

New Developmentalism and the EU's Carbon Border Adjustment

Mechanism: Policy Options for the Global South

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The Carbon Border Adjustment Mechanism (CBAM), put forward by the European Union (EU), appeared as a new environmental trade policy that holds significance to the Global South. It necessitates the Global South countries to make changes in their development strategies to not only adapt to the CBAM, but to the overall shifting of the world's economic growth pattern and sustainable development agenda from which it emerged. Against this backdrop, this article addresses how the Global South can adapt to the CBAM in particular and the larger pressure to transition to a more sustainable growth and development. This article uses qualitative methodology with data acquired through extensive desk research. Findings of this article show that new developmentalism is well suited to enhance the needed policy changes as the Global South can leverage its already-existing state capacity to effectively steer the transformation towards a more sustainable growth. This article is also equipped with possible policy options for the Global South as close examinations towards existing development policies of several Global South countries still list several challenges.

Keywords: CBAM; Global South; new developmentalism; environment; sustainable growth

Introduction

As awareness and concerns about climate change increase globally, greenhouse gas (GHG) emissions—especially carbon—has now become an important policy issue, including in trade. Internationally, there have been several international treaties and an increasing number of forums that deal with climate change, and the avenue to discuss climate change has primarily occurred at the international level due to the global nature of the climate change itself.

These measures at the international level, in turn, guide and pressure policy changes in national governments. National governments are urged to act to reduce GHG emissions through policy, one of them being carbon pricing. Carbon pricing was first implemented in Finland in 1990 in the form of carbon tax. Finland established a carbon tax of EUR 1.12 (USD 1.41) per tonne of CO₂. Progressively, Finland increased and improved the carbon tax. In 2013, the tax evolved into a combined tax on carbon and energy at EUR 18.05 (USD 22.65) per tonne

of CO₂ and EUR 66.2 (USD83.1) per tonne of carbon (Nachamany et al., 2015). Since then, other kinds of domestic environmental regulations to reduce GHG emissions have taken place in other countries.

In the recent adoption of the Fit for 55 Legislation Package on 14 July 2021 by the European Commission, the European Commission is proposing a carbon border tax, named Carbon Border Adjustment Mechanism (CBAM). Carbon border tax, although similar to carbon tax, is a fundamentally different concept because of its external nature. The CBAM is targeting additional fees on carbon-intensive products entering the EU. The additional fees will reflect the amount of carbon emissions emitted in its production and adjust with prices of carbon in the EU, as set in the Emissions Trading Scheme (ETS) (European Commission, 2019). The CBAM was proposed by the European Commission to address the problem of carbon leakage.¹ As the proposal is now in its final legislation phase, it is likely to become law in late 2022 and take effect in 2023.

With the CBAM, the EU will be the first to implement a carbon border tax. The CBAM will start with a transition phase in 2023 and change to full implementation (i.e. imposing fees) in 2026. Initially, the CBAM will apply to five categories of carbon-intensive goods: cement, iron and steel, aluminium, fertilizers, and electricity (European Commission, 2021).

This exposes the Global South to the environment as part of an emerging policy

sector that they have yet to take account and integrate in national policy-making. With the CBAM soon in place, the Global South is again incentivized, rather forcefully, to adapt to changing growth patterns to a greener economy.

In order to adapt to this ever-pressing change, the Global South is historically well equipped with a governance strategy, called the state 'developmentalism.' Especially in East & Southeast Asia and Latin America, developmentalism has the historical achievement of driving "miracle" economic growth up to two digits (Bresser-Pereira, 2020).

This article argues that the Global South can utilize new developmentalism that emphasizes state intervention and policy innovation in adapting to the CBAM and transitioning to a more sustainable growth. New developmentalism makes a semantic enlargement to "developmentalism" and the organization of capitalism by the state, enabling the state to organize the economy and tackle environmental issues simultaneously (Bresser-Pereira, 2020). In fact, many Global South countries have shown practices of new developmentalism—appertaining to the critical, proactive role played by the state in shaping new paths of economic development, working in partnership with institutions, businesses, and society, including introducing new approaches on development and industrial policy as well as promoting and nurturing industries to become greener (Dent, 2017). This challenge, which also becomes the research question of this study, is "How can

¹ Carbon leakage is the relocation of production from countries with stringent climate policy to countries with less stringent climate policy, therefore resulting in no actual reduction of emissions (Vedder, 2010).

the Global South adapt to the EU's CBAM in particular and the larger pressure to transition to a more sustainable growth?"

