 effects. This approach builds on the previous literature and
17 provides a nice application of using a gravity model with
18 variables for natural disasters in foreign countries and
19 geography to estimate this predicted openness measure.

20 Now to relate this to work done by the Commission,
21 gravity models are used in a range of Commission products.
22 For example, gravity models have been used for retrospective
23 modeling of trade policy changes. On this slide here I
24 provided a link to the USITC's gravity portal where this is
25 one example that includes a home page for data and computer

1 code related to gravity modeling of international trade. So
2 I definitely recommend if you haven't looked at this portal
3 before, definitely take a look. It's a good resource and has
4 some helpful data sources.

5 The approach by the authors of using a gravity
6 model to estimate an instrumental variable could potentially
7 be a useful tool to add to our empirical tool kit for future
8 work.

9 Last but not least, I really appreciated the series
10 of robustness checks considered by the authors such as having
11 controls, adding a control for technological change or adding
12 time trends.

13 With that, I'll now hand it off to Tamar to
14 continue the discussion.

15 MS. KHACHATURIAN: Thank you so much, Ross, and
16 thank you Professor Dorn for joining us today and presenting
17 your really interesting work on trade openness and income
18 inequality. Nice to meet you virtually after a couple of
19 months of e-mails back and forth.

20 So, my comments are centered around thinking about
21 the composition of trade, heterogeneity across industries and
22 over time, as well as extensions to assess potential
23 differential impacts. So first on the composition of trade
24 is what I'll start with, and you had mentioned this during
25 your presentation a little bit.

1 So circling back, Ross just mentioned that there
2 are differential impacts depending on development levels that
3 you find in your work, in particular that trade openness
4 benefits the relative income shares of the very poor in
5 developing countries.

6 So the overall question here is how the different
7 composition of trade between developed and developing
8 countries may be driving the differential results. So I have
9 a statistic here on the slide and this particular stat is
10 from 2021, but it's showing that there is a greater
11 proportion of services trade in developed countries, which
12 accounted for 73 percent of world exports of services and 67
13 percent of world imports of services in 2021.

14 So some more specific questions to consider along
15 this vein: If the trade openness measure in your paper only
16 refers to goods trades, so that is trade openness does not
17 include services trade, how might extensions that include
18 services trade alter the results, particularly for developed
19 countries where trade openness would be larger for certain
20 economies and the composition would be different?

21 If the analysis in your paper includes both goods
22 and services trade in the openness measure, a relevant
23 question here would be if the inequality reducing effects are
24 driven by the greater or relative share of goods trade? So
25 there are other questions to ask along that vein of, you

1 know, considering the composition of trade and the industry
2 mix, but those are just a few to consider.

3 The next question that I'm kind of turning to is
4 the recent faster growth of services trade and how might
5 extensions, including trade from 2015 that do include both
6 goods and services, impact the results? So over the last two
7 decades, services trade has been growing faster than goods
8 trade and I think, Ross, you can move on to the next slide
9 where I have borrowed a really nice graphic from the World
10 Bank.

11 So we see in the left panel that overall growth of
12 the world exports more than doubled between 2005 to 2019,
13 while goods exports increased by about 80 percent. In the
14 right-hand panel, what is notable is that services exports by
15 middle income countries increased threefold over that same
16 time period. And there, I think after the period in 2015,
17 there's some notable increases there. Over the entire
18 period, high income countries and lower income countries grew
19 at about the same rate over the entire period. So just
20 thinking about extensions after the end of your time period
21 in the paper that you examined and thinking about how some of
22 the heterogeneity over time and the different growth trends
23 would potentially impact the results.

24 And on this next slide, and this is the final
25 slide that we're going to share, is on heterogeneity across

1 industries and thinking about potential extensions that may
2 be able to assess differential impacts of trade and trade
3 openness.

4 So I guess the first question is actually the
5 second bullet on the slide that I have here, and just to sort
6 of think about whether goods and services trade have
7 potentially unique inequality impacts. So thinking just
8 within the services sector, we can think that, you know,
9 trade and investment are an avenue to greater access to
10 services which are critical in enabling economy-wide
11 function. So sectors like telecom and transport and
12 financial services, or other sectors that have a really
13 important role to play in the productivity of the labor
14 force. So sectors like education and health. So thinking
15 about that aspect of services trade and investment and
16 openness would tend to favor reductions in income inequality.
17 On the other hand, some recent empirical work that examined
18 lever market impacts of services trade find that services
19 trade favors high-skilled workers. So I guess overall, even
20 within services trade, it's not really clear what direction
21 the impacts would lead to.

