

WORLD TRADE
ORGANIZATION



Moratorium on electronic transmission: economic and tariff revenue effects

ECONOMIC RESEARCH
AND STATISTICS DIVISION



Fiscal revenue and economic effects of Moratorium on electronic transmission (ET)

Aims of the presentation:



1. Update WTO Secretariat Information (Job/GC/114) on amount of trade in digitizable goods
2. Calculate size of digitized trade (electronic transmission).
 - Digitizable trade is physical trade which can be replaced by electronically transmitted trade, also called digitized trade or electronic transmission
3. General equilibrium exercise to calculate fiscal revenue and economic effects

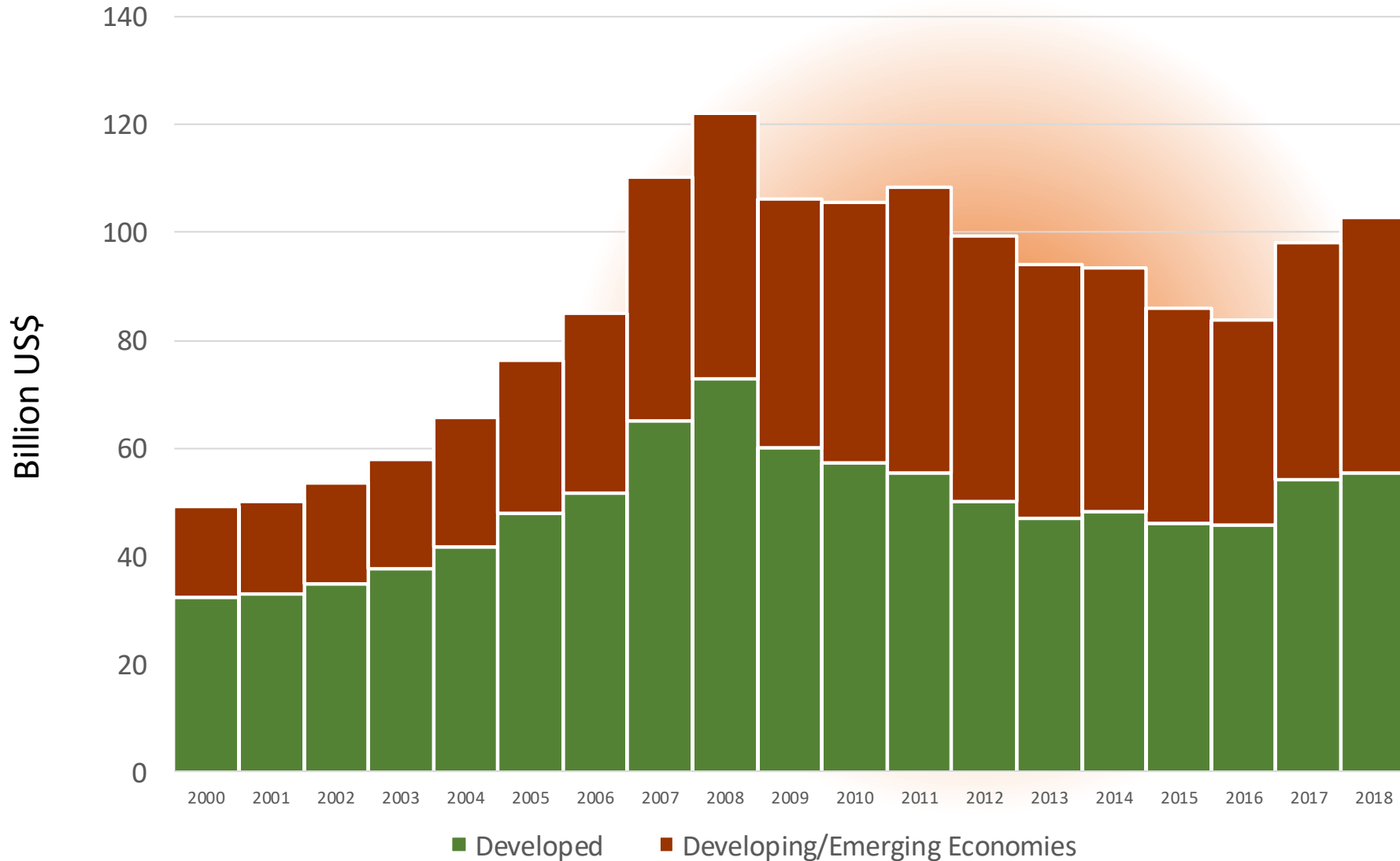
Fiscal revenue and economic effects of Moratorium on electronic transmission (ET)