This article studies the emergence of the EU's CBAM and how the Global South countries can adapt to it as part of the shifting of the world's economic growth pattern. We assess and elaborate our argument by building upon a vast literature of the developmental dynamics in the Global South, particularly in relation to the environmental context, and examine their industrial and other economic policies. The subject for our examination includes Brazil, Bangladesh, China, India, and Indonesia—countries of the Global South that mirror a reconciliation of development policy and industrial upgrading with the needs of the incremental greening of economic growth in their agenda (Bowles, 2021). This article is then followed by policy recommendations derived from our evaluations of the empirical situations in the aforementioned countries.

The structure of the article is as follows. First section introduces the CBAM briefly and how it emerged as a signifier of the changing growth pattern. Second section details how the research is conducted, from data collection to analysis. The third section sets out the theoretical foundation of this article by exploring the concept of new developmentalism. The fourth to seventh section discusses the policy implications of the CBAM, state capacities of the Global South, and the relevant policy options. Finally, the last section concludes this article by presenting a conclusion and several policy recommendations.

Methodology

This article is conducted by qualitative assessment where data being used are secondary ones. The data collected include publications from news, articles, and books pertaining to developmentalism and overview of existing policy dynamics in several Global South countries.

This article looks at how several Global South countries incorporate ecological modernism ideas on their "greener, more sustainable growth" and practice state capacity in realizing it. Using varied case studies allows us to explore extensively how new developmentalism is exercised (Oddell, 2001). It shows combination of similar but, at the same time, often contrasting factors that could showcase the many ways Global South countries display features of new developmentalism (Dent, 2017). A comprehensive perspective from the Global South with regards to the issue at hand can then be obtained, and in turn, it enables us to infer policy recommendations for other Global South countries by providing insights into remaining key issues and the possible strengthening of new developmentalism.

The Nexus between Economic Growth and Environmental Issue in International Relations

In policymaking, the links between economic and environmental issues are becoming increasingly salient. This section first discusses sustainable development, especially how it has reconceptualized the links between the economy and the environment to realize sustainable growth. In this section,

'New Developmentalism' will be introduced.

Economic Growth and Environmental Disruptions

The end of World War II brought forth competitions between countries in restoring their war-torn economy. The rapid economic growth experienced by Japan, or better known as the "Japanese Miracle," throughout the second half of the 1900s made it a model for development, which then put the concept of 'Developmentalism' to fame. Developmentalism refers to the pursuit of economic growth where a directive government is reinstated (Johnson, 1982). Countries that adopt developmentalism consciously assign economic development at the top of their national agenda with the government playing the leading role.

In developmentalism, control over resources and markets are matched with extensive coordination with the public and private sectors as well as the nurturing of industries. Hence, the government can secure sufficient social modalities and implement its strategic industrial and economic policies rather smoothly (Johnson, 1999). The concrete form of developmentalism policies can vary, but a common thread is the pro-active role of the government in: (1) planning strategic policies; (2) setting the resources allocation; and (3) creating strategic collaboration with private sectors (Amsden, 1998; Wade, 1990; Chang, 2002).

Although policies that heavily focused on rapid industrialization had brought countries to achieve their economic and social objectives, the environment emerged as

a victim of that success. It was evident in a plethora of studies exploring the causality between the environment and economic growth, namely the 'Environmental Kuznets Curve' and 'Environment-Economic Growth Dilemma'. The former sees that, at a certain level, economic growth would always lead to environmental regressions (Mulali & Ozturk, 2016; Fu & Zhang, 2016; Moutinho et al, 2017; Maneejuk et al, 2020), while the latter considers environmental hazard as a definite cost of economic development, one of which must be undertaken by the government to attain economic growth (Beresford, 2001). These findings and subsequent environmental dynamics, confirms the underlying tension between economic development and the environment.

New Developmentalism: Reconciling Growth and Sustainable Development

Increasing concerns regarding how human activities in pursuit of development were having severe impacts on the planet made countries, particularly developed one, to commence an international forum in 1987 to draw up strategies and action plans for moving towards a more sustainable pattern of development—later referred to as "sustainable development." Advocates of sustainable development believed that the existing patterns of growth and development would be unsustainable (Sustainable Commission, 2011). They then further argued that the result of development should have been a state of society where living conditions and resources continue to meet human needs and development goals without undermining the

stability and integrity of the natural system, so that the needs of the future generation is not compromised² (UNGA, 1987).