22 And then sort of the second question I have is, the
23 first bullet here: Would analysis that also incorporates
24 heterogeneity across industries be useful for their
25 understanding effects on income inequality? So for example,

1 if we were looking at a particular manufacturing industry and
2 trying to assess how openness or shock to that manufacturing
3 industry would impact income inequality, and how would we
4 sort of measure income inequality in that analysis because we
5 may not think that a particular sector analysis would impact
6 economy-wide income inequality.

7 And finally, sort of my last question is: How
8 would design a study to understand the effects of trade
9 inequality across regions within a country, or is there a
10 specific sub-group to focus on? For example, given the high
11 share of female employment in certain developed economies,
12 would it be useful to estimate the impact of services trade
13 focusing on inequality impacts by gender?

14 So that sort of wraps up my host of questions. I
15 really enjoyed reading the paper and I look forward to
16 discussing our comments and then the broader questions from
17 the audience.

18 MS. POWELL: Terrific. Thanks so much Tamar and
19 Ross and Florian for all of your presentations. We're gonna
20 give Professor Dorn the first opportunity to respond to the
21 discussants comments and then the floor is open for
22 questions. So please raise your hand and let us know that
23 you have a question, or feel free to put your questions in
24 the chat as well. So, Dr. Dorn.

25 DR. DORN: Okay, yeah. Thank you very much Ross

1 and Tamar for the summary and your nice comments on our
2 paper. And yeah I would like to come up with the comments of
3 Tamar about different composition of trade. So I did not
4 mention it, so our trade data is from the World Bank world
5 development indicator. So the rate statistics includes the
6 goods and services. So it's a sum of both, but we did not
7 differentiate between services and goods and that's a very
8 good question and I think the truth, future research should
9 elaborate more on the impact of integration of services in
10 the world.

11 Because, as you already mentioned, in the last ten
12 years the increase in rate and goods did not increase anymore
13 in the world. So it is quite stable. So let's say it's like
14 slowbalization. I saw some figure already it's a
15 slowbalization and not a globalization anymore in goods
16 trade, but what is going on is more that there is trade and
17 services is still increasing.

18 And so it would be interesting how the trade and
19 services influencing income inequality and maybe as you
20 already mentioned, I totally agree whether this could explain
21 so of the research I already showed you, because we did not
22 examine this. But again I would also say that there are some
23 differences between advanced economies because, just let's
24 compare the USA and Germany.

25 So Germany has a very huge amount of, for example,

1 the trade in goods, and the U.S. at a huge amount in the
2 increase in trade in services. And that's the reason why it
3 could be very interesting to compare what is the impact on
4 which groups within the country. So because I would get that
5 high-skilled services are more traded than low-skilled
6 services, for example; so in finance, in telecommunication,
7 or in insurance industry.

8 So I would say even the service industry, which is
9 traded globally, is more skill-driven than the low-skilled
10 service sectors. And maybe that could also be different
11 between countries and that's the reason why I think you
12 should also focus on which kind of services are traded.

13 Coming to your comment that it's very important to,
14 yeah, include industries or sectors even more, yeah I totally
15 agree. That is what I already mentioned. I think it's very
16 important to discuss which specialization also some countries
17 have. So for example, Germany still has a very high share of
18 manufacturing industry among advanced economies compared to
19 some others.

20 When I think about the automotive industry, for
21 example but they also have some specialization on the very
22 high-skilled manufacturing. So it's the high-skilled part of
23 the total value chain. So they outsourced all the very
24 low-skilled production to other countries and what is at the
25 end there is just the high-skilled production at the end.

1 So there are -- I mentioned two papers in our
2 study. The first ones, which you for sure know, the Autor,
3 et al. paper 2013 for the U.S., how the import shocks may
4 explain income distribution in the U.S.A. A similar exercise
5 was done by the other paper. It's from Dauth, et al. one
6 year later for Germany, and they used a similar empirical
7 strategy like Autor, Dauth et al; think Autor, Dauth, Hanson,
8 and they found, for example, that the overall for income was
9 higher for Germany because of this trade integration,
10 especially for regions with high manufacturing industries,
11 for example, automotive industry. So here, the skilled
12 intensity of some region was the driver that people in this
13 region benefitted from trade.

