Learning by trading goods in Colombia: analysis and recommendations

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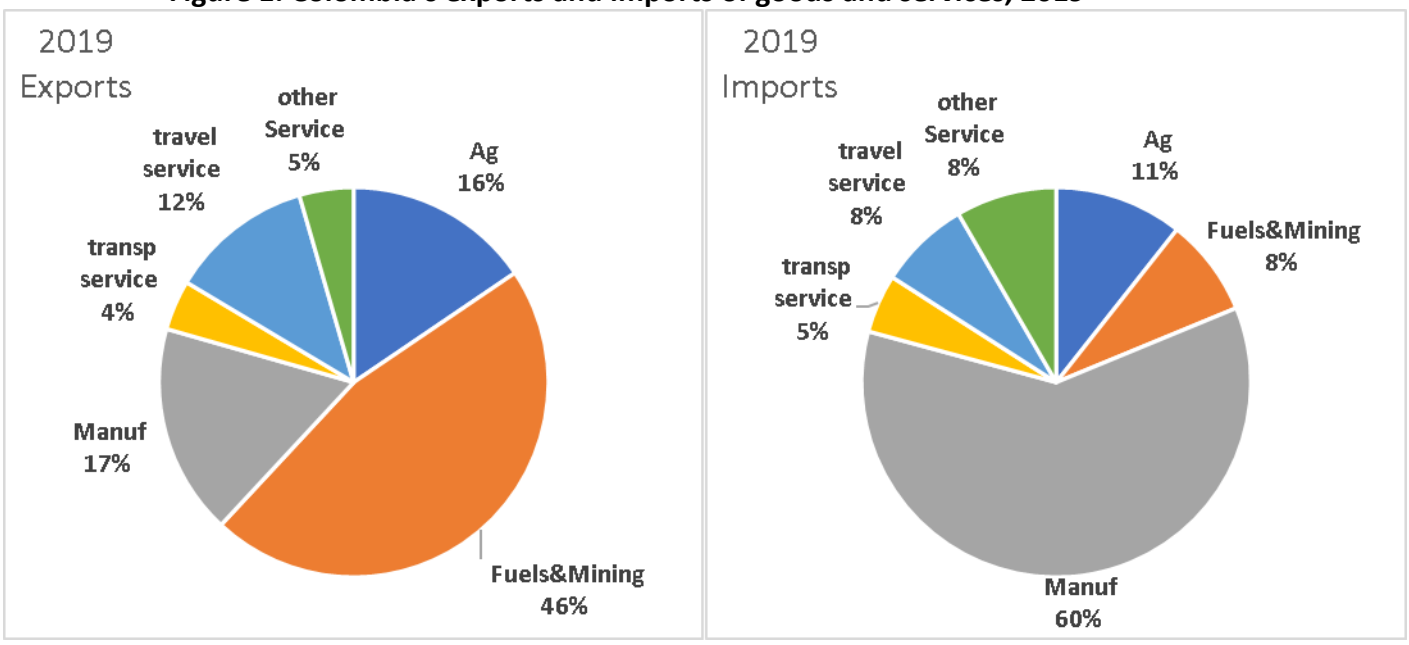
While there are many ways to boost growth in the medium run, a long-run boost to income growth can come from only one source - high and sustained growth in productivity, especially labor productivity (Romer, 1990)**.** But what promotes productivity growth? Productivity growth is tied to the adoption of better knowhow. In short, technology – or knowhow more generally – is the key ingredient when it comes to permanently raising the growth of Colombians' productivity.

Internationalization in its various forms is a critical channel through which Colombian firms can access the large supply of knowhow abroad. Since Colombia is far from the global technology frontier, connecting the domestic and international economies more deeply is one way to boost the productivity of Colombian workers. In short, deeper internationalization is critical to sustainably raising Colombians' material standard of living.

Trade in goods and services is one of the most important vehicles for tapping into and leveraging foreign knowhow (World Bank, 2011) This chapter considers the economic mechanisms involved, the barriers to the operation of these economic mechanisms and the policy adjustments that could speed up productivity advancements via trade in goods in Colombia.

