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Policy Dilemmas for ASEAN Developing Countries Arising from the Tariff Moratorium on Electronically Transmitted Goods

Manuel F. Montes and Peter Lunenborg



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POLICY DILEMMAS FOR ASEAN DEVELOPING COUNTRIES ARISING FROM THE TARIFF MORATORIUM ON ELECTRONICALLY TRANSMITTED GOODS

Manuel F. Montes and Peter Lunenborg*

SOUTH CENTRE

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* Manuel F. Montes is Senior Advisor, Society for International Development, and Peter Lunenborg is Senior Programme Officer at the South Centre. An earlier version of this paper was presented at the 20-23 November 2020 workshop on “Facilitating Digital Trade in ASEAN and East Asia” convened by Jakarta-based institute ERIA (Economic Research Institute for ASEAN and East Asia). The authors gratefully acknowledge the comments of Carlos Correa, South Centre Executive Director, and the comments and suggestions of Dr. Lurong Chen of ERIA. The authors take full responsibility for all errors, opinions and analyses.

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South Centre
International Environment House 2
Chemin de Balexert 7–9
POB 228, 1211 Geneva 19
Switzerland
Tel. (41) 022 791 80 50
south@southcentre.int
www.southcentre.int

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ABSTRACT

This paper examines the policy dilemmas facing developing countries in ASEAN in working within, and participating in, international negotiations toward making permanent the WTO tariff moratorium on duties applicable to electronically transmitted goods. In the context of ASEAN's countries' trade-oriented development strategies, the analysis considers the moratorium's impact on tariff revenues, economic performance, and industrial development prospects. The paper presents estimates of tariff impacts and studies the national policy implications of the moratorium. An extension of the moratorium would establish a special regime for a class of goods whose components are contentiously defined but with a potential of being an important source of tariff revenue and of having an impact on industrial development in the future for developing ASEAN countries. This special regime for electronically transmitted goods cannot be justified as a global public good and is unnecessary. The removal of the regime would restore national space in developing ASEAN countries and allow them to obtain tariff revenues from the trade of these goods and to upgrade domestic capabilities in participating in the digital economy.

Le présent document s'intéresse au dilemme auquel les pays en développement de l'ANASE sont confrontés dans le cadre de leur participation aux négociations internationales qui visent à pérenniser la pratique, adoptée à titre provisoire par les membres de l'OMC, consistant à ne pas imposer de droits de douane sur les transmissions électroniques. Il analyse, dans le contexte des stratégies de développement axées sur le commerce poursuivies par les pays de l'ANASE, l'impact du moratoire sur les revenus qu'ils tirent de la perception de droits de douane, leurs performances économiques et leurs perspectives de développement sur le plan industriel. Il présente des estimations des conséquences résultant de cette décision sur les droits de douane et étudie les répercussions du moratoire pour ces pays sur le plan politique. Une extension du moratoire aurait pour effet d'instaurer un régime spécial pour une catégorie de biens dont les composants sont définis de manière contestable mais qui pourraient constituer une source importante de revenus et avoir un impact sur le développement industriel futur de ces pays. Pour autant, ce régime spécial, dont la nécessité n'est pas démontrée, ne peut être considéré comme un bien public mondial. Sa suppression permettrait aux pays en développement de l'ANASE de regagner leur indépendance, de tirer des revenus du commerce de ces biens et d'améliorer leurs capacités à participer à l'économie numérique.

En este documento se examinan los dilemas de política a los que se enfrentan los países en desarrollo de la ASEAN a la hora de trabajar y participar en las negociaciones internacionales destinadas a que se convierta en permanente la moratoria de la OMC sobre los derechos de aduana aplicables a las transmisiones electrónicas. En el contexto de las estrategias de desarrollo orientadas al comercio de los países de la ASEAN, el análisis examina la repercusión de la moratoria en los ingresos arancelarios, el desempeño económico y las perspectivas del desarrollo industrial. El documento presenta estimaciones sobre el impacto de los aranceles y estudia las consecuencias de la moratoria en las políticas nacionales. Una ampliación de la moratoria establecería un régimen especial para una clase de productos cuyos componentes tienen una definición polémica, aunque con la posibilidad de ser una fuente importante de ingresos arancelarios y de influir en el desarrollo industrial futuro de los países en desarrollo de la ASEAN. Este régimen especial para las transmisiones electrónicas no se puede justificar como un bien público mundial y es innecesario. La eliminación del régimen restablecería el espacio nacional en los países en desarrollo de la ASEAN y les permitiría obtener ingresos arancelarios del comercio de estos productos y mejorar la capacidad nacional para participar en la economía digital.

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1. INTRODUCTION

The digital economy emerged rapidly as a defining policy challenge for developing countries. This study examines the national and international policy issues confronting the countries in Southeast Asia as a collection of rising developing countries in relation to electronically transmittable (ET) goods within the overall context of the escalating growth of the digital economy.

Digital economy activities are essentially globalized in nature: their built-in economies of scope and scale oblige their provision beyond national markets. As a group of countries that have decisively hitched their development ambitions to the global economy, the digital economy's policy challenges are crucial for Southeast Asian countries and for the sub-region. Development requires social progress beyond the avid consumption of new technologies and participation in new-fangled international markets wrought by the digital economy. Development requires the progressive and steady buildup of domestic productive capacities in the populace and the diversification of the domestic economy.

This research paper will examine the policy dilemmas arising from the temporary World Trade Organization (WTO) tariff moratorium from 1998 on electronically transmitted goods. The immediate issue is whether the moratorium should be made permanent, a proposal supported, for instance, by the Pathfinder group of countries in the Asia-Pacific Economic Cooperation (APEC).¹ What is at stake making permanent the global moratorium for economies in the Association of South-East Asian Nations (ASEAN) and East Asia? The rest of the paper approaches the policy dilemmas involved in the following manner. Section 2 reviews key trade and development indicators (export performance, value-added contents of exports, structural change) of the economies of the region. Section 3 explores the export potential and the possibilities in development paths pertinent to ET goods. Section 4 explores whether a global regime of restricting tariff policies by sovereign states such as the moratorium in a specific type² of trade is necessary or advantageous to development. Section 5 assesses the role of tariffs as a policy tool for development in two aspects: as a source of government revenue and as a tool for the selective building of international competitiveness. Finally, Section 6 poses a set of implications of the analysis for economic policy and presents some conclusions.

Starting as a temporary measure in 1998 and renewed in successive negotiated decisions, the tariff moratorium on ET products is a voluntary international contract³ among the WTO Members. As an agreement among sovereign states, it is an exercise in setting international rules and institutions, albeit, until now, a temporary regime. What is at stake now is whether this regime should be made permanent as proposed by the European Union (EU) (WTO, 2019a), the United States (US) (WTO, 2019b), Singapore (WTO, 2019c), New Zealand (WTO, 2019d), and Canada (WTO, 2019e).

The debate over making the tariff moratorium on ET products permanent occurs with a backdrop of rapid change in public oversight over the digital economies, particularly the large private players in the sector. Public authorities took an unquestionably forbearing approach

¹ These countries are Australia, Canada, Chile, Korea, Mexico, New Zealand, Peru, Singapore, the United States and Chinese Taipei (USTR, 2016).

² This analysis relies heavily on the WTO differentiation between goods and services and proceeds on the basis that the tariff moratorium applies to goods alone, not, for example, the transmission of services.

³ The moratorium appears not to be directly within the scope of the WTO Dispute Settlement Understanding, on the ground that it is not listed in the Appendix to the Understanding, "although it still imposes a legal obligation that may be subject to other forms of review and pressure" (Kelsey *et al.*, 2020, p. 42).

with regard to regulation of the digital economy during its rapid rise. This approach is consistent with historical precedents when the nature of the technology was unfamiliar to leaders who do not participate or are not involved in its development. Historical precedents also indicate that familiarity born of widespread use and mounting experience with the new technology's pitfalls provoke a period of widening state regulation and standard setting. This process has clearly begun⁴ in the case of the digital economy and the debate on making permanent the tariff moratorium on electronically transmitted goods takes place within this global process.

Dominant digital businesses are seeking mightily not to be regulated based on the arguments of "creative destruction"⁵ and the positive social impacts of "disruption" - a word well-associated with the digital economy. The "disruption" at stake here is whether making permanent the 25-year moratorium on tariffs on internationally traded digital goods will introduce new competitive pressures in the domestic sphere to boost activities that promote efficiency and welfare.