Preview of results



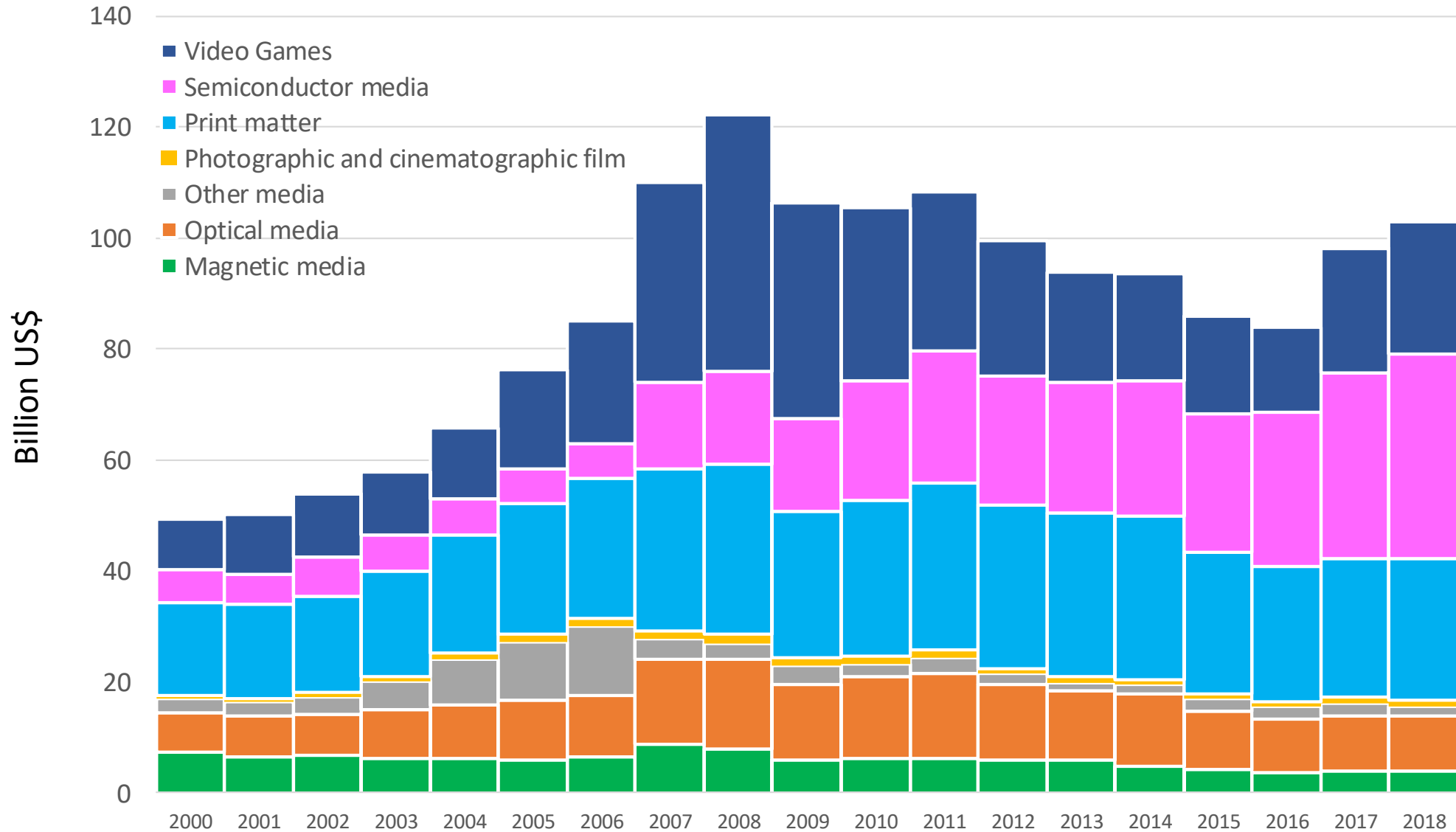
1. With extended list digitizable trade is about \$ 100 billion (excluding intra-EU)
2. Tariff revenue effects of lifting Moratorium are projected to be positive:
 - Between 0.15% and 0.25% of total tariff revenues for developing countries and least developed countries, LDCs (respectively between appr. \$500 and \$800 million for developing countries and between \$ 32 and \$58 million for LDCs)
3. Impact on total tax revenues also projected to be positive
4. Negative projected effect on trade of lifting moratorium
 - Reduction in real imports between 2.6% and 3.1% of initial imports in digitized trade of developing countries and 10.4% and 11.7% of initial imports for LDCs