Figure 1: Colombia's exports and imports of goods and services, 2019



Source: WTO online data

Colombia's exports are dominated by primary goods; its imports are dominated by manufactured goods, as Figure 1 shows. Fuels, mining products, and agriculture account for 62% of exports. Manufacturing goods accounts for only about 17% of the total. Service exports are important. The sum of exported travel and transport services (much of which is related to tourism) is not much smaller than that of all manufactured exports and equal to the share of agricultural goods. The import of agricultural and fuels & mining goods amounts to 19%, which is about equal to the share of service imports.

Trade in goods and services is fundamental for technological adoption and advancement in several dimensions. Imported goods and services frequently embody new or improved technologies, and more generally, are vehicles for productivity growth. Exporting also triggers technological advancement.

Imported manufactured goods used by local producers often embody new or improved technologies. Trade enables the access of local producers to imported inputs in the technological frontier. Their technological advancement may manifest in the form of lower prices or improved quality, and thus results in productivity gains for the local producer. The Colombian trade liberalization of the 1990s, for instance, led to improvements in the quality of local goods that used imported inputs.[1] This is one of the key channels by which importing goods boost the productivity of the Colombian economy (Fieler, Eslava, & Yi Xu, 2018) (Mogro, Pinzón, & Carrillo, 2020). Some of the imports of primary goods similarly boost productivity by providing access to inputs with competitive prices. Imported consumer goods boost Colombian's well- being by lowering prices and expanding the variety of choices. They are thus also important, though not directly linked to productivity growth for national producers.

Exporting is also a vehicle for technological advancement. Firms and workers in export sectors typically have higher productivity (Cáceres, 2013) To some extent this reflects a selection effect (only the most competitive manage to export), but exporting does boost productivity directly in two ways. First, exporters are forced to respond to a demanding international market (WEF, 2015) They are driven to keep up with best practices, international production standards, the latest technology, and to use world-class intermediate goods and capital equipment. They are faced with customers of refined tastes and requirements. The pressures of exporting also drive them to learn about advanced marketing practices and international production standards. Second, exporting provides access to much larger customer bases and thus allows economies of scale that could not be realized when selling only to the local market.

Imports are also a crucial source of market competition. Competition has a disciplining effect and represents a strong incentive in the process of adoption and adaptation of technology. Without competition, incumbents have scant incentives to upgrade their production. Not

[1] (Fieler, Eslava, & Yi Xu, 2018)

only is competition crucial to protect those incentives, but import competition frequently also teaches new technologies. Moreover, the survival of incumbents with inferior technologies is enabled by the lack of competition, to the detriment of final consumers and to those further down the value chain, causing negative technological effects and an anti-export bias in those activities. In fact, low productivity producers are able to survive and grow in Colombia, which is in itself a sign of weak competition[2]. Inferior technologies also mean low salaries, implying that workers may also end up trapped in low-paying jobs. There is indeed evidence that the trade liberalization episodes of the early 1990s led to increased innovation and technological improvement in Colombia and other Latin American economies via increased competition.[3][4] 5678 9

The positive effects of competition, and import competition in particular, have limits. First, the effects of competition are heterogeneous across firms with different productivity levels. It is the firms in the middle and upper part of the productivity distribution that tend to engage in technological improvement as a result of increased competition. Relative to those whose technology lags the most, intermediate and high productivity firms are better equipped to escape competition via innovation. Low productivity producers are more likely to have to contract or exit the market as a result of competition. Although this has a net positive effect for the economy, by permitting the reallocation of the productive resources from those uses with poor returns for the producer and the workers to higher productivity uses, it also creates short run losses for those who find themselves in a period of transition between those two uses. Second, while competition creates pressures to innovate it also erodes the profits born from innovations, thus moderating the benefits from innovating.

These limits to the benefits of competition, however, do not imply that protection from international competition yields positive returns for the economy. By increasing the prices of imported goods and thus allowing local producers to raise internal prices, protection hurts the final consumer and forces producers downstream to face higher input costs. Rather than imposing these costs, policy must deal directly with the specific unintended and undesired consequences of international competition. Retraining opportunities and services that help workers effectively transition to better jobs are crucial to ensure that the workers of firms unable to compete are indeed able to take advantage of new and better opportunities rather than be left unemployed or subemployed (IMF, 2017). Crucial are also public capabilities to

[2] (Eslava, Haltiwanger, & Pinzón, 2019) and (Eslava & Haltiwanger, 2020).
[3] (Fieler, Eslava, & Yi Xu, 2018) and (Eslava, Haltiwanger, Kugler, & Kugler, 2013)
[4] (Bustos, 2011).
[5] (Iootty, Pop, Pena, & Stinshoff, 2020)
[6] (Eslava, Haltiwanger, Kugler, & Kugler, 2013)
[7] (Eslava, Haltiwanger, & Pinzón, 2019)
[8] (Eslava & Haltiwanger, 2020)
[99] (Levy, 2020)

aid firms upgrade their technologies[10], based on direct and transparent support policies instead of barriers to trade[11]. Effective sunset clauses are a must for support policies intended to enable the emergence of new firms and activities.