While the period of the moratorium saw the rapid international oligopolization of key markets by leading, mostly US-based, digital companies, the record suggests that the digital divide between developed and developing countries has not narrowed, even though East Asia has kept pace better than other sub regions. The tariff moratorium has tied the hands of governments around the world from raising public revenues from a new and growing sector. This is discussed in Section 5.1. In the context of the United Nations (UN) 's Sustainable Development Goals (SDGs), which all Member States have committed to, increasing tax revenues has become especially critical.⁶

Mainly stemming from dissatisfaction with the outcomes of essentially market-led strategies in Africa and Latin America in the last three decades, there is a revival of interest in the state's vital role in industrial development; this is reviewed in Section 5.2. The moratorium prevents governments from utilizing tariffs to foster domestic startups and risk-taking in this new and growing sector until they achieve international competitiveness.

The proposal to make permanent the WTO tariff moratorium on ET trade takes place in a global economy undergoing the proliferation of digital technology applications. Digital technology has rapidly revolutionized operations in existing spheres of economic activity, telecommunications, banking and payments, and transportation, and is disrupting business models. It is also, itself, creating new arrangements in social and economic interaction, such as new marketplaces and digital platforms.

Digital technology is making possible the provision of products and services across national borders without a tangible (meaning something "physical" or something states can generally retrieve, such as the Earth time when and location where a service is provided) good or service crossing the border. Taxes and tariffs can only be collected on defined and measured quantities of goods and services. By deploying digital technology, international companies, a

⁴ For example, in the midst of the Covid-19 pandemic, the EU has formulated a regulatory 'hit list' targeting Big Tech mainly directed at curbing their anti-competitive actions (Financial Times, 2020b). About a week earlier, a US Congressional Report found that "Amazon, Apple, Google and Facebook have all abused their market power" and must restructure their businesses, even though Republican Party parliamentarians expressed reservations about the policy recommendation.

⁵ Schumpeter (1942), the originator of the concept of "creative destruction" which he applied at the multi-sectoral, economy-wide level, himself proposed that unregulated creative destruction is unsustainable and that economy-wide regulation is inevitable.

⁶ For instance SDG target 17.1: strengthen domestic resource mobilization, including through international support to developing countries to improve domestic capacity for tax and other revenue collection.

category increasingly dominated by large companies from developed countries benefiting from oligopolistic positions in markets, can extract value and profits from markets and economies in which they have no physical presence. This process of “de-materialization” of economic events – on which taxes and tariffs have typically been collected – can have serious consequences on public finances everywhere.

2. ASEAN: KEY TRADE AND DEVELOPMENT INDICATORS

First, it is important to set the stage for the analysis and policy proposals by recognizing that the economies of focus in this paper are all robust trading nations and have relied heavily on their trading prowess to pursue their development ambitions. In ASEAN, the growth of the digital economy should represent a new open ground for trade-oriented growth. How should these countries engage with the existing international structure and rules governing the digital economy?

2.1 ASEAN export performance

How will a permanent moratorium on ET tariffs, as proposed by a group of developed countries in WTO shape the coming challenges of economies in the ASEAN region?

The export success of ASEAN is portrayed in Table 1. Among ASEAN countries, exports of goods and services as a proportion of gross domestic product (GDP), excluding Singapore, dwarfs that of China by more than twice, on goods and by almost five times on services. Compared to other developing countries, ASEAN exports, excluding Singapore, are 1.5 times higher.

ASEAN's reliance on exporting is higher inclusive of Singapore, which participates in much re-exporting. Singapore developed its exporting prowess as a development strategy to upgrade the capabilities of its own population.

Table 1: Export Performance versus Other Global Groupings, 2018
(per cent of GDP)

Country (group)	Export of goods as % of GDP	Export of services as % of GDP	Exports of goods and services as % of GDP
China	17.9	1.2	19.1
East Asia & Pacific	24.7	4.5	29.2
European Union	37.6	11.7	49.3
Hong Kong SAR, China	157.2	31.2	188.4
Japan	14.9	3.9	18.8
Singapore	110.6	67.0	177.7
United States	8.1	4.1	12.2
World	22.7	6.5	29.2
ASEAN	48.2	13.3	61.4
Developing countries	25.3	3.1	28.3
Non-developing countries	21.1	8.7	29.8
ASEAN excl. Singapore	39.3	5.6	45.0

Source: Authors' calculations using three datasets from World Bank Open Data (<https://data.worldbank.org/>): 1) 'Exports of goods and services (BoP, current US\$)' (BX.GSR.GNFS.CD); 2) 'Merchandise exports (current US\$)' (TX.VAL.MRCH.CD.WT) and 3) 'GDP (current US\$)' (NY.GDP.MKTP.CD)

2.2 ASEAN value-added contents of exports

As fierce trading nations, ASEAN countries should consistently monitor trends in the value-added content of their exports. Recent trends, from 2005, show a positive increase (Table 2). As a proportion of world value-added, ASEAN countries as a group, including Singapore, increased the value-added in exports from 19.7 to 21.2 per cent. As a measure of catch-up with developed countries, ASEAN value-added content of exports increased from 9.1 to 10.9 per cent.

The conclusion from the table is that ASEAN is keeping up with the Organisation for Economic Co-operation and Development (OECD) and catching up with the world.

Table 2: Comparative Trends in Value-Added in Exports, 2005-16
(USD billion and per cent)

	2005	2010	2015	2016	Std. Dev. 2005 to 2016
OECD member countries	1,707,980	2,982,580	3,422,230	3,372,339	
ASEAN	336,534	602,716	709,809	715,038	
Singapore	81,367	147,434	177,964	180,668	
ASEAN excl SGP	255,167	455,282	531,845	534,371	
ASEAN as share of OECD	19.7%	20.2%	20.7%	21.2%	0.80%
ASEAN excl SGP as share of OECD	14.9%	15.3%	15.5%	15.8%	0.55%
Non-OECD economies	1,975,935	3,107,021	3,344,395	3,207,323	
World	3,683,915	6,089,601	6,766,625	6,579,662	
ASEAN as share of world	9.1%	9.9%	10.5%	10.9%	0.63%
ASEAN excl SGP as share of world	6.9%	7.5%	7.9%	8.1%	0.44%

Source: Authors' calculations using OECD Trade in Value Added Statistics (<https://stats.oecd.org/>), dataset 'Domestic value added content of gross exports' (EXGR_DVA)

Note: The standard deviation is calculated from annual data of percentages for the years 2005 to 2016.

2.3 ASEAN structural change

Structural change, meaning the shift in the weight of production (and employment) from agriculture to industry to services, is a basic indicator of development. Table 3 for manufacturing, which is a central subsector of industry, and Table 4, for services, provide some hints of some of the challenges facing countries in the ASEAN region, in five-year intervals starting in 1975 up to 2019. These tables suggest that ASEAN countries had been shifting their economies steadily to manufacturing and services in the period 1975-2005 but more recently starting from 2005, there are distinct signs of a slowing of structural change and perhaps even some reversals, particularly in Indonesia, Malaysia and Philippines.

Table 3: Manufacturing as a Proportion of GDP (per cent)

Country	1975	1985	1995	2005	2015	2019
Brunei						
Darussalam	11.7	10.1	13.0	12.3	14.5	13.6
Indonesia		16.4	24.1	27.4	21.0	19.7

Cambodia			9.1	17.8	16.0	16.3
Lao PDR			6.0	9.6	8.2	7.5
Myanmar				12.8	21.3	24.8
Malaysia	18.7	19.7	26.4	27.5	22.3	21.5
Philippines	25.7	25.2	23.0	24.3	19.9	18.5
Singapore	21.4	20.1	24.0	27.1	18.1	19.8
Thailand	18.7	21.9	26.2	29.6	27.4	25.3
Vietnam		20.5	15.0	18.8	13.7	16.5
ASEAN (simple average)	19.2	19.1	19.5	20.7	18.2	18.0

Source: Authors' calculations using World Bank Open Data (<https://data.worldbank.org/>), dataset 'Manufacturing, value added (% of GDP)' (NV.IND.MANF.ZS)

The shift to manufacturing has been strongest for Cambodia, Myanmar and Thailand. However, for the other countries there could be a slowdown or some reversal especially when comparing 2005 levels with 2019 levels. The Singaporean shift out of manufacturing would be consistent with the pattern of a relatively advanced economy, but the patterns in the other countries is a source of disquiet. External factors could also be at play, including the rise of imports of manufactured goods from China. In this situation, countries such as Indonesia, Philippines, and Malaysia would find caution in agreeing to a permanent moratorium to be prudent.

