Taxonomy of Trade Barriers: Five Types of Protectionism

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Abstract

This paper examines the different motives for introducing trade barriers and identifies five types of protectionism. While the 20th century was dominated by "lobbyist protectionism" and "industrialiser protectionism," the period following the global financial crisis of 2008–2009 has been a time of "geostrategist protectionism" and "populist protectionism." Finally, the introduction of a carbon border adjustment mechanism in the EU could be the beginning of the spread of "benevolent protectionism." The proposed taxonomy of protectionism shows why, despite the consensus among economists on the benefits of international trade, protectionism remains so prevalent. It also helps to explain why developed countries, once the main proponents of free trade and globalization, played a major role in the intense growth of trade barriers in the 2010–2020s.

1. Introduction

The vast majority of modern economists agree that free trade promotes economic growth. Textbooks on international economics focus on demonstrating the benefits of international trade. David Ricardo's theory of comparative advantage, which

illustrates these benefits, is one of the best-known economic principles. The Booth School of Business in Chicago regularly surveys a standing panel of distinguished economists on various aspects of economic policy. The panel of experts they survey shows unusual unanimity on the effects of free trade. When asked whether experts agreed that "freer trade improves productive efficiency and offers consumers better choices, and in the long run these gains are much larger than any effects on employment," there was not a single negative response (Clark Center Forum 2012).[1]

However, protectionism is still widespread around the world and has increased steadily over the past decade and a half. Indeed, since November 2008, Global Trade Alert has recorded more than 40,000 government actions restricting trade and just over 9,000 liberalizing trade (Global Trade Alert 2023). And it is the developed world that is leading the way in rising protectionism: Of the top 10 countries by number of protectionist measures introduced over the period, only one is not a developed country, in fifth place (China). The share of global imports subject to import restrictions increased from 0.6% to 8.9% between 2009 and 2021, with the largest increase occurring in 2018–2019, when the U.S.-China trade war began (WTO 2022). In 2022, there is a new surge in trade restrictions related to sanctions against Russia. The sanctions are not considered protectionist measures by the countries that impose them, but many of them differ from protectionist measures only procedurally: for example, banning goods from Russia or imposing tariffs on them are examples of standard protectionist practices, albeit with different motivations.

This article seeks to answer the question of why the world is becoming increasingly protectionist given the consensus among economists on the benefits of free trade. Through a review of the academic literature and the practice of protectionist measures, the aim is to identify the key motivations of the states that introduce them and to propose a taxonomy of protectionist measures. Through this prism, the rise of protectionism observed globally in the 2010s–2020s is explained.

In this article, protectionism is understood in a narrow sense—as a set of measures aimed at creating barriers to the import of goods into a country. These measures include import embargoes as well as tariff and non-tariff barriers. The use of subsidies, even those prohibited by the World Trade Organization, is not considered in this paper as they are not directly aimed at creating barriers to free trade, although they do change the rules of the game in favor of domestic producers at the expense of importers.

The article is structured as follows. Section 2 describes the main types of benefits that international trade brings to participating countries. Sections 3–7 describe the five types of protectionism, depending on the objectives pursued by the states that use them. The final section summarizes the proposed taxonomy and draws the main conclusions.

2. The benefits of international trade

The justification of the benefits of international trade in economics goes back at least to Adam Smith. Since then, international exchange has not only increased,

but its sectoral and geographical scope and organizational structures have also changed considerably. New stylized facts have been reflected in new theories, which together identify four main sources of benefits from trade (Makarov 2022).

The first relates to the benefits of specialization and the international division of labor. This approach is usually analyzed in terms of absolute, comparative, and competitive advantages. They can be attributed to higher productivity in a given sector—this is the spirit in which advantages were interpreted by Adam Smith and David Ricardo. Heckscher and Ohlin, on the other hand, emphasized the different endowments of countries with factors of production (Heckscher 1919; Ohlin 1967). Porter has shown that in some countries the market environment (e.g., the existence of complementary industries and government support) may be more favorable to certain industries than in others (Porter 1998). Often, the legal environment and the investment regime are also important. In any case, it makes sense for a country to export what it does best and import the rest. Such a strategy will contribute to higher levels of consumption and welfare.