Upon gaining recognition from world leaders, the United Nations eventually set up a comprehensive document on sustainable development. However, interpretations towards the concept can vary insofar they share certain general features and a strategic framework for achieving it (UNGA, 1987). The European Union, for example, adopted a strategy in favour of sustainable development of which organizing principles center around “precautionary”, “ecological modernism”, and “polluter pays” (European Union, 2012).

Such condition made analysts contend that the ideas, concepts, and theories of developmentalism had withered—if not entirely losing relevance—in this era of globalization where developmental agenda no longer only concerns industrialization and economic growth to catch up and compete in challenging economic activities (Doner, 2005), but in so doing continues to be connected to the realization of sustainable development. They asserted that economic organization grounded on developmentalism is hence unworkable (Dent, 2017, p. 3).

On that account, developmentalism underwent a theoretical evolution, propagating the emergence of “New Developmentalism.” Contrary to such pessimism, proponents of new developmentalism believe that state-capacity is rather transformative and versatile. The global challenge of envi-

ronmental disruptions is seen as presenting opportunity than threat to state-capacity as it just requires new methods of managing markets, reconfiguration of state-business-society relations, and new approaches to industrial policies still centered upon the state (Dent, 2017, p. 3).

The new developmentalism combines theories on state capacity (SCT) concerned with governance of development processes and ecological modernism (EMT) which sees environment and natural resources as factors of production that have values (Dent, 2017, p. 6-7). New developmentalism assimilates EMT ideas onto the strategic plans for economic development, where it prescribes state to support the drive towards new eco-industries and environmentally sustainable practices in business processes. As such, businesses can continue to make profit, expand markets, and obtain their corporate objectives while acting sustainably to meet state’s growth objectives (Dent, 2017, p.3-7).

Although new developmentalism is considerably more evident in newly developed countries, such as South Korea (Kim & Thurbon, 2015), Japan (Harrel & Haddad, 2021), and Singapore (Dent, 2017), it can be put in place in a wider geographical scope insofar a strong developmental state is exercised towards realising transformational sustainable growth (Dent, 2017, p. 2). In this context, it is applicable and of high interest not just to the advanced economies, but also to developing countries, including the Global South.

² The definition of sustainable development, as noted by the Brundtland Commission, reads “... development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

This article follows the prescription of new developmentalism. In this understanding, we need to look at CBAM as both part and signifier of the changing development pattern. The exercise of new developmentalism in the Global South is closely tied to revitalised and refocused forms of state capacities aimed at realising transformative social and economic objectives—that is achieving sustainable growth (Dent, 2017, p. 2). In this article, we will first see how development policies of several Southern countries are crafted to respond to mounting pressures of sustainable growth, commonly marked by the reconciliation of material prosperity and sustainability goals.

Consequently, we also argue that new developmentalism is, in fact, workable in the context of helping other Global South countries meet their transformative sustainable growth and economic objectives. First, it aligns with the institutional context that is present in the majority of Global South countries, where state directives remain strong. This also means that policy prescriptions derived from the premise of new developmentalism can be argued as more effective in steering the structural transformation necessitated by the changing development agenda, for an exceptional advantage is already at disposal (Szalavetz, p. 110-114). Second, it recognizes the long-standing, continued pre-eminence of economic and industrial objectives in states' conformation towards sustainable growth. This fits the context of

the Global South which still regards them as relevant policy objectives (Rockström et al., 2009; Chen & Lees, 2016).

The EU's 'Normative Power' and Policy Changes in the Global South

In understanding the CBAM, it must be first understood that the nature of the EU as an institution is that it manages trade not only as an economic issue, but also a strongly normative one. The EU has a long record of linking trade with normative ends such as labour, environmental, and human rights standards, which originated from its conception as a “normative power.”³ This is primarily reflected in the EU's constitutionalism as an elite-driven and treaty-based phenomenon (Manners, 2002). The EU constitution, or *acquis communautaire*⁴, contains an increasing number of normative provisions, including on environment and climate change (European Union, 2008). Those provisions then influence policy-making, including the CBAM proposal.

In imposing additional fees on carbon-intensive imports, CBAM would also induce policy changes globally. This is due to two factors relating to the EU's normative power in the CBAM case. First, as a trade bloc, the EU is a very lucrative market. Functioning as a single market, trade policy decisions are taken at the EU level. With around 450 million people, its size is third only to India and China. Not to mention its high purchasing power and strong currency. As

³ Normative power, simply put, is the ability to shape what is considered 'normal' in international relations (Manners, 2002).