In the case of services, the trend is still in the increasing direction with some evidence of some slowing down. This indicates that a "premature" shift into services – particularly in low skill services - happening in many other developing countries does not seem to be an important factor in most ASEAN countries. In ASEAN, the share of services increased from 45/46 to 49 per cent between the late 1990s/early 2000s and 2019. Ensuring that the shift to services is weighted more toward high skill services will be important. As discussed in Section 5.2, building domestic capabilities in high skill services, such as software maintenance/adaptation and the editing of publications, can be facilitated by selective protection, including through tariffs. This can build a cohort of domestic service capabilities for domestic and international markets.

Table 4: Services as a Proportion of GDP (per cent)

Country	1975	1985	1995	2005	2015	2019
Brunei						
Darussalam	9.1	27.0	44.6	27.5	39.4	38.2
Indonesia		41.9	41.1	40.3	43.3	44.2
Cambodia			34.2	39.1	39.8	38.8
Lao PDR			40.9	43.4	44.2	42.7
Myanmar					39.4	40.7
Malaysia			47.9	44.2	52.0	54.2
Philippines	34.7	40.4	46.3	52.7	58.5	61.0
Singapore	63.1	63.1	61.6	64.1	70.0	70.4
Thailand			53.6	52.3	54.9	58.6
Vietnam			44.1	42.6	39.7	41.6
ASEAN (simple average)	35.6	43.1	46.0	45.1	48.1	49.0

Source: Authors' calculations using World Bank Open Data (<https://data.worldbank.org/>), dataset 'Services, value added (% of GDP)' (NV.SRV.TOTL.ZS)

3. THE EXPORT POTENTIAL AND VARIETY OF DEVELOPMENT PATHS IN ELECTRONICALLY TRANSMITTABLE GOODS

ASEAN countries have offensive interests in exporting ET goods for which a tariff moratorium under typical conditions would be congenial to further growth. This section will discuss the possible impact on these interests of the end of the WTO tariff moratorium.

For the group of developing countries as a whole, Kelsey *et al.* (2020, p. 73) find the shift to online transmission of ET product exports to developed-country destinations to be significant. The shift is not surprising for many reasons. Developed country destinations have more developed infrastructure for receiving electronic transmissions and their own businesses and consumers are more comfortable accessing ET products (for example, because of the affordable availability of printers in homes and offices for printed material). The same study found that this shift movement to transmission online since 2006 was “particularly acute” for the region that is often labeled as ‘Greater China’, meaning the People’s Republic of China (“China”), Hong Kong-China, Macao-China, and Taipei-China. However, the shift was not very dramatic for the other developing countries.

In this study, we tried to estimate the corresponding shift for ASEAN as a whole and this is reported in Table 5. Table 5 reports that among ASEAN countries, the growth rate of ET exports between 2001 and 2018 is 788 per cent since the level in 2001, because these countries started off at a low base in 2001; if Singapore were included, the total growth is lower (209 per cent). The ASEAN ET export growth since 2001 exceeds that of developing countries (411 per cent). The data suggests that growing ET exports hold great promise for ASEAN countries.

Table 5: ET Exports, including ASEAN, 2001-2018

ET exports 2001 and 2018	2001 (USD bn)	2018 (USD bn)	Total Growth Rate, 2001-18 (%),	Absolute Growth, 2001-18 (USD bn)	ET exports as share of GDP (2018)
World	58.70	130.42	122	71.72	0.15%
Non-developing countries	47.22	71.73	52	24.52	0.13%
Developing countries	11.48	58.69	411	47.21	0.18%
EU28	30.16	50.26	67	20.10	0.32%
China	1.78	21.46	1103	19.68	0.15%
US	9.99	12.57	26	2.58	0.06%
Hong Kong, China	3.37	11.78	250	8.41	3.26%
ASEAN	3.07	9.50	209	6.43	0.32%
ASEAN excl. Singapore	0.56	4.96	788	4.40	0.19%
Japan	2.96	4.59	55	1.63	0.09%
Singapore	2.51	4.54	81	2.03	1.22%

Source: Authors’ calculations.

Notes: ET export products as listed in Annex.

Export data for groups (EU, ASEAN) includes intra-group exports.

What would be the effect of a removal of tariff moratorium on prospects of future ASEAN ET exports? The key issue is whether the growth of ASEAN ET exports will be inhibited by retaliatory tariffs of importing countries. In this version, this study does not offer a direct empirical analysis of the matter as it applies to ASEAN. In regard mainly to the tariff revenue question, Kelsey *et al.* (2020, p. 73) suggests that developing countries, including China, which is a significant ET exporter, would still obtain significant net revenues because they import more than they export. There is a separate question of course on where the incidence of the tariffs falls, which depends on demand and supply elasticities. At present, there is a high degree of uncertainty over the openness of the global trading system in the medium term.

In the case of exports, the promising potential for many developing countries appear to be in specific areas of software products (such as web design, adaptation of software to local conditions, troubleshooting), remote services (such as remote accounting and financial services and medical procedures), and the export of cultural products (such as movies and telenovelas). Some leading developing countries and a least developed country (LDC) such as Bangladesh are significantly participating in these sectors and have a huge growth potential.

This study takes the position of a strict separation between ET products and services, which are disciplined under the General Agreement on Trade in Services (GATS). A permanent moratorium might appear to be in the interest of exporters and potential exporters. The ambiguity of what are goods and services in ET does not justify developing country support for a moratorium. For ETs that are services, these fall under a different category of WTO disciplines and a permanent moratorium does not protect exporters from taxes that importing countries could levy on them. For those ETs which can be agreed to be goods, it is possible for importers to levy tariffs on the goods, though not on the transmission even during a moratorium, which is the position that Indonesia announced in the WTO's Eleventh Ministerial Conference (WTO, 2017).

4. SHOULD TARIFFS ON ET GOODS BE SUBJECT TO INTERNATIONAL DISCIPLINES?

With the prospect of the temporary tariff moratorium becoming permanent, it becomes even more critical to consider what principles should guide the decisions among sovereign states in installing international regimes. Deficiencies in the global diplomatic and governance framework nurtures the proliferation of trade agreements, resulting in a “spaghetti bowl,” in rule setting. In considering the question of straightening out the contents of this bowl, Nakatomi (2019, p. 31) proposes as the problematique the question of what are the “boundaries of allowable⁷ regulations and balance” of national regulations.

In the context of the built-up economic interdependence among countries, Rodrik (2020) proposes an approach to determine which issues should be subject to international discipline. While almost all national policies have an international impact, these issues can be grouped into two categories: (1) “genuine public goods” (GPGs) for which there is a standard definition from the field of public finance and (2) “beggar thy neighbor” (BTN) policies. Climate change, because there is a finite emission space to be shared globally by disciplining individual behavior, is a good example of a GPG. BTN policies are those which generate an income transfer to a home country *only* to the extent that they harm other countries. In a BTN, either all⁸ countries, including the home country are harmed or the value of the harm on others exceeds the benefits to the home country and thus there is a global deadweight loss. Rodrik (2020) proposes that only GPGs and BTNs should be lodged at the international level, the rest should be reserved for domestic policy.

Most other trade policies are not BTN but what could be called “Beggar Thyself” or “Enrich Thy Neighbor.” Export subsidies degrade a home country’s terms of trade and improve those of its trading partners. Unilateral trade liberalization which degrades a home country’s terms of trade and improves those of others are not BTNs; this policy does not create a deadweight loss and has not been subject to international restrictions.

Many policies that are not “genuine” BTNs but have been internationally disciplined anyway are industrial policies, including trade-related investment measures (TRIMS) such as local content requirements. While these policies have spillovers on other countries, they do not cause damage at the overall global level.

Rodrik’s (2020) framework seeks to be parsimonious about which policies should be subject to international discipline: based on economic principles, these should only be the policies that create a global deadweight loss. All other decisions must be reserved for local determination.

⁷ The discussion in the literature portends to some ambiguity in what “allowable” means. One can differentiate between what is allowable as a matter of multilateral discipline (based on its impact on other countries) versus a matter of what is considered “best practice” in development policy (for example, whether the theory that higher tariffs are inimical to faster development is being applied).