The second source of benefits from international trade was established in the 1970s and 1980s and is mainly associated with Paul Krugman. Unlike classical and neoclassical authors who analyzed perfectly competitive markets, he began to look at international trade through the prism of monopolistic competition models, characterized by the presence of a large number of varieties of the same goods. These varieties are, for example, car models or toothpaste brands. Krugman, drawing on Dixit and Stiglitz's model of monopolistic competition (Dixit and Stiglitz 1977), points out that in the differentiated product industries characteristic of developed countries, consumers want more choice, and international trade with other developed countries allows this love of variety to be satisfied (Krugman 1980). It is precisely this love that drives active trade between developed countries with similar comparative advantages, as well as bilateral trade in goods from the same industry that are now seen as different varieties catering to different consumer preferences.

A third source of gains from trade—economies of scale—is also associated with differentiated products. As production increases, unit costs fall, partly because of the traditionally high capital costs of modern industry and partly because of learning-by-doing. Companies learn from their own and others' mistakes, optimize processes, implement new technical solutions, etc. For most countries in the world, the size of the domestic market is so small that it does not allow them to take full advantage of economies of scale. A prerequisite for the competitiveness of industries is therefore to enter foreign markets. International trade is what allows firms to take advantage of economies of scale, thereby stimulating economic growth (Krugman 1979).

A fourth source of trade benefits is related to the reallocation of resources within industries. This is evident in the "new-new" theories of international trade that emerged in the early 21st century, which shift the focus of trade theory from the level of countries (or, more precisely, industries within countries) to the level of firms. Entering a foreign market always involves some extra costs that only a

relatively select group of firms, usually the larger and more efficient ones, can afford. This means that exporters tend to be more productive than firms that operate exclusively in the domestic market. Given that exporters are the main beneficiaries of free trade, it can be concluded that it leads to a redistribution of wealth in favor of more productive firms, which raises average productivity and consequently the overall welfare of society (Melitz 2003).

This list of four sources of gains from trade is not exhaustive. Rather, it summarizes the different stages in the development of the theoretical understanding of the international exchange of goods and services. It can also be interpreted as a list of first-order gains which, as their logic develops, are superimposed on the gains of the following levels. For example, the literature has established that trade stimulates technical progress (Keller 2004) (e.g. because of economies of scale and because more productive firms that benefit from trade are more likely to innovate), that it leads to lower trade markups for domestic firms due to increased competition (Feenstra and Weinstein 2017), and that trade between two countries reduces the risk of military conflict between them and helps to reduce military costs (Seitz, Tarasov and Zakharenko 2015). This review of theories does not pretend to cover all possible sources of benefits from trade, but it demonstrates their diversity and the magnitude of the positive effects of international trade on economic growth.

Nevertheless, the world is still a long way from eliminating all barriers to trade. Although protectionist practices are viewed negatively by the vast majority of economists, they are still part of the arsenal of most nations in the world. Moreover, they have become more widespread in recent years. To explain the new upsurge in protectionism after the Great Recession, it is important to understand its possible theoretical background. The five underlying motivations for protectionist measures are discussed in detail in the following sections.

3.The first type of protectionism: “lobbyist protectionism”

The standard neoliberal approach links the introduction and maintenance of tariff barriers to the influence of pro-protectionist interest groups that win a political battle. Most protectionist measures in the world are linked to protecting the interests of national producers who have influence over decision-making. For example, protectionist measures in most countries around the world include tariffs on many products as well as non-tariff barriers of all kinds. For the economy as a whole, such protectionism is in most cases harmful, but the net losses are not evenly distributed among economic agents.

Protectionism hurts consumers first and foremost—imported goods become more expensive for them. However, this loss is spread over a large number of individuals. Each of them loses so little, and their capacity for political consolidation is so low, that they do not represent a serious force in defense of the principles of free trade. At the same time, protectionism generates gains for producers. Overall, these are smaller than the gains for consumers, but they fall entirely on a relatively

small number of firms in the industry, which are highly motivated and can easily band together to lobby the government to impose protectionist measures (Ehrlich 2008). In this way, protectionism can win even when there is a cumulative negative impact on a country's economy (Grossman and Helpman 1994).

According to this interpretation, protectionism is the result of rent-seeking behavior, i.e. behavior that does not aim to increase welfare but to redistribute it in one's own favor through the privileges received, in this case from the state (Tullock 1997; Krueger 1974).