⁴ *Acquis communautaire* refers to the accumulation of legislation, legal acts, and court decisions that constitute the body of European Union law that came into being since 1993.

more than 40% of the EU's merchandise is traded with the Global South, it is impossible to reject EU's trade policy without further ramifications (DG Trade, 2021). This has enabled the EU to use trade, especially the conditional opening of its market, to further their normative cause.

Second, the CBAM is helped by the increasing salience of climate issues internationally. Climate change was not a hotly debated global issue 50 years ago, but it is now. The increasing salience of climate change is influenced by a lot of factors and actors, including EU activism in advocating climate change internationally (Delbeke & Vis, 2015). With an international consensus in place, EU climate policies are well situated to induce policy changes globally in order to reduce emissions.

Facing the CBAM and other drivers of change, Global South governments have to act. The pattern of growth is undeniably shifting globally from carbon-intensive production to low-carbon production. This challenge would require the Global South to prove its commitment to fight climate change and match its development strategy.

Implementing Carbon Pricing as an Initial Solution

In facing the CBAM, this section explores initial solutions that can be used by affected countries, including the Global South. This section discusses carbon pricing measures as the initial solution and primary means to address the CBAM in two parts.

Levelling with EU ETS and Overstepping CBAM

The CBAM is directly related to the EU Emissions Trading Scheme (ETS). The ETS is a 'cap and trade' system that limits the total emissions that the EU member states (plus Norway, Iceland, and Liechtenstein) can emit and enables entities (mainly businesses) in the EU to trade emission allowances, essentially establishing a market-based approach to put a price on and gradually decrease emissions (DG Climate Action, 2015). The CBAM is basically an external extension of the EU ETS, that aims to put a similar price on carbon-intensive import goods (European Commission, 2021).

In this sense, the goal of CBAM is twofold. First, to provide a "level playing field" between EU and other international producers by imposing a similar amount of restrictions and fees. This goal was explicitly stated by President Ursula von der Leyen in her Political Guidelines, where she declared that the CBAM was going to be made to "ensure our companies can compete on a level playing field" (Von der Leyen, 2019). Second, to expand the implementation of carbon pricing internationally. This goal is a consequence of the problem statement in the CBAM Proposal as "differing ambitions related to climate policies" of the EU's international partners (European Commission, 2021). Although secondary, this goal is very related to the EU's normative power and the global nature of the fight against climate change.

In relation to the Global South, it was stated explicitly in the CBAM Proposal that

it will take into account carbon pricing measures in other countries. Moreover, countries that have established a comparable carbon pricing system to the EU ETS can be excluded from the CBAM (European Commission, 2021). Therefore, establishing a carbon pricing mechanism is a straightforward solution for countries whose exports are significantly affected.

Carbon pricing is loosely defined as an instrument that “captures the external costs of GHG emissions and ties them to their sources through a price” (World Bank, n.d.). However, there are two main forms of carbon pricing: carbon trading and carbon tax, which differs mainly in the market-based or state-centric approach to emission reduction. The Global South has these two options of carbon pricing to implement as an initial solution to respond to CBAM from the EU.

Accountable Progress, Pushing Transition, & Encouraging Innovation

Carbon pricing as a solution coincides with the current climate commitments in the Paris Agreement by almost all countries and trends towards a green transition. In this context, carbon pricing is being seen as an increasingly appealing policy option. A report from the World Bank found that there are 96 countries that are planning or considering implementing some forms of carbon pricing. This number has consistently risen each year (World Bank, 2019).

In the green transition, carbon pricing plays some important roles. First, the main function of, and main argument for, carbon pricing is that it provides an account-

able way to track progress in reducing GHG emissions. The EU ETS was made to give a certainty of the annual maximum quantity of GHG emissions. This is relevant for the EU's climate goals and international commitments (DG Climate Action, 2015). Second, carbon pricing also pushes transition to a greener economy by internalizing the cost of climate change to the producers. A price on carbon would provide disincentives for producers to keep emitting GHG, so they would need to transform or pay for their emissions. Third, in the same vein, carbon pricing would also encourage innovation of new, low-carbon production methods. As the old, carbon-intensive methods of production are becoming more expensive and obsolete, they would be incentivized to innovate more sustainable methods of production. Carbon pricing would also provide revenue for the government that should be used for green investments (World Bank, n.d.).