⁸ The phrase BTN originated in the 1930s when countries sought to devalue their currencies to export more and import less, provoking symmetric devaluations in their trading partners thereby causing losses to everyone.

5. TARIFFS AS POLICY TOOL FOR DEVELOPMENT

Tariffs have been an indispensable tool of development policy. This section will discuss the role of tariffs in two ways: (1) as a source of government revenue and (2) as a means of fostering industries and sectors in the national economy to diversify it.

5.1 Tariffs as source of government revenue

5.1.1 Higher dependence of developing countries on tariff revenues

Import tariffs have been an early source of state revenue in poorest countries. These can be collected in the ports of entry of a country on the penalty of confiscation. As countries move up the development ladder, the historical pattern is that their dependence on tariffs on imports declines. The reduction in the proportion of government revenues from tariffs declines because of (1) the emergence of other sectors where revenues can be collected and (2) government capability for enforcing taxes in other areas where collection is more difficult, such as in the case of personal income taxes, improves. In addition, since the late 1970s, when the criterion of reducing tariff rates and other import restrictions became the touchstone of development policy, developing countries have been reducing import tariffs, even before the emergence of other, more modern sectors, which could be a substitute source of tax revenue and even to the point of endangering their overall revenue performance.

The International Monetary Fund (IMF) has assisted developing countries in replacing revenues lost from lowering tariffs by introducing internally collected indirect taxes, specifically the system of value added taxes (VAT). An IMF study recognized the limits of this strategy. Based on panel data from 111 countries in the period 1975 to 2000, Baunsgaard and Keen (2005), in an IMF working paper, find that low-income countries (which are those most dependent on trade tax revenues) have recovered, at best, no more than about 30 cents of each lost dollar through the introduction of VAT. For middle-income countries, recovery has been in the order of 45–60 cents for each dollar of lost trade tax revenue. In the literature, no comparable alternative finding⁹ has emerged.

Among the ASEAN countries, the historical pattern of dependence on import tariff revenues is broadly consistent with (or is not contradicted by) the record. Figure 1 indicates that among these countries, Singapore and Malaysia have the lowest dependence on import tariffs. The other economies have greater dependence roughly in accordance with their development status. The possible outlier is the Philippines which exhibits the highest proportion of dependence on import tariffs. It is notable that the Philippines is more dependent on import tariffs despite a schedule-enforced import liberalization program in the 1980s, as the only economy in the region to undergo a structural adjustment¹⁰ program.

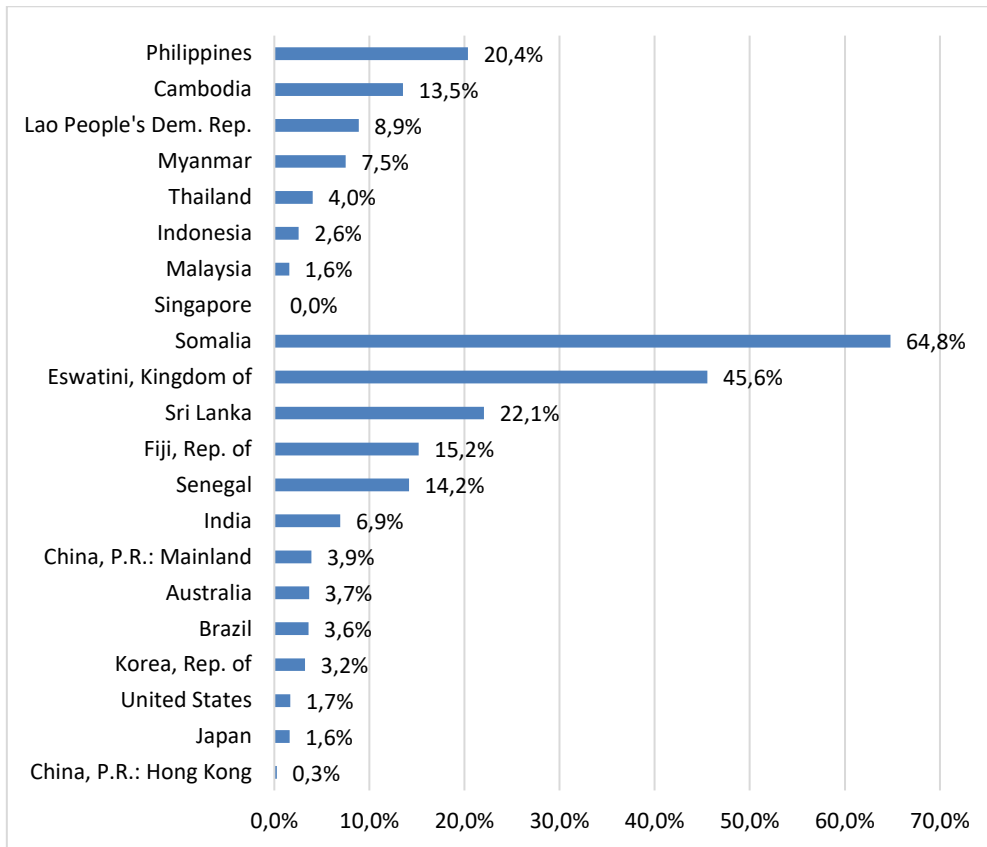
Among developing countries, the pattern of dependence on import tariffs as a proportion of total revenues is also broadly confirmed (Figure 1). Somalia and Eswatini have high dependence, the United States and Japan, have low dependence. Hong Kong, China, which is basically a free port like Singapore and not a developed country, has low dependence. A

⁹ See also Cage and Gadenne (2018).

¹⁰ The Philippines' greater dependence on tariffs can be associated with a combination of shortfalls in import liberalization, including in its design for inattention to transactions costs considerations (Clarete, 2005), or subsequent backtracking or whether other sectors have not grown as rapidly as envisioned under the liberalization programs themselves (Aldaba, 2013).

lower measured dependence on tariffs does not imply that such countries collect a smaller amount of trade taxes; they can still collect enormous tariff revenues because their bigger economies also import substantial volumes.

**Figure 1: Comparative Dependence on Tariffs among Countries
(Percent of total central government revenues from tariffs in 2018)**



Source: Authors' calculations based on IMF'S Government Finance Statistics (<https://data.imf.org/>)

The current temporary tariff moratorium on ET products is a noteworthy case of a uniform tariff rate of zero by all WTO Members on a class of imports whose global volume is rapidly growing. The zero tariff is undifferentiated with regard to trading participants' dependence on tariff revenues and therefore undifferentiated with regard to the level of development. The moratorium is effectively the polar opposite of the standard application of special and differential treatment; it is special treatment for growing sectors in advanced industrial economies.

5.1.2 Revenue implications of a permanent moratorium on tariffs on ET

Compared to developed countries, developing countries have a greater interest in the potential impact on fiscal revenues of a permanent moratorium on ET trade. This section discusses estimates of the impact on tariff revenue of a permanent tariff moratorium on electronically transmitted goods. It will also examine alternative studies from proponents of a permanent moratorium.

5.1.2.1 Loss in government revenue depends on the scope of the moratorium

Estimating the revenue impact of the ET moratorium must begin with a (brief) discussion of which economic transactions would be subject to tariff policy. The conception of what kinds of goods would the tariff moratorium apply to has been shifting, and in certain analyses to be discussed below even wander beyond goods into services. Appreciating the potential development impacts of a permanent tariff moratorium must be in the context of a shifting treatment of what is “electronically transmittable” transactions.

The original May 1998 moratorium concerned “not imposing customs duties on electronic transmissions,” which the WTO Secretariat explained did not apply to products that are delivered in tangible form even if ordered online (Kelsey *et al.*, 2020, p. 55). There are three key terms in the moratorium – “current practice”, “customs duties” and “electronic” – for which up to the present “there is still no clarity on what they mean” (Kelsey *et al.*, 2020, p. 60). The increasing possibility of delivering physical goods in digital form and shifts from sales of physical goods to the provision of services threatens to stretch the meaning of what is ET upon which the tariff moratorium would apply. It is also the case that the WTO’s 1998 work program on ecommerce included both goods and services.

On the basis of precedents and practices, Kelsey *et al.* (2020, p. 60) take the position that the moratorium applies only to goods.