14 It's exactly the other way around to what you have
15 seen in the U.S., but there were also some region which lost
16 because some industries also vanished from Germany. These
17 were the industries without any high-skilled manufacturing or
18 high-skilled value chain. That's the reason why I said you
19 should focus on what is the industry composition of each
20 country and you -- it's not easy just to say it's goods
21 versus services.

22 It's also about which kind of the value chain in
23 the goods production is still in the country or not. Which
24 do you -- which parts of the value chain do you outsource or
25 not? And that's the reason why I do not think there is just

1 one simple answer. You need to take a look on the specific
2 composition of a country to have the right policy
3 conclusions.

4 I hope I addressed the most comments, but very good
5 comments. I was thinking about next research questions and I
6 think, yeah, actually this differentiation between services
7 and goods and the high-skilled services and low-skilled
8 services was very interesting and should be examined more.
9 Thank you very much.

10 MS. KHACHATURIAN: Thank you so much.

11 MS. POWELL: Thank you. So the floor is now open
12 for questions. I don't see anything in the chat at the
13 moment, but please raise your hands if you have a question.

14 MS. LAWLESS: Tamar and Ross, while we're waiting
15 for people to put things in the chat, did you want to
16 continue the dialogue for a minute there?

17 MS. KHACHATURIAN: I guess one sort of follow-up
18 question I have Professor Dorn is whether you would, you
19 know, given the sort of outlier affect that you found in your
20 paper, and also talking now about how different countries
21 have different, you know, occupations or skill levels and
22 their particular mix of things that they trade, whether it's
23 services or goods.

24 Do you see this research being more full if it
25 focuses on specific countries, like country specific

1 analysis, or do you think it's more useful to do, you know,
2 continue the cross-country analysis like you've done in your
3 paper, but isolating some of these, you know, points that
4 you've mentioned?

5 DR. DORN: I think we should proceed to do both --

6 MS. KHACHATURIAN: Yes.

7 DR. DORN: -- is the simple answer, because both
8 have benefits. To focus on single countries here more often
9 you have much better data. So you can rely on microdata
10 within one country and you can control for specific effects,
11 and it's more easy to identify caution mechanisms, what is
12 really impact behind such effects.

13 But as I mentioned at the beginning of my talk why
14 we did our exercise is because there are a lot of very nice
15 papers on the list here using microdata of individualized
16 countries, but it's tough to conclude for external validity
17 for other countries. So I think we should still try to focus
18 what we can learn for overall trends.

19 Yeah. But we need to focus on specific
20 compositions and we should think about which is comparable
21 data which can control for all the country's specific effects
22 across countries. If we can do so, then I think
23 cross-country analysis would be very nice anymore, but it
24 depends often on the quality of the data.

25 MS. KHACHATURIAN: Right. Thank you.

1 DR. DORN: So I would prefer to do research with
2 high quality data before having some results. Having, for
3 example, not nice figures but you are not sure about the
4 quality of the data and you should not rely on policy
5 conclusions with not so good data. So that's the reason I
6 would try to do both.

7 MS. KHACHATURIAN: That's helpful.

8 MS. LAWLESS: To continue on the vein of how to
9 maybe learn something by looking at services separately from
10 goods in the analysis, you can tell we have a special
11 interest. You were talking about how you had controlled for
12 technology but we're looking at services trade and its
13 sensitivity to being traded cross-border and being related to
14 being able to be delivered electronically.

15 And so I'm wondering if there is something in how
16 we include technology in the analysis or isolate it in the
17 analysis which might still be represented by having seen that
18 rise in services trade in recent years, because you're
19 putting cross-border services trade in your overall trade
20 openness index. So is there -- maybe you have some thoughts
21 about whether you can and cannot isolate the technology
22 aspect of electronic delivery?

23 DR. DORN: Very good, very nice question. I'm
24 thinking about it. So, yeah, in a controlled variable we
25 included the capital share of information technology within a

1 country as a control, but not what is a share of tech
2 services across countries, yeah. Yeah, to isolate this
3 impact we would need to have data which focus on services
4 specifically related to these tech industries, if I
5 understand you in the right way, but I'm not --

6 MS. LAWLESS: Yeah, or maybe --

7 DR. DORN: -- sure about a good data source about
8 this right now.

9 MS. LAWLESS: Yeah. If you were going to pursue
10 some subdivisions of certain kinds of trade as --

11 DR. DORN: Yeah.

12 MS. LAWLESS: -- the sample, that's something to
13 think about. It worries me to completely sort of control for
14 technology because it is embedded in the mere volume of
15 services trade by definition, particularly since you've got
16 cross-border trade. You don't have all of the kinds of
17 services trade. It's just cross-border trade, which is gonna
18 be very electronic delivery sensitive.