The history of U.S. trade policy provides many examples of "lobbyist protectionism." For example, between 1914 and 1997, the U.S. banned the import of avocados from Mexico on phytosanitary grounds, the risk of some insect pests entering U.S. orchards. During this period, Mexican avocados were freely exported to Europe, and since the 1970s, numerous USDA inspections have not found significant pests in Mexican crops. However, lobbying by Californian avocado growers delayed the lifting of the ban on Mexican avocado imports until 1997 (Lamb 2006), when it was included in the agreements in preparation for the North American Free Trade Agreement (NAFTA). The lifting of the ban on Mexican avocados has brought significant benefits to the U.S. economy. For example, in the 2019/2020 fiscal year, avocado imports from Mexico brought $4 billion in value added, 3,351 jobs, $2.2 billion in worker income and $1.1 billion in tax revenue to the U.S. (Williams and Hanselka 2020).

Another example of "lobbyist protectionism" in the U.S. that is still in place today is the U.S. sugar support program. In addition to production quotas for domestic companies, the program also uses tariff quotas and exemptions in U.S. trade agreements with other countries for sugar. These policies keep U.S. domestic sugar prices well above the world average (by more than 100% in some years), with losses to the U.S. population of between $2.4 and $4 billion (Beghin and Elobeid 2017). Like the restrictions on avocado imports, this is a classic example of a policy that benefits a narrow group of economic agents involved in the business in question at the expense of the masses of consumers across the country.

The reason that U.S. trade policy provides the most obvious examples of "protectionism for sale" is because of the relative transparency of U.S. lobbying. Associations of manufacturers of certain products have perfectly legitimate representatives in Washington D.C. and contribute to the election campaigns of U.S. politicians. In many other countries, the patronage of protectionist practices by big business takes different forms but is no less widespread. For example, the literature provides evidence of this kind of protectionism in Turkey (Mitra, Thomakos, and Ulubaşoğlu 2002) and Indonesia (Mobarak and Purbasari 2006), while Borchert et al. (2012) show how special interest protectionism in transport and communication services exacerbates the continental curse of landlocked developing countries.

To conclude the section on "lobbyist protectionism," we note that not only protectionism can be rent-seeking, but also any other kind of trade policy. For example, Rodrik (2018) convincingly argues that modern trade agreements, which focus less on removing barriers to international trade and more on standardizing

rules of doing business (including aspects such as intellectual property protection, government procurement rules, labor and environmental standards), are largely the result of rent-seeking behavior by multinational corporations (Kim, Milner 2019). In effect, this is a different kind of trade lobbying: while companies use protectionism to protect their rules of the game by isolating themselves from the global market through trade barriers, they use trade agreements to try to extend their familiar rules of the game to foreign markets.

4. The second type of protectionism: "industrialiser protectionism"

"Lobbyist protectionism" is bad for national prosperity. But not all protectionist measures are. In some cases, trade barriers can be beneficial, not just for individual interest groups, but for economies as a whole.

The strongest argument for protectionism is the need to protect new industries. It was first used by U.S. Secretary of the Treasury Alexander Hamilton, who wrote as early as 1790 that it was impossible to build up a domestic industrial base without import duties. They are designed to provide firms with a large domestic market and allow them to take advantage of economies of scale (Bairoch 1995). A little later, a similar argument was developed by Friedrich List, the author of the concept of the national system of political economy, who proposed a proactive role of the state in economic development and noted that Great Britain moved to a policy of free trade only after it had become the industrial and technological leader of the world. Spreading the ideas of free trade to other states deprived them of the opportunity to replicate the original path (List 1856). List's ideas were embodied in both Germany and the Russian Empire. Moreover, as proof of their validity, modern proponents of "industrialiser protectionism" use the example not of Great Britain, but of the United States, which, in full compliance with List's recommendations, abandoned protectionism later than other developed countries, and then, having become the world's largest economy, just like Great Britain a century earlier, transformed itself into the main proponent of free trade (Reinert 2007).

Attempts to create their own industries through domestic producer support programs were widely used by developing countries until the 1990s. The need to protect infant industries was one of the reasons for them for not joining GATT. In the 1980s, the idea received new support from Paul Krugman's new theory of international trade, which centered on the notion of economies of scale (Krugman 1979). Given the existing diversity in market structures and cost structures (and the resulting peculiarities in achieving economies of scale), trade liberalization is not necessarily the optimal solution. Helping domestic firms to conquer foreign markets, as well as protecting them from foreign competition in their home market, can be part of an effective strategic trade policy, which may incur costs in the short run, but will create firms and industries that are dominant in the long run, leading to higher economic growth (Brander 1986). However, it is assumed that once a firm achieves market leadership and is able to take advantage of economies of scale, protectionist measures can be removed.