Estimates of lost “tariffs” in this paper take the position that these are from customs duties foregone, levied on the importation of goods. Under this view, the regulation of services trade in the WTO is based on the GATS. In a 2016 analysis of the fiscal implications of the moratorium (WTO General Council, 2016), the WTO Secretariat based the assessment only on “digitizable goods” and did not include services. The WTO Note identified digitizable products at Harmonized System (HS) 6-digit product codes falling into the ET category. Among the products included are products like journals and periodicals, books, pamphlets, maps, newspapers, postcards, personal greeting cards, “other printed matter,” cinematographic film, video games, computer software, musical records, tapes and other sound or similar recordings; and other recorded media.

Indonesia has claimed that the ET moratorium only applies to the manner of transmission, and not to the content of what is transmitted (Kelsey *et al.*, 2020, p. 62). In an analogous manner, countries could not levy customs duties on water in a river flowing into their countries but could on the fishes swimming in that water. It would appear that the interpretation proposed by Indonesia would essentially render it toothless as products contained in or delivered through electronic transmissions (the fishes in the water) could face customs duties. This would provide countries with the policy space to apply duties to ET products themselves. Indonesia has introduced a new chapter among its tariff line listing called “Software and other digital goods transmitted electronically,” opening the possibility of levying tariffs on the imports at a later date. In June 2019, India and South Africa called for a common understanding on the scope of the moratorium before a decision to extend or make permanent the moratorium (WTO, 2019f).

WTO Members who have supported a permanent moratorium take the position that imported goods themselves are exempted from tariffs. The Comprehensive and Progressive Trans-Pacific Partnership Agreement (“CPTPP/TPPA”), in which the US was a dominant negotiator that subsequently withdrew from it, but which still includes Australia, Japan, and New Zealand, prohibits “customs duties on electronic transmissions, including content transmitted electronically” (CPTPP/TPPA 2016, Article 14.3, para. 1). The use of the word “content” is not defined in the agreement “which appears to be infinitely extendable as the digital technology evolves” (Kelsey *et al.*, 2020, p. 62). ASEAN states Malaysia, Singapore and Viet Nam are

signatories to the CPTPP/TPPA and this could preclude future efforts to apply tariffs on ET should these be considered useful for regional digital cooperation.

The successor to the North American Free Trade Agreement (NAFTA) (the United States-Mexico-Canada Agreement, “USMCA”) explicitly refers to computer programs, text, video, sound recording or other products that are digitally produced or transmitted. The EU in various free trade agreements has various definitions of what is involved in ET, including views that the supply of services within disciplines over cross-border services are electronic transmissions (Kelsey *et al.*, 2020, p. 63).

Beyond the evolution of legal texts in trade agreements, an economic analysis from a Europe-based research institution (ECIPE, 2019) on the tariff and economic impact of a permanent moratorium has used services trade data from the Global Trade Analysis Project (GTAP) data base as a proxy for the amount of ET goods trade. GTAP, a data set heavily used in Computable General Equilibrium (“CGE”) trade modelling, does not have the actual ET products broken out separately as group of products, which is what is required in CGE studies. The European Centre for International Political Economy (ECIPE) takes four categories of internationally traded services (wholesale and retail trading services, recreational and other services, communications and business services n.e.c.). To be able to apply a CGE evaluation, the study applies tariffs on these, and calculates the tariff losses, by using an estimated proportion inside each services category which could have applied to imports of ET goods. The advantage of the CGE methodology is that it produces an estimate of the economic impact of policy, beyond just the tariff losses.

Kelsey *et al.* (2020, p. 68) questions the appropriateness of using services trade as a proxy for ET product imports, since the moratorium does not apply to services trade (in which disciplines emanate from GATS) and applies only to goods on which tariffs can be levied, consistent with the WTO General Council (2016) product categories.

Banga (2019, pp. 393-394) raises objections to this data maneuver. For example, “online trade retailing services are included irrespective of what products these retailers are selling.” This could include “fruits, vegetables, furniture, machinery, etc., which have nothing to do with ET.”

In order to overcome data constraints, proxy methods are employed in empirical economics analyses. Officials and negotiators must take into account that their numerical results cannot be directly used for policy-making and could be misleading, even if these results confirm the policy preferences of their users.

5.1.2.2 Evaluation of different methodologies and estimates of losses in tariff revenue and in economic activity

A permanent moratorium will impact, first of all, fiscal revenues of importing countries. A policy evaluation of a lifting of the moratorium starts with estimating the revenue impact on importing countries of introducing tariffs on ET imports. Then there is the question of what the overall impact on economic performance would be in imposing tariffs. There are well-trodden methods – albeit with increasing insight on their limitations within the economics profession – for obtaining numerical estimates of the impact of tariff changes on tariffs revenues and on economic performance. This section shall present this study’s estimates of the tariff impact on Southeast Asian countries of the moratorium. It will also examine other studies, including those that are able to calculate economic impact.

This study estimates the tariff losses of the moratorium for ASEAN countries by applying a methodology introduced in UNCTAD (2019) for assessing tariff losses among developing countries. With a slight variation on the years utilized for the historical data, Kelsey *et al.* (2020) recalculated the UNCTAD (2019) and arrived at values only slightly lower than UNCTAD

(2019). The methodology relies on estimating a reasonable figure for the unobserved quantity of ET imports. The method assumes that the historical growth (about a decade from the turn of the century) of the physical version of the imports extends into the most recent years. For most countries, the actual data exhibits a plateauing of the physical imports and the difference between the extrapolated total imports and the observed physical imports is associated with the imports that have been converted into electronic form. To calculate foregone tariffs, one would have to then apply average tariffs (either bound or applied tariffs) on the estimated ET imports.

In applying a methodology to ASEAN countries, an intermediate step is to make an estimate of the tariff rates that can be applied to ET imports. Table 6 reports the data we gathered on the average MFN (Most Favoured Nation) tariffs on the relevant tariff lines.

Table 6: Simple Average of MFN Applied Tariffs (per cent)

ASEAN country	ET product	Non-ET product
Singapore	0.0%	0.0%
Brunei Darussalam	0.2%	0.3%
Philippines	3.8%	6.1%
Myanmar	4.1%	6.5%
Indonesia	4.7%	8.1%
ASEAN average	5.4%	6.7%
Malaysia	5.5%	6.1%
Thailand	5.7%	11.2%
Viet Nam	8.5%	9.6%
Lao PDR	10.0%	8.6%
Cambodia	11.1%	11.2%

Source: International Trade Centre (ITC) Market Access Map for sample of tariff lines for which data was available (latest year available for each country)

This study's estimates of individual ASEAN country imports on electronically digitizable products and estimated tariff losses are reported in Table 7.

Table 7: Estimated ET Imports and Foregone Tariffs, ASEAN Countries
(figures in USD thousands)

ASEAN country	Estimated imports in 2017	Actual imports in 2017	Move online	MFN applied ET products	Tariff Revenue Loss (using applied tariffs)	Tariff Revenue Loss (using 'bound' tariff of 12.6%)
Singapore	2,733,541	2,501,920	231,621	0.0%	0	29,184
Malaysia*	446,785	842,616	-395,831	5.5%	0	0
Thailand	1,133,626	589,610	544,016	5.7%	30,768	68,546
Indonesia	1,416,198	575,310	840,888	4.7%	39,182	105,952
Philippines*	297,382	575,083	-277,701	3.8%	0	0
Viet Nam	2,354,121	554,047	1,800,074	8.5%	153,410	226,809
Cambodia	865,844	139,930	725,914	11.1%	80,401	91,465
Brunei Darussalam	92,514	12,474	80,040	0.2%	178	10,085

Total for ASEAN	9,340,012	5,790,990	3,549,022		303,939	532,042
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Source: Authors' calculations.

Note: Lao PDR and Myanmar excluded from the ASEAN estimate because import data is not available for the years 2001 to 2009.

Table 7 utilizes the averages from Table 6 for the MFN applied tariffs for each country. For bound tariffs, it uses the global average applied in UNCTAD (2019) and Kelsey *et al.* (2020) of 12.6 per cent. In reality, no bound tariffs for on-line ET goods currently exists (the moratorium bounds them temporarily at zero). Therefore, the theoretical tariff revenue loss could be much higher.

For some countries, such as the Philippines and Malaysia, the actual imports were higher than the estimated imports, which would imply that there was a move from on-line to off-line imports rather than vice versa... For these countries, the tariff losses are set to zero. ¹¹

ASEAN's total tariff revenue losses (revenue foregone) of a permanent moratorium are estimated to be in the range of \$304 to 523 million annually. The figures would probably be higher if data would have been available for Lao PDR and Myanmar. Viet Nam, Indonesia and Cambodia exhibit the largest tariffs foregone. Not coincidentally, these are the countries with relatively high applied duties on ET products. These are also among the countries which have shown resistance in the negotiations against a permanent moratorium and/or broad scope of application of the moratorium.