From this section, it can be inferred that implementing carbon pricing would not only serve to overstep the CBAM, but also help countries to reduce their emissions and fulfil their climate commitments. In the following section, this article looks at how the Global South countries have been using their state-capacities in advancing their growth needs aligned with the new sustainable development agenda.

State Capacity and Green Transition Efforts of the Global South

As the result of the CBAM and the world's turn into a more sustainable economy, this section explores the features of new

developmentalism that is already present in several Global South Countries. This section discusses demonstrated state capacities for green transition in three parts.

State Directives in Mapping Sectoral Priorities: Sustainable Growth in National Development Agenda

Governments across the globe have started to recognize the importance of emission reduction in development. Although industrialization had brought to them extraordinary wealth and advancement, heavy pollution and high depletion were among the most unfavourable by-products lowering down their satisfactory level (Kaneko & Managi, 2004). This was then followed by an extensive demand for security and improved quality of life designated by a better environment, knowing that there was a significant loss caused by the environmental damage that society must pay at the end of the day, which accounted for almost 8% of China's total GDP; valued at USD 54 billion (Fang & Yang, 2008, p.29-30). Another push for China was the global trend of green growth⁵ which regards impacts on environmental sustainability as a measure of competitiveness, determining its position in the international arena (Fang & Yang, 2008, p.35). This pressures then prompt the Chinese government to change their strategy and transform their growth pattern—that is, to green growth.

This commitment was later translated into a ground-breaking national development

agenda. The Chinese government issued the Eleventh Five-Year Plan in late 2005, an economic and social development plan that put tight restrictions on carbon emission as well as stipulated actionable steps to achieve sustainable economic growth (Asia Pacific Energy, 2006). It called for industries to develop hydro-powers; encouraged investment on clean power generation equipment; and pushed for the production and consumption of renewable energy sources (Asia Pacific Energy, 2006). This mirrors an essential feature of a state-capacity in new developmentalism: a proactive role of the government in deciding the development agenda, setting priorities, and steering its execution.

However, much of these plans are relatively short-term. To prevent returning environmental hazards prior to an economic turning point, a long-term plan has to be developed. To be able to respond to the changing pattern of growth, including CBAM and other upcoming regulations, sustainable growth must be introduced as a long-term agenda, as prescribed by new developmentalism.

A Leap Forward: State's Role in Creating Supportive Environment for Green Transition

Interventions in supporting green transition are already evident in the Global South. As part of the Global South that possesses enormous potential for renewable energy, for example, the government of Brazil

⁵ Green growth—known also by its alternative epithet, green economy—refers to a form of growth strategy that emphasizes the usage of natural resources in a sustainable manner and a low carbon consumption in the production processes, as opposed to the conventional industrial growth. In this article, we use the term 'green growth/economy' and 'sustainable growth/economy' interchangeably.

led the country's gradual transformation to green growth by enacting numerous research and development (R&D) programs dedicated to studying renewable energy and providing investment-funding in green technologies.

In Brazil, the establishment of a public Science and Technological Institutions (STI) came as early as 2004 in pursuit of technological autonomy as well as economic development.⁶ However, it was the year 2012 that the government showed keen interest in developing environmentally-sensitive technologies (ESTs). From this point on, the government started ordering the STIs to engage with companies, private institutions, and other relevant parties to conduct joint R&D activities and promote ESTs (World Bank, 2010).

This was done in two ways. First, the government provided funding to help the business enter and engage in the innovation and investment projects. This funding is made available for the production and investment in ESTs and other modern low-carbon technologies that are projected to be available for a large-scale implementation in 2030 (World Bank, 2010). Considering that transitioning to green technologies is hard for businesses early on, this intervention can be understood as part of the government's effort to reduce the upfront costs and risks that the business had to undertake to realize green innovations (Freeman & Soete, 1997).

Second, the government guarantees their innovation from R&D results by working together with the National Institute of Industrial Property (INPI) to grant them a

fast-track in processing patent applications under the "Green Patent" program (WIPO Green, 2021). The patent would give its holder exclusive rights for up to 20 years; to decide who may or may not manufacture and sell the protected technology. This initiative did not only incentivized business, but also fostered competition and production of technologies alike in the market (WIPO Green, 2021).