19 I had another question which may be completely off
20 base but since this is all in a traditional income shares
21 analysis and you noted that market economies, and being a
22 market economy or the degree of development is an important
23 parameter, have you thought about thinking about what
24 proportion in the income shares is not wage income, i.e.
25 returns from capital and ownership? Because that's obviously

1 a discretion that we have here in the United States about the
2 higher deciles.

3 DR. DORN: We did not control for it in our
4 analysis. So we just used figures on income as they are. So
5 we did not differentiate between capital income or wage
6 income, yeah. There are some --

7 MS. LAWLESS: Okay.

8 DR. DORN: -- specific papers focusing on wage --

9 MS. LAWLESS: Uh-huh.

10 DR. DORN: -- on wages, but I'm thinking about
11 papers focusing on capital income which would more focused on
12 the upper deciles, yeah.

13 MS. LAWLESS: Uh-huh.

14 DR. DORN: Yeah, yeah. Especially in the U.S.A.
15 You're correct. Especially in the U.S.A. there's a
16 discussion about it now.

17 MS. LAWLESS: Yes.

18 DR. DORN: Yeah.

19 MS. LAWLESS: Yes. And the easy connection between
20 skills and wage income, and therefore decile distribution is
21 not as easy, you know. It's more complicated, similar but
22 more complicated when you think about non-wage income.

23 DR. DORN: Yeah, yeah. So also the theory I
24 presented was focused on wage income or let's say labor-based
25 income because it's more about a global --

1 MS. LAWLESS: Uh-huh.

2 DR. DORN: -- distribution of production and who
3 benefits from this production and it's not related to these
4 capital flows. Yeah.

5 MS. LAWLESS: Uh-huh.

6 DR. DORN: I'm sorry. I cannot answer you.

7 MS. LAWLESS: Oh, no. No apologies. I just
8 thought I'd throw it out there but we'll check in the chat or
9 please raise your hand if you'd like to take the discussion
10 in yet another direction.

11 MS. POWELL: Well, seeing no hands or anything, we
12 are at the hour. So thank you so much to Dr. Florian Dorn
13 for joining us today to giving us such a fantastic
14 presentation and, of course, to Tamar and Ross as well for
15 providing the discussants comments. This concludes the D.C.
16 seminar series for 2023, but stayed tuned. We do plan to
17 have seminars in July of next year 2024. So thank you very
18 much.

19 MS. LAWLESS: Thanks for joining everyone.

20 DR. DORN: Thanks for the invitation.

21 MS. POWELL: Thank you.

22 (Whereupon, at 11:30 a.m., the seminar in the
23 above-entitled matter was concluded.)

24 //

25 //

CERTIFICATION OF TRANSCRIPTION

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INVESTIGATION NO.: 332-599

HEARING DATE: November 16, 2023

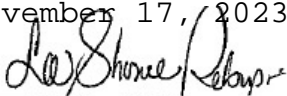
LOCATION: Washington, D.C.

NATURE OF HEARING: Seminar

I hereby certify that the foregoing/attached transcript is a true, correct and complete record of the above-referenced proceeding(s) of the U.S. International Trade Commission.

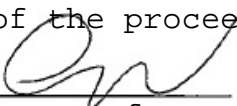
DATE: November 17, 2023

SIGNED:


 Signature of the Contractor or the
 Authorized Contractor's Representative
 1220 L Street, N.W. - Suite 206
 Washington, D.C. 20005

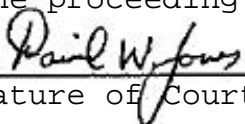
I hereby certify that I am not the Court Reporter and that I have proofread the above-referenced transcript of the proceeding(s) of the U.S. International Trade Commission, against the aforementioned Court Reporter's notes and recordings, for accuracy in transcription in the spelling, hyphenation, punctuation and speaker-identification, and did not make any changes of a substantive nature. The foregoing/attached transcript is a true, correct and complete transcription of the proceeding(s).

SIGNED:


 Signature of Proofreader

I hereby certify that I reported the above-referenced proceeding(s) of the U.S. International Trade Commission and caused to be prepared from my tapes and notes of the proceedings a true, correct and complete verbatim recording of the proceeding(s).

SIGNED:


 Signature of Court Reporter