Yearly imports of digitizable goods, by country group, 2000-2018

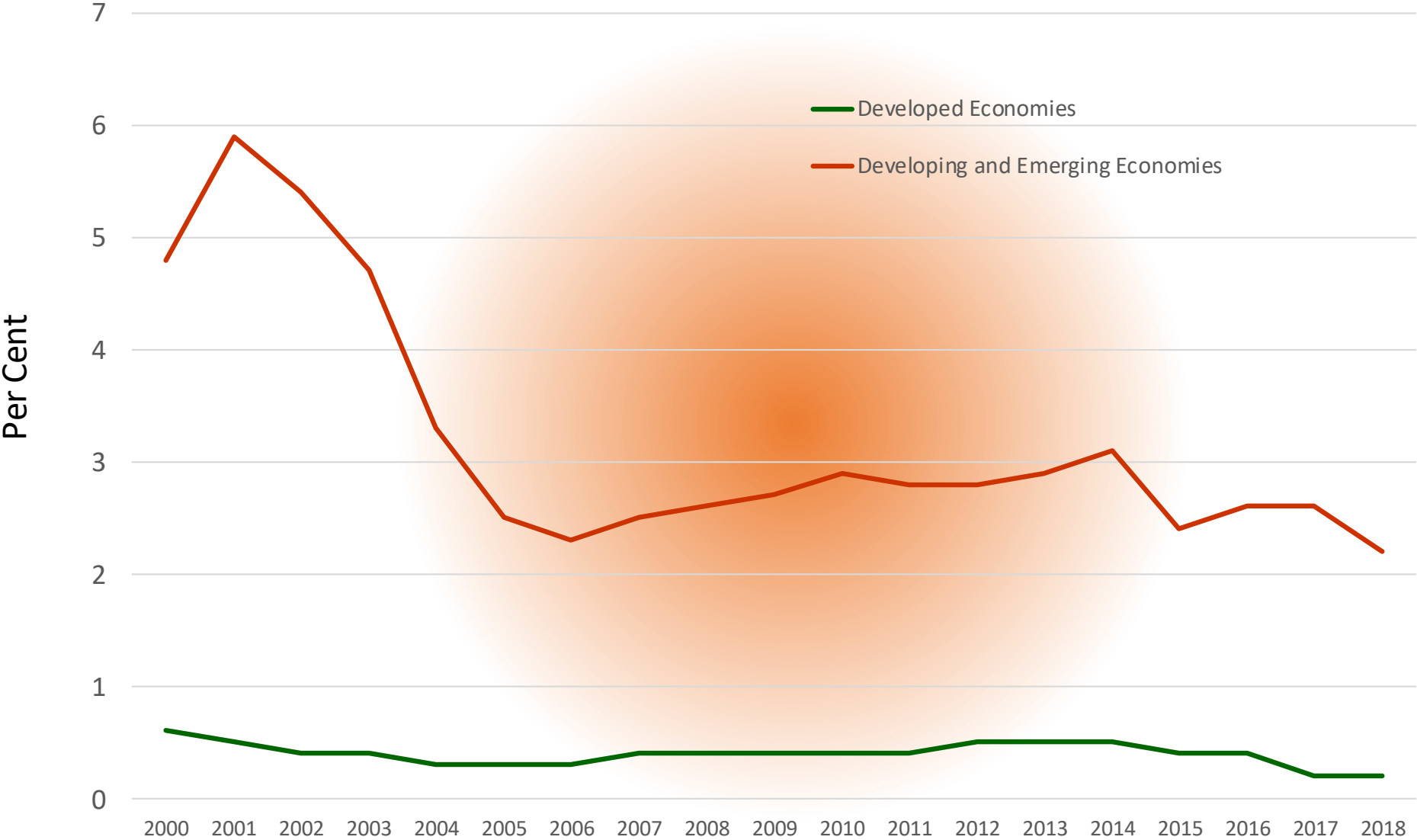


- Extend list of goods compared to Job/GC/114, following and refining Banga (UNCTAD, 2019) covering 4 HS-Chapters