The history of attempts at catching-up, both successful and unsuccessful, throughout the twentieth century is the history of strategic trade and industrial policy. One of the most prominent examples is the Korean economic miracle, which was achieved through intense protection of the domestic market from imports, while encouraging competition among domestic chaebols and supporting exports (Lee 1997). Another successful example of building a strong high-tech industry is the Brazilian aircraft industry, which emerged as part of the country's import substitution policy between the 1950s and 1980s. A key player in this industry is Embraer, which was founded in 1969 and remains one of the world leaders in the production of regional aircraft (Helleiner 1992).

Despite isolated examples of effective implementation, "industrialiser protectionism" should not be seen as a one-size-fits-all recipe for success. Firstly, arbitrary government choices of industrial priorities are bound to be mistakes. For every dozen successful examples of effective import substitution programs, there are hundreds of failures. While strategic trade and industrial policies based on export promotion have been largely successful in South-East Asia, they have had far more modest success in Latin America, where the emphasis has been on tariff protection.

Second, "industrialiser protectionism" has always been an excellent cover for traditional "lobbyist protectionism," and it can be very difficult to tell which is which at the outset. Arguments about protecting infant industries and strategic trade policies are typical lobbyist arguments used to preserve or multiply their own rewards.

Third, and perhaps most importantly, the nature of international trade has changed fundamentally over the past thirty years. Modern trade between developed and developing countries is organized in value chains, made possible by advances in information and communication technology. The components of a final good in these chains often cross borders several times. High tariff barriers prevent developing countries from participating in global value chains, and thus from absorbing the technology from developed countries and the jobs created by Western multinationals. It is this motivation that led many developing countries to abandon the idea of industrialization under tariff protection and join trade liberalization efforts in the 1980s and 1990s (Baldwin 2016). For some of them, China, India, Mexico, Southeast Asian countries, this strategy has been successful, albeit to varying degrees. "Industrialiser protectionism" has lost much of its appeal.

5. A third type of protectionism: "geostrategist protectionism"

The widespread use of sanctions restrictions over the past decade suggests that "geostrategist protectionism" should be considered as a separate phenomenon. Unlike "lobbyist protectionism" and "industrialiser protectionism," which aim to create favorable conditions for domestic producers, "geostrategist protectionism" tends to be aimed at harming a target country.

This makes protectionism more akin to sanctions. Traditionally, it has been customary to distinguish between the two. Protectionist measures aim to create advantages, increase competitiveness, and maximize profits. Sanctions, on the other hand, are a kind of power relationship, focusing on political deterrence. The tools of protectionism and sanctions have also been differentiated: the former have used tariff and non-tariff barriers, while the latter have used bans on exports and imports of certain goods, bans on financial transactions with certain companies and individuals, and confiscation of assets (Timofeev 2019).

However, a clear distinction between protectionism and sanctions is only theoretically possible. Moreover, the boundaries between the two become blurred in the context of a political confrontation, such as between Western countries and Russia or between the United States and China. In this confrontation, there is a "weaponization" of interdependence—the refusal or threat of prohibition of a particular interaction in the context of asymmetric interdependence is used to influence the adversary (Farrell and Newman 2019). In such an environment, many trade policies increasingly act as a weapon rather than a means to one's own development: They are designed to maximize damage to an adversary rather than maximize one's own gains, while minimizing negative side effects to one's own economy.

The boundaries between sanctions and protectionist measures are blurred in terms of the instruments used. For example, Russia has repeatedly used sanitary and phytosanitary barriers in recent decades to restrict trade with countries with which it has had political contradictions. In particular, imports of Georgian wines were banned from 2006 to 2013 due to alleged pesticide content; wine imports from Moldova were banned in 2006 and then in 2013; vegetable imports from Turkey were banned in 2016—formally also for phytosanitary reasons, but it was made clear that the ban was in response to the downing of a Russian Su-24 aircraft by the Turkish air force.

If the use of non-tariff barriers (technical standards or sanitary and phytosanitary restrictions) is compatible with WTO rules, the imposition of additional tariffs on products from WTO members is prohibited. This has significantly reduced the scope for "geostrategist protectionism." However, due to the paralysis of the WTO dispute settlement mechanism and the general crisis of this organization, such restrictions are gradually becoming a thing of the past. For example, in 2022 a number of states (including the U.S., Canada, the UK, Australia, and Japan) withdrew Russia's MFN status and imposed a 35% tariff on all or part of its imports not already subject to sanctions. This is a prime example of combining the deterrent motivation characteristic of sanctions with the tools of standard trade policy.