ASEAN losses from not collecting tariffs on ET products are in the order of \$532 million based on bound tariffs and \$304 million based on average MFN duties. The difference indicates that potential tariff losses depend on what level of tariffs importing countries might impose should the moratorium be lifted.

These estimates - focused only on estimated tariff revenue losses - can be compared with other existing studies that use as a starting point the tariff loss impact but imbed these losses in the broader economy in order to try to shed light on the overall impact of the moratorium on development.

ECIPE (2019, p. 6) finds that the UNCTAD methodology, used also in this study, generates overestimates of the tariff losses because the prices of ET goods have been falling and because there is a possible limit of the extent to which physical products can be migrated to electronic transmission.

On par with simulations of tariff increases, ECIPE (2019) finds that if countries apply tariffs on ET goods (as represented within four GTAP services sectors) upon the removal of the moratorium, the expected added tariff benefits for India, Indonesia, South Africa and China would be "minimal" relative to the economic damages on economic activity (ECIPE, 2019, p. 2). Aside from unconventionally "applying" tariffs on services, the specification of the ECIPE (2019) model is conventional. The CGE scenario generates the expected impact from higher tariffs of higher domestic prices, reduced consumption, slower GDP growth and lower overall tax revenues.

¹¹ This statistical quirk also applies to tariff revenue analyses performed by UNCTAD (2019) and might explain the selection of 58 countries.

These results pose a conspicuous argument in favor of a permanent moratorium. It is the case that the reported costs fully meet expectations¹² from tariff increase simulations in these kinds of studies. To inform both policy design and negotiating positions and policies, CGE's static nature – meaning that the numerical results involve comparing one long-term situation with another long-term outcome, while keeping fixed the sectors in both equilibria – must be taken into account. In a CGE numerical calculation, the methodology assigns to tariffs the principal role of reducing economic activity and welfare through losses in consumer surplus by raising the domestic prices on goods on which they are levied. In conventional applications as in ECIPE (2019), the numerical results do not reflect the possibility that higher tariffs on imports could stimulate domestic start-ups and new production, which generate additional employment and incomes.

To numerically evaluate the impact of tariff increases on ET products, OECD (2019) utilizes a partial equilibrium approach; this allows the use of demand-supply schedules of domestic markets for actual products in the ET list without needing to use services sectors as proxies as in the ECIPE (2019). The study generates broadly similar results to ECIPE (2019), albeit with less dramatic numerical results. Because ET constitutes only 1.2 per cent of total trade (OECD, 2019, p. 17) of developing countries, the study estimates the foregone revenue for developing countries to be only in the order of 0.08-0.23 per cent of overall government revenue (OECD, 2019, p. 15).

OECD (2019) finds that most of the costs of new tariffs on ET imports will be borne by domestic consumers and users. This finding that the costs of the tariffs will be borne domestically is broadly consistent with the limited competition on the supply side of the kinds of goods in the ET grouping – goods from intellectual or the arts sectors and highly technical goods, such as software. The methodology applied and the style of interpretation of its numerical results have recently been utilized heavily in asking consumer welfare questions on recent US trade policies associated with protecting domestic industries (Cavallo *et al.* (2019) and Fajgelbaum *et al.* (2019)). These estimates are alerts for policy makers on the costs of tariff protection to be borne by domestic consumers and users.

In all countries, the assignment of which sectors bear the cost of tariffs with the removal of the moratorium is a policy/political decision informed by equity and technical considerations. Selective protection of priority sectors imposes costs on other sectors. Public authorities, the private sector, and society must weigh whether the costs imposed on other sectors render benefits for the economy as a whole within a reasonable time frame.

For developing countries, among which ASEAN countries are considered to be relatively successful, what is at stake is the possibility of establishing new activities, new enterprises, and new capabilities inside the national territory. Will entry into new, non-commodity, more modern, globally growing sectors, replace traditional economic activities and allow the labor force to transfer into more productive and higher income employment? The question of prioritization is important and it is possibly the case that even advanced countries, such as the US¹³, also engage in such policies and privilege certain sectors with protection and subsidies.

An additional aspect is that the methodology of estimating tariff revenue losses, including in this study, that is Kelsey *et al.* (2020), UNCTAD (2019), ECIPE (2019) and OECD (2019),

¹² While CGE results are generally looked upon as rigorous data exercises, the limitations of their numerical results for policy purposes in respect to trade liberalization have been debated, both as an overall methodology (for example, Taylor and von Arnim (2007) and Jackson (2016)) or in respect to contested model specifications (for example in the case of the evaluation of the Trans-Pacific Partnership (TPP), Petri and Plummer (2016) and Capaldo and Izurieta (2018)).

¹³ See Wade (2012, 2017).

imposes uniform tariffs at a computed average to the grouping ET products. This is a rough approximation and the accuracy of the estimates could be thought of as being based on a rough-and-ready weighted average of a range of tariffs imposed on the range of ET products.

In the deliberate exercise of industrial policy to be discussed in the next section, ambitious developing countries could still set the tariffs on many ET products at zero to minimize the costs of using these for priority industries if they are critical inputs for such sectors. In this case, the upgrading of their domestic industries would be exploiting any subsidies developed countries are bestowing on ET products, such as tax incentives, on behalf of their own economies.

If certain ET products are indeed critical, developing countries could even subsidize imports of important ET products, if it is in their long-term interest. All these policies can be applied with or without any global WTO-enforced tariff moratorium. Because it is not clear what global public good (or bad) the tariff moratorium actually addresses in the manner of Rodrik (2020), we propose that its lifting of the moratorium would more likely than not be welfare increasing for developing countries in the immediate period and in the long run.

Authorities in Southeast Asia will be wrestling with dilemmas arising from the dueling prognoses regarding the impact of an end to the tariff moratorium (or with its new, permanent status). Proponents of a permanent moratorium present well-trodden calculations of the cost of ending the moratorium as would be the case in any tariff increase, though the estimates are handicapped by severe methodological limitations discussed earlier. Economic analysis has built elaborate and intricate methodologies with regard to demand or the consumption side of markets.

In economics, lower prices for consumers or users usually have straightforward implications: they raise welfare. But economic analysis is less adept in analyzing and generating policies on the supply (or production) side of markets; it is distinctly handicapped in regard to examining when new products or sectors are introduced.

If the moratorium is lifted, national efforts are required to obtain tariff revenues from the sector and, as discussed in detail below, a need to design programs to yoke tariff policy to industrial development. Here the analytical underpinnings are less distinct, and will depend much more on each economy's capabilities and ambitions.

5.2 Tariff as tools for the selective building of international competitiveness / economic diversification

5.2.1 Historical role played by tariff policy

The historical role played by tariff policy in the early industrial development of the present group of advanced industrialized economies is unequivocal. With the WTO and the spaghetti bowl of regional trade agreements, the current configuration of trade cooperation and enforceable disciplines differ substantially from that earlier era. This section puts the proposed permanent moratorium on ET products into the context of the development challenges confronting developing countries.

The current group of industrialized economies utilized high tariffs for extensive periods of time to build the international competitiveness of their industrial sectors. In 2013, at a per capita income of \$5,301 in 1990 dollars, the average applied tariffs of the United States was 44 per

cent, after a period since 1820 when the average applied tariff rate was 30 per cent and higher.¹⁴

Building on Chang's (1994) taxonomy, "industrial policy" is an exercise in selective state policies, involving selectivity as far as industries and sectors are concerned. "Differential tariffs, financial support for specific sectors of industry, and tax and import privileges for specific sectors are examples of selective State policies" (Memis and Montes, 2008, p. 4). Interventions that bolster upgraded economy-wide and non-targeted domestic capabilities, such as expenditures on general education, are not properly part of industrial policy.

Applying this definition, Memis and Montes (2008, p. 4) propose that many developing countries can be seen to practice targeted tariff and tax policies toward foreign investments in chosen sectors. When these kinds of investment incentives are utilized, many developing countries are actually engaging in the practice of industrial¹⁵ policy even when they claim that they have dismantled their industrial policies.