A different approach is taken by Indonesia. Recently, Indonesia became a member of the Asia-Pacific Economic Cooperation (APEC) to have completed tariff reductions of around 5% for a total of 54 products in the APEC's 'List of Environmental Products,' which includes technologies like wind turbines, solar panels, biomass boilers, and other pollution-controlling equipment (APEC, 2012). This policy made the inflow of imported technologies easier and the goods cheaper for businesses and consumers. Considering that the renewable sector is knowledge-intensive by nature, the development of green technology can only be realized by first bringing in foreign technology that is comparatively more eminent to study (APEC, 2016).

Those cases showed another important feature of state-capacity that already exists in the Global South: nurturance of industries. In this context, governments of Brazil and Indonesia ran an R&D program and created a favourable environment for technology transfer activities, which will later push for domestic innovation. Both strategies nurture the industrial capacity to align

⁶ Act 10,973 of December 2004.

with the new economic growth pattern.

However, one major issue pertaining to this support in the context of other Global South countries is that, oftentimes, the knowledge transition did not occur to companies and/or industries that produce significant pollution, such as manufacturing and electricity. The challenges are twofold. First, there is an existing cultural difference between STIs and companies; whereas STIs want to create knowledge and train human resources, companies are still inclined to achieve financial targets—which then drive them to do business-as-usual approach for short-term results (Figueiredo et al., 2019, p.3). Second, in the context of joint R&D, the issue of excessive bureaucracy is still hindering partnerships and innovation. Other than that, up to this day, not many countries in the Global South have implemented and/or properly executed the research funding and intellectual property scheme (Figueiredo et al., 2019, p.12).

Keeping Businesses on the Loop: Mobilizing Capital to Push Innovation

Several governments in the Global South have also helped mobilize the capital resources needed by their industries and companies through various monetary and fiscal policies. This capital mobilization took mainly in two forms: subsidy and lending.

In Bangladesh, the government issued a 'revolving fund' of USD 26 million under the green re-financing scheme in 2019 to disburse low interest loans to over 50 renewable energy and green industries. Later in 2015, the government had also mandated their

commercial banks to allocate no less than 5 percent of their lending to the renewable energy sector. Another additional fund of USD 200 million was also set up specifically for the textile industry to switch to greener technology in the following year, which is a big industry in Bangladesh (Volz, 2018).

Likewise, in India, the government provided parties with capital subsidies in instalments with a limit of 30% of the project cost for solar power (MNRE of India, 2013). The amount of capital incurred by the government for this kind of subsidy peaked in 2017 with an estimate of USD 154 billion (IISD, 2020). Other than that, the Indian government collaborated with the State Bank of India to introduce a 'green car loans' scheme for electric vehicles. This scheme has 20 basis points of lower interest rate and longer repayment window compared to the conventional car loans (Jain, 2020). The special lending scheme is aimed at enhancing the flow of credit, reducing the up-front purchase price, and thus encouraging more green vehicles in the country.

Those incentives are given with conditionalities. In both countries, the governments necessitated that the parties produce tangible impacts for society, one of the examples being electricity, if they were to continue receiving such assistance. The governments also entailed a monitoring and reporting mechanism to evaluate said projects after they incur the subsidy and loan (MNER of India, 2013). In this context, it must be understood that conditionality is another core element of developmentalism; this mechanism would induce companies to create con-

crete goals and actionable steps to achieve it, otherwise they would lose their benefits due to poor performance.

The seemingly persistent problem with businesses in the Global South, however, is that they have not been incentivized enough to modify their factor endowments and shift their production pattern from input-driven to productivity-driven practices. Coals and fossil fuels still dominates the Global South's energy mix; the abundant availability makes it the quickest, easiest, and cheapest source of electricity (Tritto, 2020). On the other hand, the Global South countries also face issues related to low human resources in a way that not many workers are familiar with how green technologies operate. The cost advantage of moving into an eco-friendlier practice, then, remains correlated to the issues of availability and extraction.

Industrial Planning Strategies and Policy Options of the Global South

The aforementioned practices have shown that the Global South countries possess the capacity to implement new developmentalism in the past. However, adapting to CBAM and further changing patterns of growth would need more policy innovations from the Global South. This section breaks down several strategies and policies that can help them progress and further adapt with the changing pattern of growth. The discussion in this section is divided into four parts.

Making a New Strategic National Development Plan

As discussed in the previous section, some of the Global South countries have integrated environmental targets and strategies in their respective national development plans. However, the current environmental targets and strategies are becoming increasingly irrelevant in the face of new challenges, one of which is the CBAM.