The line between protectionism and sanctions is also increasingly difficult to draw in terms of motives. The deterrence of a country's technological development, which is the goal of "geostrategist protectionism," can be seen not as an end in itself but as a condition for making the country's own

economy more competitive in the long run. This may follow from the new trade theory, which focuses on economies of scale. Modern high-tech industries are characterized by huge positive returns to scale. The development of virtual platforms reinforces this and, as a result, some markets are subject to the "winner takes all" principle. The technological deterrence of competitors becomes a tool to secure this victory.

The trade war launched by the U.S. against China should obviously be seen in this context. For a long time, the Chinese economy was a perfect complement to the U.S. economy, creating a codependency between the two countries that became the basis of globalization in the 2000s. China provided the U.S. with cheap consumer goods and, in return, received direct investment from U.S. companies, which acted as an entry point for advanced technologies into the Chinese market (Roach 2014). However, as the Chinese economy developed, it shifted from complementing the U.S. economy to competing with it. The share of high-tech products in Chinese exports is already one and a half times higher than in U.S. exports (30% versus 20% in 2021). The "Made in China 2025" plan, adopted in 2015, aims to transform the country from a "global factory" to a producer of high-tech products in 10 categories (including information technology, robots, aerospace equipment, green technology, medical equipment, etc.) in which China is targeting global leadership (McKinsey 2015). Unsurprisingly, it is these industries that have received the largest increases in import tariffs under the Donald Trump administration.

To some extent, the U.S. approach to deter its main competitor is similar to the strategy it used against Japan in the 1980s. It is significant that Robert Lighthizer, who directly led the U.S.-Japan trade negotiations thirty years ago, was appointed U.S. Trade Representative under Donald Trump. The "voluntary export restraints" that the U.S. imposed on Japan, along with the high U.S. import tariffs on a whole group of important goods, including cars (Satake 2000) and semiconductors (Irwin 1996), can also be interpreted as "geostrategist protectionism." The result was the stalling of the Japanese economic miracle and the loss of Japan's status as a major rival to the U.S. in high-tech sectors.

The U.S. is unlikely to achieve the same success with China, especially since China, unlike Japan, which has remained militarily and politically dependent on the U.S. since World War II, has not taken a passive, consensual position in the trade war. Moreover, China's retaliatory measures can also be interpreted as "geostrategic protectionism". For example, Kim and Margalit (2021) convincingly show that China's trade war activities primarily targeted import restrictions on those American goods whose production was concentrated in areas that favored Republicans in elections. Moreover, such a strategy worked in the sense that the residents of these districts were made aware of the trade war, felt its negative effects and blamed it on the Republican Party, thereby reducing its support in congressional elections (Kim and Margalit 2021; Blanchard, Bown and Chor 2022). Thus, once again, the adversarial motivation typical for sanctions is combined with the standard protectionist toolkit.

6. The fourth type of protectionism: "populist protectionism"

One of the main drivers of protectionism today is related to the distributional effects of free trade. These have been known for a long time. According to the Stolper-Samuelson theorem, countries that specialize in the production of capital-intensive goods will raise the incomes of capital owners and lower the incomes of labor (Stolper and Samuelson 1941). Recent international trade theory suggests that trade redistributes wealth from less productive firms operating domestically to more productive firms operating abroad (Melitz 2003). This leads to a concentration of wealth in large firms and their shareholders and, further down the chain, in the regions where these firms are located.

These distributional effects of trade in developed countries are very similar to the effects of technical progress: it also brings undeniable net benefits to society, but at the same time tangible losses to some parts of society—primarily unskilled workers (Rodrik 2011). Unsurprisingly, it is difficult to disentangle the two in quantitative assessments of the causes of inequality. Given that international trade, like technical progress, generates net welfare gains, the losses suffered by the losers could be compensated by the winners (through tax redistribution) and mitigated through educational development, retraining and training for unskilled workers. In reality, however, this does not work.

First, there is ample evidence that the distributional effects of trade in developed countries are disproportionately larger than the benefits of trade. Given the low levels of tariff protection already in place in most developed countries, the gains from further liberalization would be relatively small. For example, the gains to the U.S. economy from the highly ambitious Trans-Pacific Partnership (including the U.S., as originally envisaged) have been estimated at 0.5% of GDP per year by 2030, of which only a few per cent are due to lower tariffs (Petri and Plummer 2016). At the same time, even in liberalized economies, the distributional effects of tariff cuts can remain very significant. For example, Rodrik estimates that in an economy with an average tariff level of 5 per cent, the amount of redistribution from labor to owners of capital as a result of free trade would be $45.5 for every dollar of gains from free trade (Rodrik 2018). Compensatory redistribution on this scale is hard to imagine.