 - Photographic and cinematographic films
 - Printed matter
 - Media for sound, video, software or other phenomena
 - Video games

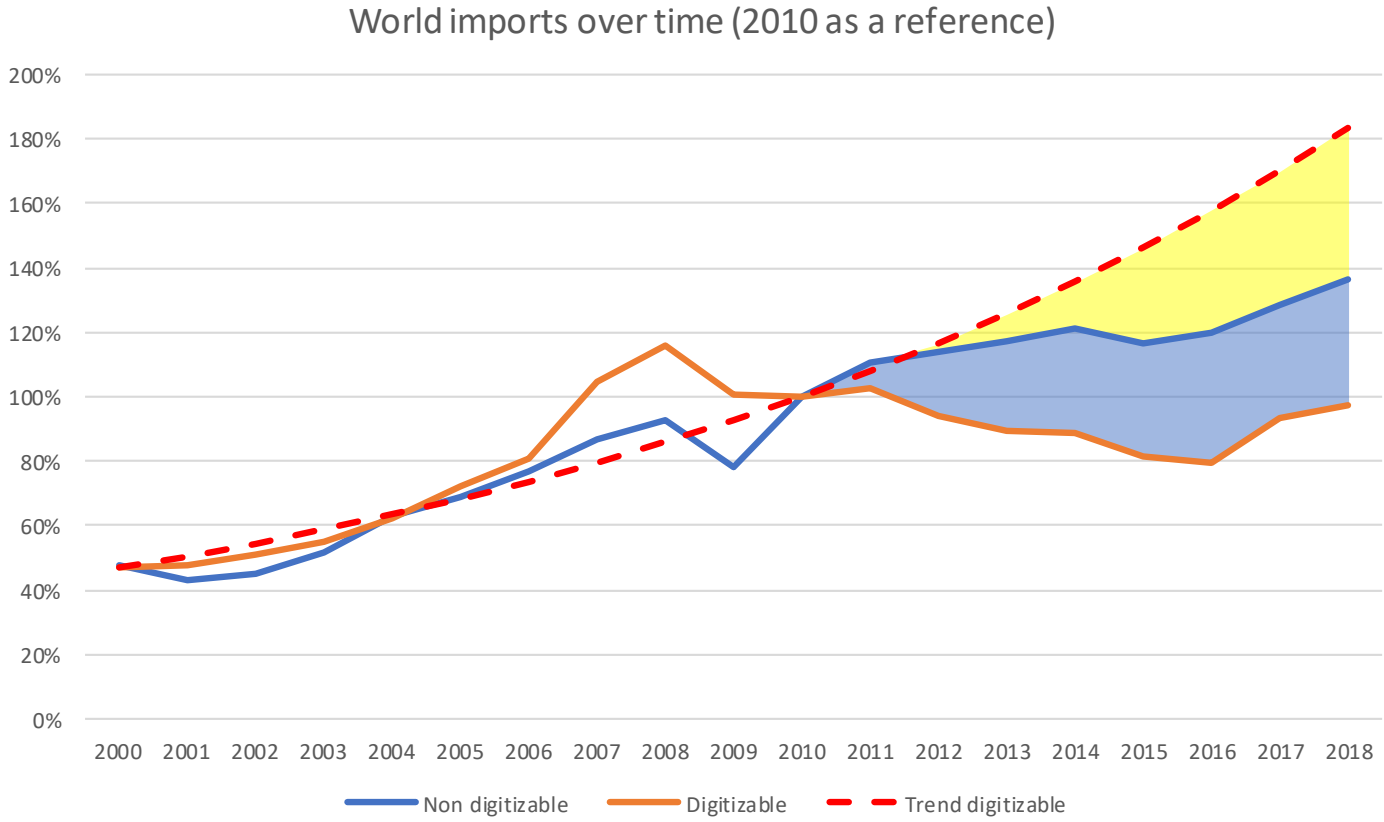
Yearly imports of digitisable goods, by product group, 2000-2018



