



SUMMARY

- Renewing the WTO e-commerce moratorium is essential to preserve the functioning of today’s digitally-enabled economy – even more so given the numerous downside risks currently threatening global growth.
- Customs duties and formalities on electronic transmissions are virtually impossible to implement and enforce without creating further fragmentation of the trading system.
- The calculation of tariffs for electronic transmissions is unworkable: an ad valorem assessment will not work for the majority of electronic transmissions; a non-ad valorem assessment will have highly distortive impacts on the digital economy.
- The moratorium’s economic benefits far outweigh any potential tariff revenue from digitalised goods and services, including for developing and least developed economies.
- This is especially the case given that there are more efficient and practical behind-the-border options for revenue collection.

CONTEXT: A HIDDEN DRIVER OF DIGITAL DEVELOPMENT

Since the [Declaration on Global Electronic Commerce](#) at the Second Ministerial Conference in 1998, WTO Members have continued the practice of not imposing customs duties on electronic transmissions (the “moratorium”).

The moratorium has enabled digital trade to flourish, preventing the creation of trade barriers and burdensome customs duties or tariffs. The moratorium has helped consumers access new products and services, and enabled businesses, in particular micro, small and medium-sized enterprises (MSMEs), to access new markets. It also made a powerful statement: the default position with new forms of trade arising after the conclusion of the WTO Agreement is with no tariffs.

As a result, digital trade has been an immense economic driver: enhancing productivity, innovation and competitiveness, while also reducing the cost of doing business in an increasingly digitalised world.

This paper sets out the clear downside risks of allowing the moratorium to lapse based on practical and economic factors – drawing on available empirical evidence and private sector expertise.

THE ECONOMIC CASE AGAINST ALLOWING THE MORATORIUM TO LAPSE

The imposition of customs duties leads to declines in domestic output and productivity, increases in unemployment and inequality.

This holds even more for industries undergoing high levels of innovation, such as many involved in the digital economy. One-sided, inward-looking analyses presuppose that a new raft of protectionist tariffs in the absence of the moratorium will protect nascent industries in developing countries such as, for instance, the 3D printing industry.

What this overlooks, however, is that the unilateral imposition of tariffs on electronic transmissions will likely lead to countermeasures by affected third countries, directly interfering with the ability of MSMEs in developing countries to scale and access international markets.

According to a [comprehensive scenario modelling](#) study undertaken by the European Centre for International Political Economy (ECIPE), potential tariff revenue losses are far outweighed by the GDP losses that would accrue from the unilateral imposition of tariffs (“Scenario 1”), or, what is more likely, the reciprocal imposition of tariffs (“Scenario 2”).

Under Scenario 1, tariffs on electronic transmissions (using the average tariff rates assumed by UNCTAD on a Most Favoured Nation basis) lead to immense GDP losses. The projected GDP loss for the Indian economy, for instance, is US\$716 million as against expected tariff revenue of \$US39 million. Further investment (domestic and foreign direct), jobs and welfare losses are also suffered.

As the ECIPE paper notes, if one or a small number of countries impose tariffs on electronic transmissions, “it is a political fallacy to assume that a broader group of WTO Members would not follow suit and begin to consider their own tariffs”. Net losses are even more pronounced in Scenario 2. The GDP losses for India, for instance, would amount to US\$1.9 billion, against an expected tariff revenue of US\$31 million. In addition to these losses, there would also be considerable losses in domestic taxes.

A [further study](#) from the Organization for Economic Cooperation and Development builds on these findings, noting that the revenue implications of lifting the Moratorium are “likely to be relatively small and would come at the expense of more significant gains in consumer welfare and export competitiveness”.

Considered in totality, the projected economic losses from the imposition of tariffs on electronic transmissions far outweigh any projected revenues.

HOW THE UNILATERAL IMPOSITION OF CUSTOMS DUTIES ON ELECTRONIC TRANSMISSIONS COULD FRAGMENT THE INTERNATIONAL TRADING SYSTEM

Bans on the imposition of customs duties on electronic transmissions are plentiful within bilateral, regional and mega-regional trade agreements. Fifteen APEC members, for instance, have entered into agreements containing a ban since 2008.