Second, the last decade has seen a politicization of inequality in the United States and Europe. Rising prosperity for the rich, against a backdrop of stagnating or even falling real incomes for the middle class and the poor, has sharply increased tensions over any phenomenon that increases inequality. International trade is not the most important of these, but it is much easier to oppose than the robotization of industry or the rise of the "education premium." In this way, protectionism becomes a tool in the hands of the populists through the support of the masses.

Donald Trump's first three waves of tariffs, which included increases in duties on solar panels (30%) and washing machines (20 to 50%), as well as steel (25%) and aluminum (10%), are a prime example of "populist protectionism." Numerous papers have shown the negative impact of this measure on the U.S. economy. Amity et al. (2019) calculate that Trump's trade policy causes a net welfare loss of

$1.4 billion per month and costs consumers $3.2 billion per month. Fajgelbaum et al. (2020) estimated that the net loss to the U.S. economy was 0.04%. Even in terms of employment, where the tariffs appear to have been targeted, the effect is negative: some positive impact on jobs in iron and steel production is offset by lower employment in industries that use steel and aluminum (which employ 80 times as many people) (Cox 2021) due to their higher costs and retaliatory trade restrictions in partner countries. Blanchard et al. (2022) suggest that Trump's trade policies led to the eventual loss of between 5 and 40 Republican Party seats in Congress in the 2018 elections. In contrast, however, the U.S. tariffs themselves contributed to support for the Republican Party, and the overall losses are related to retaliation, especially the highly effective (in terms of electoral impact) retaliation used by China. As for the electoral effects, there is no doubt that anti-free trade rhetoric helped Trump win the 2016 presidential election. Moreover, despite the overall negative outcome of his trade policy, in the 2020 presidential election in two states (Georgia and Wisconsin), additional popular support for the protectionist measures he initiated allowed Trump to pass the 50% electoral threshold, while the negative impact on his rating from retaliatory measures, although greater in volume, did not play an electoral role (Lake and Nie 2022).

The Trump example has shown that promises of protectionist barriers can benefit a politician, given that in developed countries free trade hits a large part of the population (albeit in relatively small amounts), which also tends to exaggerate the role of international trade in their problems. The situation is similar in the European Union, where withdrawal from the European integration is gaining popular support in some countries even in the face of the negative net effects of such a move. In this sense, Brexit is also a form of "protectionist populism."

And even after protectionist trade policies have been implemented and their negative economic effects are already evident, they remain extremely resilient. This is arguably particularly characteristic of the American electoral system, in which individual states play a disproportionately large role in electoral outcomes, so that policies (including protectionism) that gain support in those states may be politically preferable, even if they result in national setbacks. It should be noted that the Biden administration never lifted many of the restrictive measures imposed by Donald Trump, although it did manage to reach agreement on lifting barriers against the UK, Japan, Canada and Mexico (the last two—introduced under Trump). Even with regard to the EU, there is no discussion of a complete removal of tariff barriers, although they have been eased compared to the original version established under Trump administration. The vast majority of the new tariffs against China remain in force.

In conclusion, "populist protectionism" is characteristic of developed countries. And it is not just a question of the political system, which forces decision-makers to focus on the opinion of the electorate, but also of the purely economic basis of the phenomenon. According to the Stolper-Samuelson theorem, free trade leads to a fall in labor incomes only in developed countries with a significant stock of capital. In developing countries, the opposite is true: the wages of unskilled workers should

rise. This does not necessarily happen in practice due to inertia and low labor market flexibility (Topalova 2010), but free trade certainly does not have a negative impact on the incomes of the general population in developing world, so "populist protectionism" does not make sense here.

7. A fifth type of protectionism: "benevolent protectionism"

"Benevolent protectionism" is protectionism in the name of the public good. It is most obviously implemented for the environmental protection. Stricter environmental policies in developed countries make domestic producers less competitive compared to importers from countries that do not have such policies. In these circumstances, new border barriers that protect domestic firms will make them more amenable to stricter environmental regulation that would otherwise be inconvenient for them.

Under WTO rules, environmental concerns can be used to restrict market access for certain goods, but in practice this has long been almost impossible: most conflicts between free trade and the prevention of environmental damage have been resolved in favor of the former. The trade disputes over tuna imports from Mexico to the U.S. to protect dolphins are well known, as is the embargo on shrimp imports to the U.S. from countries that do not use turtle-safe nets. Overall, the U.S. holds the record for the highest number of environmental disputes under the GATT/WTO, and in each case it has de facto failed—the restrictions imposed by the U.S. have been found to violate the agreement. Under the product/process distinction, the WTO has developed a practice of recognizing claims against a producer only if they relate to the product itself and not to the manner in which it is produced (Howse and Regan 2000).