(Trade weighted) Applied MFN tariff rates on digitizable products

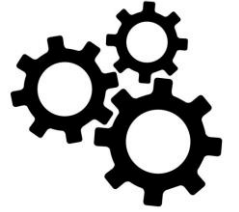


Development of digitizable and non digitizable goods trade and calculation of digitized trade



- Digitizable trade grows faster than comparable trade (in same HS chapters) until 2009 and then stagnates
- Two approaches to proxy for digitized trade
 - Use trend until 2010 (conservatively) and assume growth of digitizable goods continues in electronic form (Banga, 2019; UNCTAD): digitized trade 85% of digitizable trade
 - Use difference between digitizable and comparable non-digitizable trade based on econometric estimation: digitizable trade 66% of digitizable trade

General equilibrium exercise



Employ WTO Global Trade Model: computable general equilibrium (CGE) model, using 2014 base-data projected to 2018 (WTO Staff Paper ERSD 2019-10)

Use of CGE model with calibration to real-world base-data makes it necessary to locate electronic transmission somewhere: digitized trade is part of Business services (Communications) in study based on inspecting description NAICS sectors

- We introduce separate sectors for digitized trade in the model

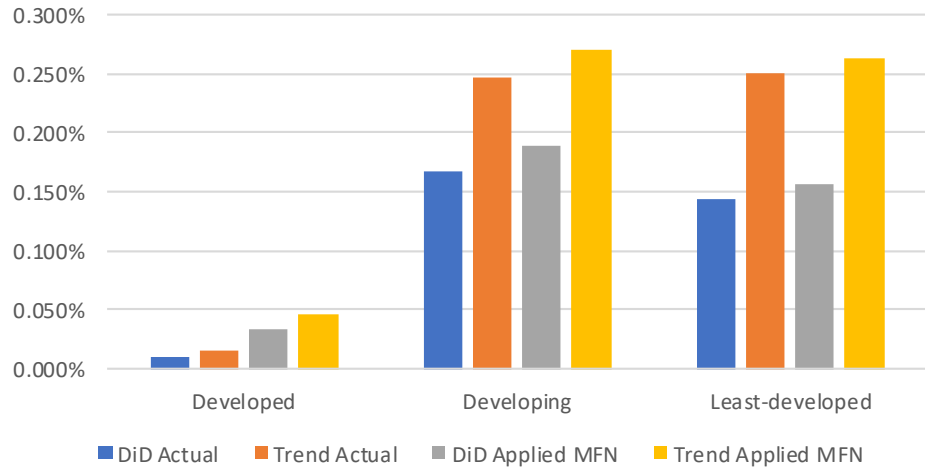
Size of digitized trade is proxied by stagnated growth in digitizable trade (previous slide)

- Historical trend approach: 85% of digitizable trade (\$103 billion)
- Difference-in-difference estimation with control group: 66% of digitizable trade (\$80 billion)