Some agreements contain affirmations of the moratorium as agreed in WTO Ministerials. Many, however, are truly “WTO-plus” obligations, creating permanent bans on the imposition of customs duties on electronic transmissions between parties to the relevant agreement.

A notable feature of these agreements is that they have increasingly aligned with the spirit and substance of the moratorium. Its lapse would therefore create a further added degree of complexity on the interaction between the multilateral trading system and the growing web of bilateral and regional trading agreements.

Ironically, given its widespread adoption in preferential trade agreements, suspending the moratorium at this juncture will actually contribute to the ‘spaghetti bowl’ phenomenon – adding further complexity to the rules governing cross-border commerce.

CUSTOMS DUTIES ON ELECTRONIC TRANSMISSIONS CAN’T EASILY BE CALCULATED

Ad valorem assessments are unworkable

Putting aside the unsettled and critical issue of whether an electronic transmission constitutes a good, service, or ‘bundle of rights’ akin to copyright or intellectual property, calculating the economic value of an individual electronic transmission is in many instances an impossible task.

Hypothetical 1: Live-streaming a performance

Consider the hypothetical performer—famous Bollywood actress and singer-songwriter “Priyanka”. Priyanka is debuting a song and opts to livestream it to her millions of fans across several channels. The performance is transmitted electronically to her approximately 44 million Priyanka followers in more than 100 countries.

If an “electronic transmission” is considered an intangible good (an unsettled area of trade law and the working assumption of the Government of Indonesia in its new Chapter 99 to the Indonesian Customs Tariff Book), then there are

potentially millions of electronic transmissions of Priyanka's performance, transmitted to as many as 100 countries.

Assessing the economic value per view in this instance is not possible.

There are countless forms of electronic transmissions that are practically impossible to quantify and track, not to mention difficult to value from a customs valuation perspective.

Consider the steady flow of emails necessary to facilitate business-to-business and business-to-consumer transactions. Ascribing an arbitrary economic value to these electronic transmissions to enable customs declarations premised on *ad valorem* duty assessments will create perverse, unintended consequences, potentially placing a direct disincentive on electronic communication and stifling digital innovation.

Hypothetical 2: Business to business data flows—service optimization

Consider South African haulage and logistics provider Cyril, who has recently purchased trucks for his business from a prominent European firm. The trucks are equipped with on-board connected devices and sensors that capture data on the truck's performance, component wear and tear, safety and handling.

This data is then transmitted to a data centre managed by the European vendor, where it is analysed and processed to provide real-time insights back to Cyril in South Africa. This data enables Cyril to optimise the performance of his fleet, avoid unnecessary downtime, reduce fuel waste, and assess and improve driver skills.

Cyril is but one of the European firm's many customers worldwide. Hundreds of thousands of trucks covering billions of kilometres every year send to and receive data from the European firm. This amounts to billions of bits of data crossing multiple jurisdictions as the basis for this value-added service.

Assessing the value per data point in this business-to-business package service is not feasible.

Non-ad valorem assessments would be highly distortive

To undertake a non-*ad valorem* duty assessment, there must be some metric upon which an assessment can be made. Two methods of non-*ad valorem* assessment appear theoretically possible:

1. Number of bits

A possible form of assessment would be to base an applied rate of duty on the number of bytes or bits (series of zeroes and ones). Yet determining a customs duty based on file size will grossly distort the

digital economy. If an incentive is placed on reducing file size many industries will be greatly affected, from advanced manufacturing to the creative industries.

Of note is that many developing countries claim a substantial trade surplus in their creative industries, including Indonesia and India.

2. Units as a whole

Given the difficulties in assessing value as the basis for determining a duty, and the perverse and unwelcome side effects of calculating a duty based on file size, it may seem attractive to calculate duty based on a single 'unit', where that is taken to mean an intangible good (such as operating software or a movie).

To do this would disregard the last 20 years of internet infrastructure development. When an intangible is transferred electronically to a particular destination, elements of the intangible are often sourced from servers located in multiple jurisdictions, a fact explored in further detail below.

THERE IS NO SETTLED MEANING OF THE TERM “ELECTRONIC TRANSMISSIONS”

The current conversation on the moratorium fails to acknowledge the lack of clarity surrounding the meaning of the term “electronic transmissions”.