Now, however, the situation has changed significantly. First, the WTO is in crisis, and at the same time the principle of product/process distinction has become increasingly questionable (Howse and Regan 2000). Second, the issue of global climate change has risen to the top of the international political agenda over the past decade. The attention it has received in many countries, and the nature of the climate system as a global public good, make a much stronger case for using the full range of instruments available to protect the climate than for protecting dolphins or turtles. Third, the impact of policies to reduce greenhouse gas emissions on the competitiveness of businesses is so significant that the debate on the need for compensation trade barriers to reduce the burden of climate regulation on businesses in the most heavily regulated countries is inevitable.

In 2019, the European Commission announced plans to introduce a Carbon Border Adjustment Mechanism (CBAM): a system of measures designed to "level the playing field" in the implementation of climate policy for European producers and importers of carbon-intensive goods. CBAM will be implemented from 2023, initially in a transitional phase. So far, the six product groups (iron and steel, aluminum, cement, fertilizers, electricity, and hydrogen) that are most exposed to "carbon leakage," i.e. the risk that European producers will lose competitiveness

due to stringent climate regulation in the EU (European Commission 2022), have been regulated. The CBAM is not a trade policy measure in the strict sense. Payments under the scheme are not made by exporters of products to the EU, but by European buyers of imported goods. This fact, together with the synchronization of the payments with the price of emission allowances in the EU emissions trading system, allows European regulators to insist that the new scheme is WTO compatible. The countries affected by the introduction of the CBAM do not fully agree with this (Durán 2023), but the issue is a legal one. For the purposes of this paper, the important point is that CBAM is a trade barrier—a full-fledged form of protectionism.

However, such barriers can be expected to proliferate over time. They are a logical consequence of the uneven climate policies: if some countries want to do more than others, compensatory border mechanisms are the only way for them to do so without damaging their economies. In the United States, the possibility of introducing carbon border adjustments was considered as early as 2009, when it was outlined in the Waxman-Markey bill to create a domestic emissions trading system (Makarov 2012). Since then, no discussion of climate policy in the U.S. has been complete without mention of border barriers to prevent carbon leakage. Significantly, they are even recommended in the Economists' Statement on Carbon Dividends published in 2019 (The Wall Street Journal 2019). The letter, which became the most representative public address in the history of the American economic community, was signed by 3,640 economists, including 28 Nobel laureates. Clearly, the vast majority of them are in favor of free trade ideas.

Perhaps the idea of carbon border adjustments will become international. Nordhaus (2015) came up with the idea of a climate club—an association of countries with an active climate policy that introduces a carbon border adjustment mechanism against third countries that are not willing to set comparable climate targets. Such a mechanism would both protect companies in enthusiastic countries from “carbon leakage” and encourage other economies to join the club in order to gain access to their markets. The idea, albeit in a slightly modified form, is already virtually implemented within the G7 (G7 Germany 2022).

While the idea of carbon border adjustments has already become mainstream in economics and international relations, and has been translated into real trade policy measures, the issue of “benevolent protectionism” is still at the level of debate for other public goods. However, this may change in the future. For example, progressive taxation, proposed by many economists to fight inequality (Pikkety 2017; Saez and Zucman 2019), may lead to leakage of industries abroad no less than climate policy. Firms will find it easier to adopt such a measure if they are protected from foreign competition by a parallel border adjustment. The same logic applies to the maintenance of labor standards and the fight against social dumping, such as sweatshops and child labor. Such practices give countries that use them a competitive advantage in attracting foreign investment, triggering a "race to the bottom" on labor standards (Davies and Vadlamannati 2013). Trade barriers against firms from such countries are seen by many as

a solution. Di Taglia and Rodrik (2020) show from surveys that there is a high demand in the United States for protectionist countermeasures to defend the high labor standards of developed countries against "unfair" competition from developing countries. As inequality continues to grow, its politicization in the developed world increases, and the role of the WTO in regulating international trade declines, we can expect to see the spread of "benevolent protectionism" to protect high labor standards and progressive tax practices, just as we are seeing the spread of "benevolent protectionism' to combat climate change.