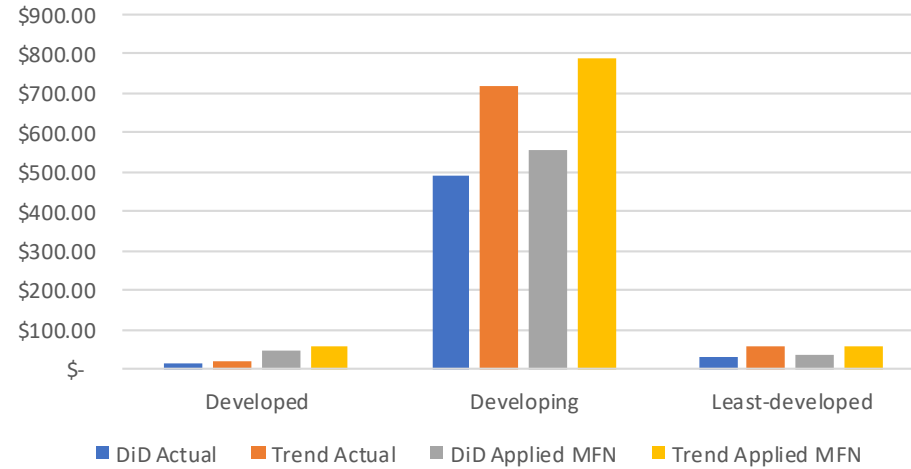
Policy experiment: lifting of Moratorium by introducing import taxes on digitized trade, equal to Actual or Applied MFN tariff rates in corresponding HS lines digitizable trade using data from WTO IDB

Change in tariff and total tax revenues of lifting of moratorium

Tariff revenue digitized trade (% of tariff revenue)



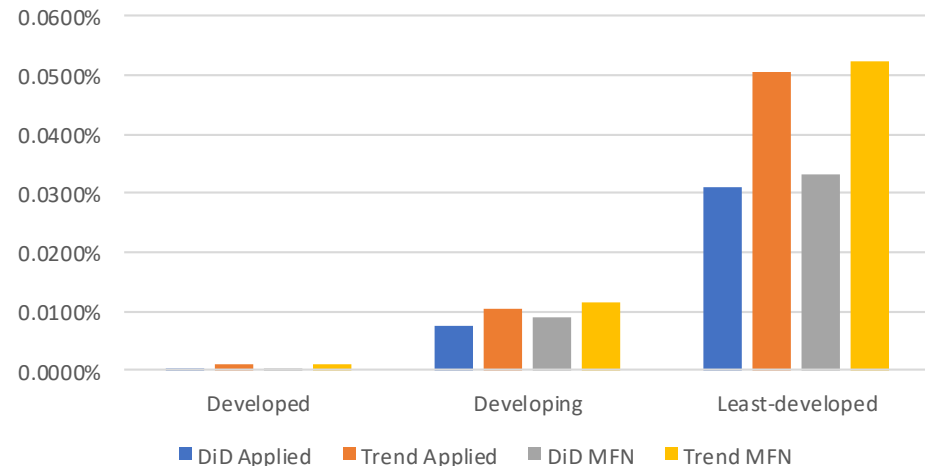
Tariff revenue digitized trade (\$ millions)



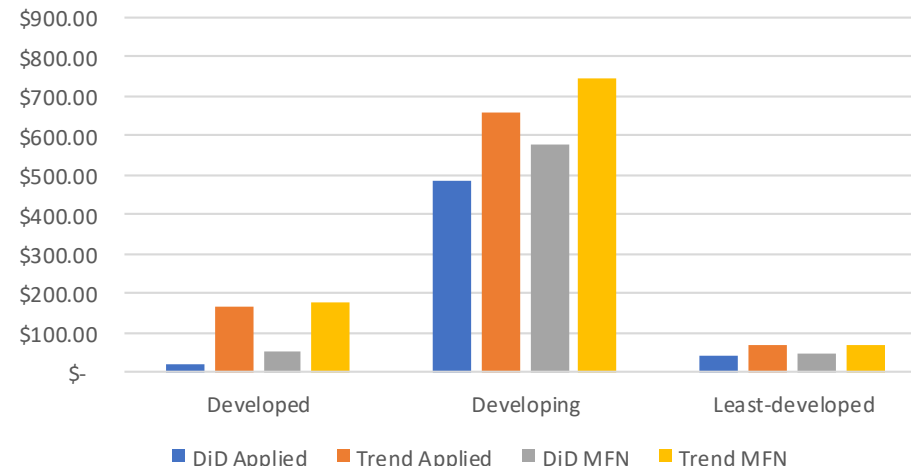
- Tariff revenues of developing and LDCs (distinct groups) falls by 0.15%-0.25% of total tariff revenues