Most of the current development plans in the Global South only address energy and transportation problems, which even though are rightfully some of the main emitters, does not answer the CBAM challenge and the carbon problem comprehensively. For example, Nachamany and Fankhauser (2016) found that most of the existing environmental regulations only focus on electricity and heat producing emitters. There are more than twice as many regulations that govern electricity and heat production (450 regulations) than there are in agriculture (181 regulations), although each contributes roughly a quarter of greenhouse gas emissions globally (Nachamany et al, 2015).

Moreover, target-wise, the Global South is also accused of not being aggressive enough to meet their environmental commitments. While the EU is leading the way by committing to be carbon neutral in 2050, Global South countries are much less aggressive. China only pledged to be carbon neutral in 2060, and Indonesia in 2070, both deemed to be inconsistent with the Paris Agreement (You, 2021; IESR, 2021). The current emission reduction targets in Brazil, China, India, Indonesia, Israel, Malaysia, Mexico, South

Africa, South Korea, Vietnam, and Iran are also found to be relative rather than absolute targets, which can be subject of multiple interpretation (Nachamany et al., 2015).

As such, it is a must-do for governments all over the Global South to update their respective national development plans to be more aggressive, long-term, and in accordance with the commitments that they made. Both sweeping carbon pricing and sector specific interventions have to be made. These need to be done to meet the challenges of the CBAM and ensure sustainable growth in the long-term.

Investments and Transforming State-Owned Enterprises

State-Owned Enterprises (SOEs) are a common feature in the Global South that could also be utilized in green transition. Having direct control over the companies, the state could issue any directives to adjust the SOEs to any goal that the government had in mind. Moreover, SOEs are usually in possession of vital national resources and strategic national industries.

For example, back in the New Order era, Indonesia relied on SOEs as the cornerstone of economic development. Under Suharto, the New Order government made, reconfigured, and invested in hundreds of SOEs to run the agriculture, manufacturing, and oil & gas industries.

One of them is Pertamina which, after its merger in 1968, is the single biggest SOE in Indonesia. Initially, state investment helped Pertamina acquire the critically needed refineries, oil terminals, and tankers (Wie,

2002). By the end of 1973, it directly produced 28.2% of Indonesia's oil, with agreements that the government helped to strike deals with Caltex and Stanvac to produce the rest. The timing is just right for Pertamina to profit from the first oil boom in 1974, which increased the revenues of Pertamina to an all-time-high of USD 4.2 billion in that year (Schwarz, 1999).

The flourishing of SOEs is enabled initially by state investments, some by foreign direct investments (FDI), and then it became self-sustaining later. Although initially deprived of capital, the New Order regime managed to reschedule old debt payments, and get new debt deals, particularly from Western countries and Japan, which wanted to give the new anti-communist government all the support it needed. By 1970 Indonesia ranked as the second-largest aid-recipient country after India (Wie, 2002, p. 205-206). The government also appealed foreign investors by revising a hostile Sukarno era investment law with a new Foreign Investment Law in 1967, which are much more welcoming (Sadli, 1972, as cited in Wie, 2002).

This development strategy is also very applicable in the context of green transition. By setting green transition as a national goal, SOEs would follow, which coincidentally, also emit collectively over 6.2 gigatons of carbon dioxide-equivalent annually in energy sector greenhouse gases globally (Benoit, n.d.). In this context, it would be likely that most loan-providing countries, which are also the countries prefer green policies, would provide generous financing. The government could also

simply inject state investments to this end.

Loans, Subsidies, and Other Financial Incentives for Sustainable Growth

Aside from the SOEs, the private sector would also play an important role in pursuing a more sustainable growth. As a matter of fact, business-state relations have always been critical to the developmentalism of the Global South. Most sectors of private businesses of the Global South coordinate closely with the government in order to collaborate for mutual benefit.

However, business-state relations in the Global South tend to be pragmatist and not agenda driven, sometimes involving rampant rent-seeking. Low interest loans are mostly directed to the lower income class and MSMEs, while subsidies are often consumer oriented with most of them designated to SOEs that provide public goods. Loans, subsidies, and other financial means have mainly served the welfare, rather than the innovation ends (Bardhan, 2018). It has not come by much as a realization in most of the Global South that those policies could be used to mobilize the private sector to innovate for a greener mode of production.