Governments of advanced economies, particularly the United States, tend (or have tended) to claim that they themselves do not engage in industrial policies at all as defined here. Wade (2017) describes the practice of industrial policy in the US even at present, most conspicuously as, but not limited to, state support for upcoming technologies critical for national security. Wade (2017) associates the public denials of these interventions, which are parts of the normal political processes in the US, with conflicts with the ideology of 'free markets.' An outstanding recent example of industrial policy is the heavy subsidization of the semiconductor industry under the Biden Administration.

It is also important to note here that today's understanding of industrial development is not confined to the manufacturing sector. Advances in technology in agriculture and services are now counted within industrial development.

Industrial policy as a legitimate policy option *even for developing countries* has made a surprising comeback, from "a policy that shall not be named" and not to be uttered in polite company (Cherif and Hasanov, 2019) as portrayed in the title of an IMF working paper to a policy arena attracting innumerable suggestions on how it should be practiced.

As part of the "Washington Consensus" (Williamson, 1990), trade liberalization involving eradication of all controls over imports and reducing the dispersion among tariffs to the lowest possible range was identified as the best policy.

Lessons from the prevalent pattern of shortfalls versus expectations from the Washington Consensus' private sector driven style of industrial policy and a reinterpretation (Cherif and Hasanov (2019), Stiglitz and Lin (2013)) of successes of Asian countries, including the recognition of their state-propelled export performance, have recreated a space for an updating of the state role in industrial development. Aside from other aspects such as learning and technology development, the critical role of state-supported finance in Asian industrial success has been incorporated in updated notions of industrial policy.

Though there is a panoply of industrial policy interventions (Chang and Andreoni, 2020), the tariff moratorium places out of reach probably the most direct tool of industrial policy. The next sub-section will discuss further details on tariff policy on ET goods. The second sub-

¹⁴ The data in this paragraph are read from Table 1 of Akyuz (2005, p. 14).

¹⁵ Williamson (1990) in discussing the "Washington Consensus" interprets investment incentives in the same way.

section will be concerned with impact on the region's export potential in ET goods. The third sub-section will discuss the technical feasibility of collecting tariffs on ET goods.

5.2.2 Industrial policy in electronically transmittable goods

As in earlier technological revolutions, in the rising digital economy, developing countries are confronted with the question of technological catch-up by whole societies (Abramowitz, 1986). In the 20th century, countries that have applied forms of industrial policy have proven more successful in the matter of technological catch-up (Nayyar, 2013; Cimoli, Dosi, and Stiglitz, 2009) and this presents a challenge to Southeast Asian leaders.

In Southeast Asia, where there are still countries which have unreliable electrical power availability for example, the digital catch-up issue must be pursued while still catching up on the first three industrial revolutions.

In a more specific vein, a perusal of the kinds of goods (Annex 1) affected by the tariff moratorium suggests that these goods tend to be finished products, such as moving pictures, publications, educational materials, video games, and so on. Baldwin (2016, p. 256) underscores that in the current fragmented style of international production a tariff could amount to:

Walling up the borders in the twenty-first century would destroy jobs as surely as putting up artificial walls inside factories would have done in the twentieth century.

National politics almost everywhere preceding the COVID-19 pandemic of 2020 increased attention to reshoring (and nearshoring) of manufacturing operations; the pandemic has only intensified interest in such efforts with the emphasis of reducing national dependence on international value chains for essential goods and services. More important, however, is that the tariff moratorium applies overwhelmingly to finished goods, which are much less likely to be produced in a fragmented manner, and thus Baldwin's (2016) apprehension about erecting walls inside production processes less applicable.

To give a concrete example, tariffs could be applied to the importation of moving pictures as a measure of protection for domestic production. Reserving a proportion of the domestic demand for locally produced pictures can support a sprawling network of skills, services and domestic craftsmanship in creating equipment and sets. In the 1990s, in order to build its movie industry, China reserved a proportion of the shows to be shown in theatres to domestic productions. Eliminating the ET tariff moratorium would allow countries to apply tariffs instead of *de facto* quotas for such purposes.

ASEAN countries must make informed judgements on which other ET products can tariffs be productively levied. On the one hand, for example, tariffs on educational materials could increase the cost to local students; on the other, the skills created to adapt and publish such materials can be important for the long-term.

Possibly even more critical, one can build on Baldwin's (2019, p. 215) identification of the potential growth area in internationally performed services through digital technology – involving what he called “telemigration” and “globoitics” – with the expansion of domestic skills arising from increased tariff-protected production. It is useful to quote from Baldwin (2019, pp. 118-119) to illustrate the kinds of digital services that are beginning to arise based on information from a Philippine site called “freelance.ph”:

Workers in the job category “digital marketing strategists” earned between \$6 and \$8 an hour, general virtual assistants between \$3 and \$8, and content editors and financial managers came in at about \$6 to \$15.

Some of these skills can be built up in publications, advertising, movie production whose imports are now tariff-free under the moratorium. Of course, some of these could be taught in school in a hothouse manner, but there would still be a competitive advantage in the experience in the creation of an actual product. As Baldwin (2019, p. 216) points out: in the international provision of services, “wage competition isn’t necessarily won by the cheapest.”

The application of a tariff on a particular type of import, instead of the neutral collection of a value-added tax in its domestic sale, is an exercise in industrial policy.

Beyond the indispensable role of building on existing capabilities, Memis and Montes (2008) emphasize that industrial upgrading must infuse higher productivity and upgraded efficiency in domestic enterprises and local service providers. Government cannot be the site of increased productivity and efficiency; enterprises are the only site where such advances can be made permanent. New technology not only has to be “consumed,” it has to be applied and adapted to domestic manufacturing and service activities and the financial practicability of applying new technologies secured at the enterprise level.

We must now take up the matter of the historical role of tariffs in successful industrial development. Sovereign decisions on whether and how much tariffs to apply on imported products should depend not only on whether the revenue losses are large but most importantly on the industrial strategy of individual countries with regard to these products. This basic guideline must be applied with regard to setting tariffs on imports of ET products. Using standard CGE techniques and within the limitations of the empirical practice of that approach, authorities in the region can estimate the costs of raising tariffs. Without a moratorium (permanent or extended) in place, ASEAN authorities can trade off the potential long-term benefits of domestic enterprise development, diversifying local economic activities, building digital capabilities among nationals, and penetrating new markets in the future against the potential costs to consumer welfare. These considerations also suggest that the fears of developed country authorities that the impact of removing the moratorium will be detrimental to the tariff-raisers themselves (not to mention adverse impact on the dominant position of their international companies) can be overstated.

There are a range of industrial policy actions, including but not limited to the application of tariffs, the provision of subsidies and *even import subsidies*, the structure of direct and indirect taxes, the facilitation of enterprise startups, the structure of foreign direct investment policies,¹⁶ education and skills acquisitions, technological upgrading, infrastructure and regional development. The setting of tariffs on ET products falls in the core of the industrial development of all countries seeking to overcome the global digital divide.

The following issues need to be considered in determining the level of tariffs *on each ET tariff line*¹⁷? Are there products inside ET tariff lines where the country perceives that it will never in its future development be able to establish international competitiveness, in which case any tariff level decision would be based purely on revenue considerations? Does the country already have sectors that would benefit in terms of more rapid growth and domestic innovation

¹⁶ See Montes and Cruz (2019) on how three Southeast Asian countries – Malaysia, the Philippines, and Thailand - structured their foreign investment attraction strategies in relation to their industrial development ambitions and domestic political constraints.

¹⁷ This study defines elements of 37-, 49-,85-,95-HS product groups as ET products.

by facilitating access to – and thus lower or perhaps zero tariffs or even import subsidies on - specific ET imports? Does the country have sectors whose expansion and upgrading it has decided to support by protecting them from competing imports through tariffs on ET imports? The answers to these questions would be different for each developing country, for each sector, and for each tariff line; they would also be different between the present and at some foreseeable future time. At the present time, it could be likely that many developing countries would find it in their self-interest, except for the need for public revenues, to levy zero tariffs on some, perhaps many, tariff lines within ET products, but these product lines would not be the same for all countries. Each developing country would have different sectors that would be of interest for possible entry or further development based on existing capabilities.