- Impact on total tax revenue also positive

Change total tax revenue (% initial tax revenue)



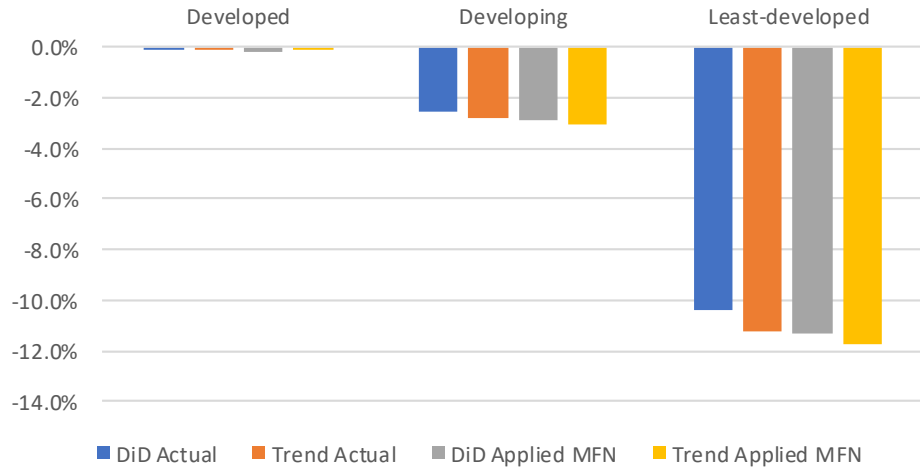
Change total tax revenue (\$ millions)



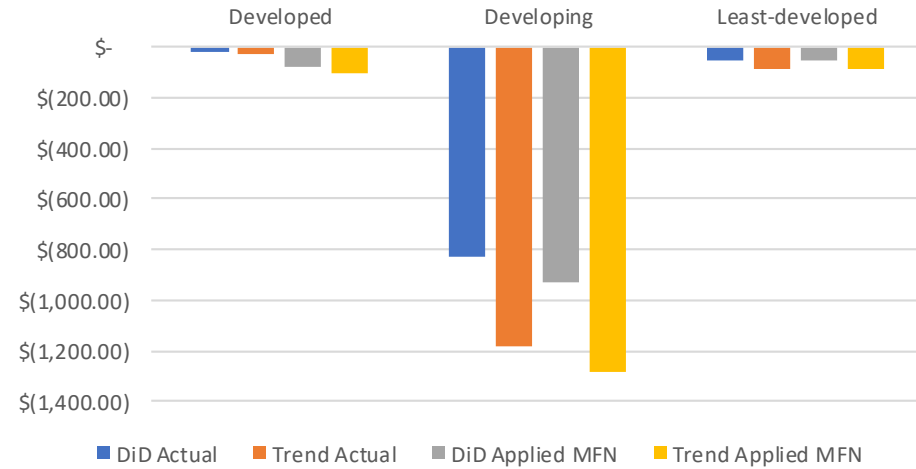
- Larger effect on share of total tax revenue for LDCs: tariff revenues larger share of total tax revenues