8. Conclusion and discussion

The five types of protectionism outlined above allow us to systematize the motives behind the introduction of trade barriers in different countries. Of course, it is not always possible to fit every protectionist measure into just one of these groups. For example, "industrialiser protectionism" may serve as a cover for "lobbyist protectionism," but de facto both objectives—protection of new industries and protection of producers' rents—may be pursued simultaneously. "Geostrategist protectionism" can be implemented simultaneously with "populist protectionism"—such a combination is part of the tariffs against China imposed on the initiative of Donald Trump (e.g. increasing tariffs on solar panels from China). "Geostrategist protectionism" can also be very profitable for lobbyists and can be implemented under their influence. For example, the food embargo imposed by Russia in 2014 not only hit farmers from Western (mainly European) countries, but also brought significant benefits to Russian producers (Volchkova and Kuznetsova 2019), while increasing market concentration in the industry (Yanbykh, Saraikin and Lerman 2020). This allows us to observe elements of "lobbyist protectionism" in the embargo as well.

The taxonomy proposed in the paper (Table 1, p. 86) helps to explain the reversal of protectionism that occurred after the 2008–2009 crisis. Over the past decade and a half, protectionist measures have been increasingly adopted by developed countries, which had previously been the main proponents of free trade. In contrast, developing countries, which are characterized by higher tariff and non-tariff protection of their own markets, have maintained a trend toward liberalization.

This kind of inversion is linked to two processes. First, the massive application of "industrializer protectionist," characteristic of developing countries, is a thing of the past. Since the late 1980s and early 1990s, most developing countries have abandoned the idea of import substitution, seeing another faster and more reliable route to industrialization—attracting Western capital and integrating into global value chains.

Second, the practice of "populist protectionism," typical of developed countries, is on the contrary gaining ground, due to the polarization of their population and the politicization of inequality against the background of the objective negative effects of free trade on income distribution in the developed world.

In the near future, "benevolent protectionism" can be expected to spread as concerns about the environment and sustainable development continue to grow. As this type of protectionism is also characteristic of developed countries, its widespread use will only exacerbate the observed inversion.

Table 1. Examples and characteristics of each of the five types of protectionism

Type of protectionism	Goal	Which countries usually implement	Examples	Result for the general welfare in the adopter country
"Lobbyist protectionism"	To support domestic producers	All	A ban on avocado imports in the USA (1914-1997), restrictions on sugar imports in the USA (current), high import duties on cars in Russia (since 2001)	Negative
"Industrialiser protectionism"	Launch industrialization, develop infant industries	Developing	Support for aircraft manufacturing in Brazil (1960s-1970s), protectionism in the Republic of Korea and Taiwan (1970s–1990s)	Positive if successfully implemented
"Geostrategist protectionism"	Deterrence of a political rival nation	All	Voluntary export restrictions in Japan in the 1970s and the 1980s, part of U.S. trade tariffs against China since 2018, Russian embargo on wine imports from Georgia in 2008–2013, tomato import embargo from Turkey in 2016–2018, sanctions against Russia in 2022	Negative; may be positive if political power is converted to economic power
"Populist protectionism"	Gaining electoral support	Developed	U.S. trade tariffs on steel and aluminum from China, EU, Canada, and Mexico since 2018	Negative; positive impact on welfare distribution may be observed
"Benevolent protectionism"	Securing public goods	Developed	U.S. embargo on tuna imports from Mexico in 1990, European carbon border adjustment mechanism in the EU since 2023	Difficult to assess due to difficulties valuing public goods

The last decade has also been characterized by the widespread use of "geostrategist protectionism." It is used by both developed and developing countries. However, in the latter it is usually a retaliatory measure or directed against other developing countries. This is because developing countries value trade more and are less willing to give it up and thus tend to pursue a policy of liberalization. Examples at the rhetorical level include Xi Jinping's speech defending globalization at the Davos Forum in 2017, and at the practical level, the African Continental Free Trade Area, which came into full force in 2021 and represented a breakthrough for trade liberalization processes in Africa, or the Comprehensive Regional Economic Partnership, which was launched in 2022, with China and ASEAN countries as the main drivers.

In this context, talk of full-scale deglobalization is something of an oversimplification. At the level of trade policy, globalization processes are indeed

reversing in the Western world. However, the fact that it has been the main driver of globalization in the past should not imply that the same trend is spreading to other parts of the world. Developing countries are more aware than ever of the benefits of international trade and are continuing the trend toward greater economic openness.

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Notes

[1] Many of the experts interviewed, it is worth noting, added caveats to their positive responses.