As mentioned before, green innovation is a high input and high-risk process. Enterprises lack the incentive to innovate when they are not sure whether innovation could bring them more returns. Hence, it is highly needed to promote business green innovation by providing low interest rate loans and government subsidies for environmentally friendly projects. Through green innovation, enterprises could not only obtain excess ex-

pected earnings but also achieve an overall better corporate image (Chen, 2008).

Take the energy sector. Dzonzi-Undi and Li (2016) researched the development of Clean Coal Technology (CCT) in four countries, two developing countries (China & India) and two developed countries (Australia & US). The CCT is a new energy producing technology that can significantly reduce air pollution. However, in the adoption of CCT, constraints are met in terms of increased capital and operational costs, as well as reduced efficiencies in the operation, thereby translating to reduced profits. These four governments then overcome these obstacles by providing low-interest loans, subsidies, and tax exemptions (Dzonzi-Undi and Li, 2016). These financial incentives are especially critical in the initial phase. Over time, as more incremental or ground-breaking innovation occurs, it will gradually become self-sustaining and no longer need government support (Acemoglu et al., 2016).

Private enterprises are well suited to make green innovations, but they lack the incentives to do so. Thus, it is in the hands of governments and banks of the Global South to provide the necessary financial incentives to encourage private innovation, research, and development for a greener mode of production.

Carbon-Intensive Trade Diversion and Exhaustion of Carbon Resources

In a relatively brief five years until its full implementation, the CBAM will bring some trade diversions because some goods are no longer competitive or have meaning-

ful demand. A model estimated that with some kind of carbon border tax, such as the CBAM, there would be some notable decrease of exports from Global South countries to the EU. Fouré, Guimbard, and Monjon (2016) estimated that there would be a decrease in exports ranging from 0.3% (USD 17 Million) from Brazil, 2.1% (USD 421 Million) from India, and 1.4% (USD 710 Million) from China & HK.

Without immediate response from the government, the decrease of exports worth millions of dollars could trigger economic instabilities. Industries might already be undergoing a green transition, but an abrupt change in production would still hurt industries. Meanwhile, the domestic demand might not substitute the missing demand.

The simple solution seems obvious: diverting carbon-intensive trade somewhere else. As the EU phased out coal gradually and as coal became less preferable in most of the developed world, new demand for coal could emerge in the Global South. China, the main consumer of coal, doubled its consumption from around 1300 Mt in 2000 to more than 3000 Mt in 2019. Demand continues to grow in Asia, and is expected to grow in Africa, offsetting the decrease in Europe and the US (International Energy Agency, 2020a; International Energy Agency, 2020b). The same goes for other products taxed by the CBAM: cement, iron and steel, aluminum, and fertilizer. The world might even see the decrease in price of those goods because of the EU's CBAM, possibly driving up consumption elsewhere.

In facing such future prospects, governments in the Global South should coordinate trade and match the supply & demand to optimize their coal production, mainly through South to South cooperation. However, this should not be taken as means to continue carbon-intensive exports indefinitely. This transition in trade should be understood in the larger context of gradual green transition. Eventually, carbon-intensive exports have to be reduced significantly, if not eliminated altogether.

Conclusion

In light of the newly proposed CBAM by the EU, countries around the world are once again prompted to change their domestic practices to be in line with the global commitment to reduce carbon and the transition to a more sustainable economic growth. Contrary to popular belief which asserts that Global South is at disadvantage, findings of this article show that countries in the Global South instead own the potential to utilize their state-capacity to adapt to this changing pattern of economic growth. The evident transition is marked by the incorporation of environmental concerns in their broader development plans and its willingness to mobilize necessary resources to materialize a more sustainable development.

However, this article also noted several shortcomings that countries need to work further upon. To overcome such obstacles, this article proposed several policy recommendations as prescribed by new developmentalism. This article prescribes the Global South countries to: (1) implement some form

of carbon pricing; (2) incorporate a more extensive and ambitious goal of sustainable growth to their national development plans; (3) invest further in SOEs and provide strategic incentives as well as initiatives to induce the private sector undergo a green transition; and, lastly, (4) plan alternative trade strategies to optimize economic gains during the transition period.

On that account, Global South countries should address the CBAM not just as a measure from the EU to respond, but rather as a catalyst for change. As the global growth pattern shifts, governments should be the main drivers of change to a more carbon-neutral means of production and sustainable economic growth. Ideally, it should start with a wide-ranging carbon pricing mechanism. Policymakers are in the heart of change in Global South. The state once again has to prove its developmental capacity through multiple policy options to maintain growth and transition to a more sustainable economy.

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