Change in real exports and imports of lifting of moratorium

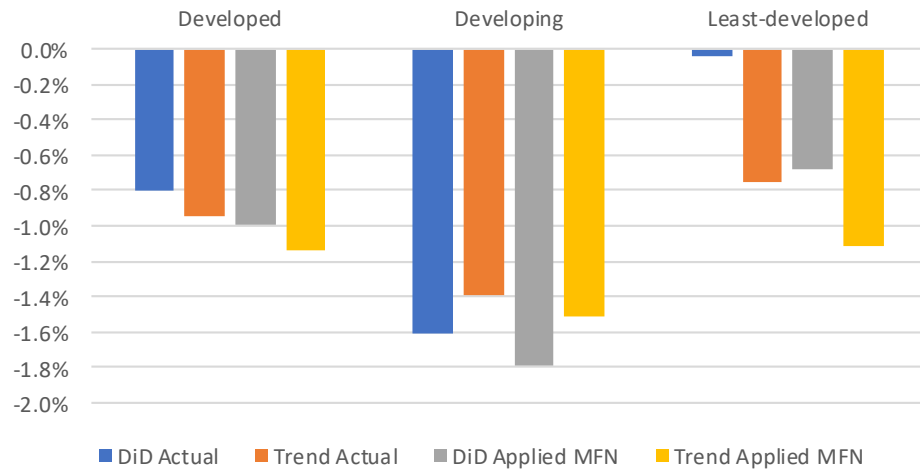
Change in digitized real imports (%)



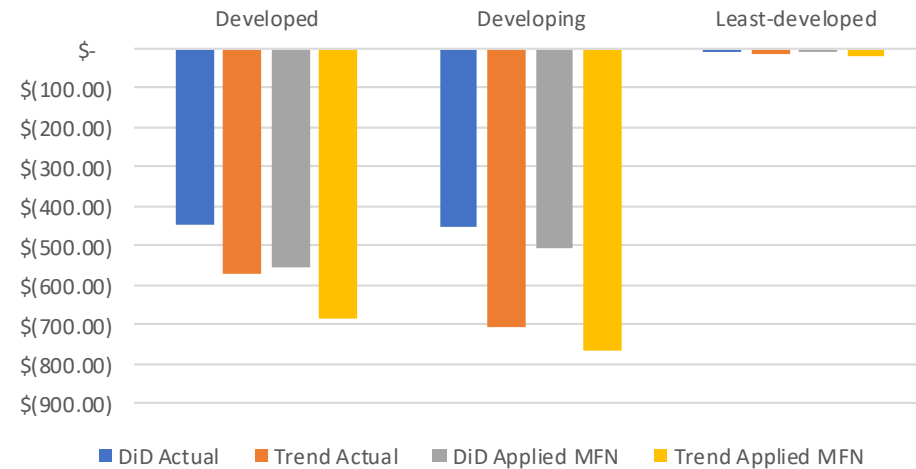
Change in digitized real imports (\$millions)



Change in digitized real exports (%)



Change in digitized real exports (\$millions)



- Reduction of imports in per cent is largest in LDCs and in millions of dollars in developing countries
- Stronger negative impact on exports of developed countries than on their imports: reflects size of tariff increases and comparative advantage

Concluding remarks: summary and discussion



We extended earlier note (Job/GC/114) with further insights in revenue implications of moratorium

- With extended list, size of digitizable trade is about \$100 billion
- Lifting Moratorium and introducing import taxes on electronic transmission raises tariff and total tax revenues:
 - Between 0.15% and 0.25% of total tariff revenues for developing countries and LDCs (respectively between approximately \$500 and \$800 million for developing countries and between \$ 32 and \$58 million for LDCs)
- Negative effects on imports for all countries:
 - Reduction in real imports between 2.6% and 3.1% of initial imports in digitized trade of developing countries and 10.4% and 11.7% of initial imports for LDCs

More study needed to assess further economic effects

- Our model does not take into account impact of (digital) services imports on downstream productivity and exporting, present in the literature (e.g. Beverelli et al., 2017)
- Impact of 3D printing on trade still difficult to predict
- Future modelling would benefit from more information about size of electronic transmission
 - Explicit data on digitized trade
 - Further definition of coverage electronic transmission