A refrain from studies supportive of a permanent moratorium is precisely the potential of internal taxes, such as VAT, with the desirable property of being neutral between domestic and foreign sourced goods and thus also less likely to run afoul of trade disciplines, to substitute for revenue losses from import tariffs (OECD, 2019, p. 24). The specific example typically given is that instead of tariffs on imported 3D printers and the associated “toner,” developing countries could obtain the needed fiscal revenues from a VAT system. This approach misses the point of applying tariffs for industrial development purposes. Tariffs on specific trade lines protect starting domestic suppliers from external competition. Moreover, nothing prevents any importing country from applying a zero tariff on an ET import deemed necessary for its industrial development program.

For industrial development considerations, among the variety of developing countries, a permanent moratorium is neither necessary nor prudent. Terminating the moratorium on ET tariffs does NOT PREVENT individual developing countries from applying zero tariffs on any product line within the grouping of ET imports. In the contrary case, a permanent moratorium would forever handcuff developing country planners from considering tariffs to use this policy tool to pursue industrial development ambitions and priorities, not to mention the loss of potential tariff revenue at the present time.

It is useful just briefly to discuss the industrial policy aspects that need to preoccupy development policy regarding the digital economy. Digital technology encompasses three main sectors: (1) digital infrastructure, including telecommunications; (2) software enabled economic activities; and (3) data platforms (UNCTAD, 2018, pp. 6-7).

The digital infrastructure arena underlines the indispensable role of the state in an arena when enormous financial investment and access to rights to installation are needed. In areas two and three - digital infrastructure and data platforms – the challenge to the government involves the design and enforcement of laws, regulations, and policies that ensure that the country’s consumers, enterprises, citizens, and state organs are able to use and access digital technology in a productive and safe manner.

There are numerous industrial development issues in all three areas that are of vital concern. Here, it is sufficient to give an illustration. Private companies aggregate and store digital information on the movements of citizens and consumers. Such data sets are vital for city planning, including for transportation, water and sewerage services, and health services. These areas sit at the heart of many industrial and capabilities challenges facing developing country governments, who must ensure their reliable and affordable access to such information.

Still another industrial development consideration comes from the enterprise aspects of the digital economy and the need to imbed the productive advances in a developing country in its enterprise sector. The digital economy is dominated by a few large companies, based in the United States and in China, with the United States having the widest geographical reach. Authorities in developed countries have become cognizant that the dominance of these large

companies has elicited anti-competitive behavior in the absence of a competition authority with global reach. In this situation, building the capabilities of domestic enterprises will require a measure of protection from the actions of such companies, for which tariff on imported substitutes would be helpful.

6. IMPLICATIONS AND CONCLUSION

The discussions on a permanent WTO tariff moratorium for ET products have centered on its impact on public revenues and on economic activity. To this discussion we have presented two other issues of concern to developing countries: (1) the nature of and the manner by which international rules and disciplines emerge and (2) the nature of and the manner by which the tariff moratorium would impact industrial development aspirations of developing countries.

The paper suggests that given the potential for rapid global growth in ET trade, it is prudent for developing countries, including ASEAN countries, to reject a permanent moratorium; there exists much uncertainty on the future paths of technological development in this sector and a fundamental ambiguity regarding the coverage of a permanent moratorium on ET at this point in time.

The discussion on infusing economic principles on international rulemaking underlines the importance of reserving for national sovereign decisions and self-interest areas where there are no genuine global public goods or significant global deadweight losses involved because of inadequate international coordination. Under this view, international disciplines have encroached into many unnecessary areas, driven by political pressures. Many of the rules being championed by the world's dominant economic powers tend to privilege the interests of large transnational companies. The international system should reserve to each nation the scope to decide whether it would like to "beggar itself" by engaging in behavior that restricts its access to or increases the cost of lower cost and higher quality external goods and services. The tariff moratorium is a glaring instance of reverse special and differential treatment in favor of leading technological countries and their internationally dominant private actors in the ET field.

In the same advanced economies, the digital sector itself has increasingly become the subject of state-designed and enforced regulation, following the pattern of earlier industrial revolutions. ASEAN authorities must recognize these trends and consider their own stances and responses with regard to regulatory adaptation over the digital economy.

Tariffs and other industrial policy interventions are vital to developing countries to upgrade the capabilities of their own enterprise sectors. To be effective these policies have to be selective in nature, which implies that developing countries will not necessarily impose tariffs on all ET imports upon the lifting of the moratorium. This should assuage the concerns of well-meaning researchers that developing country authorities would be inflicting self-harm by seeking the removal of the tariff moratorium so that ET will have the same status as most other sectors in the WTO environment. Under this viewpoint, a permanent tariff moratorium on ET products would be unnecessary.

ASEAN countries will need to develop each of their own perspectives on their long-term participation in the ET sector. To take advantage of the opportunities in the digital economy, they have to design and undertake their own programs and policy stances in ET products and related services.

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ANNEX 1: HS CODES OF ELECTRONICALLY TRANSMITTED PRODUCTS

HS Code	Electronically Transmitted Products
370500	Photographic plates and film, exposed and developed (excl. products made of paper, paperboard ...)
370510	Photographic plates and film, exposed and developed, for offset reproduction (excluding products ...)
370520	Microfilm, exposed and developed (excluding microfilm for offset reproduction)
370590	Photographic plates and film, exposed and developed (excluding products made of paper, paperboard ...)
370610	Cinematographic film, exposed and developed, whether or not incorporating soundtrack or consisting ...
370690	Cinematographic film, exposed and developed, whether or not incorporating soundtrack or consisting ...
482110	Paper or paperboard labels of all kinds, printed
490110	Printed books, brochures and similar printed matter, in single sheets, whether or not folded ...
490191	Dictionaries and encyclopaedias, and serial instalments thereof
490199	Printed books, brochures and similar printed matter (excluding those in single sheets; dictionaries, ...)
490210	Newspapers, journals and periodicals, whether or not illustrated or containing advertising ...
490290	Newspapers, journals and periodicals, whether or not illustrated or containing advertising ...
490300	Children's picture, drawing or colouring books
490400	Music, printed or in manuscript, whether or not bound or illustrated
490510	Globes, printed (excluding relief globes)
490591	Maps and hydrographic or similar charts of all kinds, incl. atlases and topographical plans, ...
490599	Maps and hydrographic or similar charts of all kinds, incl. atlases, wall maps and topographical ...
490600	Plans and drawings for architectural, engineering, industrial, commercial, topographical or ...
490700	Unused Postage, Check Forms, Banknotes, Stock, Etc
490810	Transfers "decalcomanias", vitrifiable
490890	Transfers "decalcomanias" (excluding vitrifiable)
490900	Printed or illustrated postcards; printed cards bearing personal greetings, messages or announcements, ...
491000	Calendars of any kinds, printed, incl. calendars blocks
491110	Trade advertising material, commercial catalogues and the like
491191	Pictures, prints and photographs, n.e.s.
491199	Printed matter, n.e.s.
852349	Optical media for the recording of sound or of other phenomena (excluding unrecorded and goods ...)
852380	Media for the recording of sound or of other phenomena, whether or not recorded, incl. matrices ...
852410	Gramophone records
852431	Discs, recorded, for laser reading systems, for reproducing phenomena other than sound or image

852432	Discs, recorded, for laser reading systems, for reproducing sound only
852439	Discs, recorded, for laser reading systems, for reproducing sound and image or image only
852440	Magnetic tapes, recorded, for reproducing phenomena other than sound or image
852451	Magnetic tapes for reproducing sound or image, recorded, of a width ≤ 4 mm
852452	Magnetic tapes for reproducing sound or image, recorded, of a width > 4 mm but $\leq 6,5$ mm
852453	Magnetic tapes for reproducing sound or image, recorded, of a width $> 6,5$ mm
852460	Cards incorporating a recorded magnetic stripe
852491	Recording media (excluding those for sound or image recordings, discs for laser reading systems, ...)
852499	Recorded media for sound or image reproducing phenomena, incl. matrices and masters for the ...
854212	Cards incorporating an electronic monolithic digital integrated circuit ("smart cards")
950410	Video games for use with a television receiver
950430	Games with screens, flipper and other games, operated by coins, banknotes, bank cards, tokens ...
950440	Playing cards
950450	Video game consoles and machines (excluding operated by any means of payment)
950490	Tables for casino games, automatic bowling alley equipment, and other funfair, table or parlour ...

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S **OUTH** **CENTRE**

International Environment House 2
Chemin de Balexert 7-9
POB 228, 1211 Geneva 19
Switzerland

Telephone: (41) 022 791 8050
E-mail: south@southcentre.int

Website:
<http://www.southcentre.int>

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