It is notable that calls to allow the moratorium to lapse often assume - absent consensus - that “electronic transmissions” mean the online trade of digitizable products or the online delivery, e.g., of music, e-books, films, software and video games.

Yet the term itself remains unsettled and is potentially very broad, capable of encompassing:

- internet publishing, web search portals, directories and information services
- online retail services
- online photographic, motion picture and sound recordings
- digital advertising
- data hosting, system (e.g. cloud) services and data transfers.

To explore how electronic transmissions work in practice, consider the following hypothetical example, which serves to illustrate just how technically, legally and operationally complex it would be to levy customs duties on just one form of electronic transmissions: the data packets required to stream a movie.

Hypothetical 3: Online Streaming

Nasra, based in Jakarta, subscribes to a streaming platform headquartered in the United States. She would like to watch a movie on her smartphone.

Under current technology, data are sent via packet switching—a process whereby data are divided into small units, called packets, and transmitted independently via the Internet. The size of a typical individual IP packet is anywhere from 1.5 to 64 kilobytes.

Browsing through the titles available to her, Nasra's smartphone receives electronic transmissions to the streaming platform's application on her smartphone. Those transmissions are stored on a third party's distributed system in the cloud, and are transmitted to Nasra's smartphone from Singapore, Hong Kong SAR, Mumbai and Sydney.

For Nasra's movie, there could be up to 5 million data packets, or electronic transmissions, sent to her smartphone. This number is not predetermined, as it is a function of the speed of her Internet Service Provider at any point in time—the streaming platform having developed sophisticated technology to determine the optimal video quality consistent with Nasra's internet connectivity. The higher the speed, the greater the number of total data packets.

When Nasra clicks play, the platform sends a signal to the 10 nearest servers to Nasra, a subset of the thousands of servers that the streaming platform maintains globally. Packets of data are received from Australia, Japan, Guam, New Zealand, South Korea and The Philippines, until the application determines that Singapore provides the more efficient connection.

Part-way through Nasra's streaming of the movie, the streaming platform engages in a routine redundancy check, momentarily suspending service through the region, causing the application to automatically receive data packets from a different geographic region, in this case from several countries within the European Union.

By the time Nasra has finished watching her movie, she has received millions of electronic transmissions from at least 9 separate jurisdictions.

This example highlights the manifold complexities that arise when seeking to hypothesise a workable regime for levying customs duties on electronic transmissions. Given the carrier medium, regarding the entire movie as an individual electronic transmission is conceptually unsound.

Given the underlying ICT infrastructure that supports it, a single certificate of origin or customs declaration for the entire movie is untenable. In this context, requiring customs formalities for every electronic transmission would be next to impossible to comply with, for businesses of any size.

Unilateral moves to define and characterise “electronic transmissions”, absent multilateral negotiation and agreement, will further fragment the international trading regime and strain already fraying dispute resolution processes.

IMPOSING CUSTOMS DUTIES ON ELECTRONIC TRANSMISSIONS IS NOT TECHNOLOGICALLY AND ADMINISTRATIVELY VIABLE

Assuming the conceptual issues explored above can be overcome, it is an open question whether it would be technically feasible to operate a system for the collection of tariffs on electronic transmissions.

Given that “electronic transmissions” are the data making up an intangible good or service, customs declarations could run into the millions per good or service and be sourced from many jurisdictions. Requiring a customs declaration to accompany data flows would place an immense burden on the efficient functioning of global commerce and the free and open internet upon which it relies.

It would also place an enormous burden on customs bodies and could, assuming the value of electronic transmissions can be readily ascertained, impose administrative costs on customs bodies far outweighing the value of the electronic transmissions themselves.

CONCLUSION

On the basis of all existing evidence, there is a strong case for renewing the moratorium at the WTO’s 12th Ministerial Conference this month.

Imposing customs duties on digital transactions would be technically unfeasible and create severe distortions to the provision of online services to businesses and consumers – while offering little, if any, upside in terms of revenue generation.

In addition to renewing the moratorium for a further two years, we also encourage WTO members to consider mandating a competent international institution – such as the World Bank – to conduct a comprehensive technical and economic study on the issue of applying duties to electronic transmissions.