While legal competition is good for innovation and technology adoption, illegal and unfair competition should be fought against. Practices as smuggling, on the one hand, and dumping and imports underinvoicing, on the other, erode the efforts of firms to invest in new technologies and increase productivity. Thus, efforts to increase legal and formal competition should be accompanied by stinger efforts to fight smuggling and unfair trade practices.

The ability of the economy to take advantage of trade in goods and services as a tool for technological improvement is impacted by tariff and non-tariff barriers to imports, as well as transportation, logistics, and transaction costs that may make importing and exporting expensive. These restrictions limit competition in the segments under protection and increase costs for those working downstream from these activities. This chapter presents recommendations to reduce these barriers to trade.

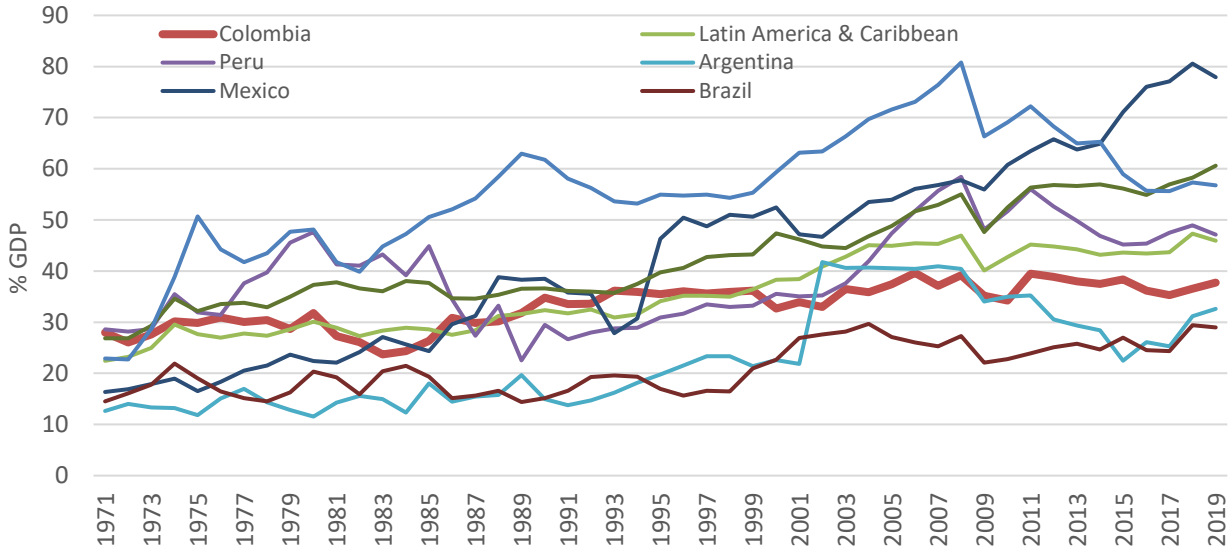
Barriers to the trade of goods: tariffs and non-tariff barriers (NTBs)

The last three decades have witnessed important reductions of trade protection, first through the 1991 unilateral trade reform that significantly reduced the level and dispersion of tariffs, and then through the signature of a series of Free Trade Agreements and a 2010 reform which further reduced tariffs. After the 1990s reform reduced Most Favorite Nation (MFN) average tariff from 26.6% in 1990 to close to 12% by the mid-nineties, average tariffs further fell from 12.4% in 2000 to 6.2% in 2019.

[10] Pilot programs of technological extension implemented in Colombia have showed positive effects on management practices. The pilot's impact evaluation implemented in the automobile parts sector in 2012 showed that both individual and group-consulting lead to improvements in management practices of a similar magnitude (8 to 10 percentage points), in which the group-based approach dominates on a cost-benefit basis (Iacovone, Maloney, & McKenzie, 2018).

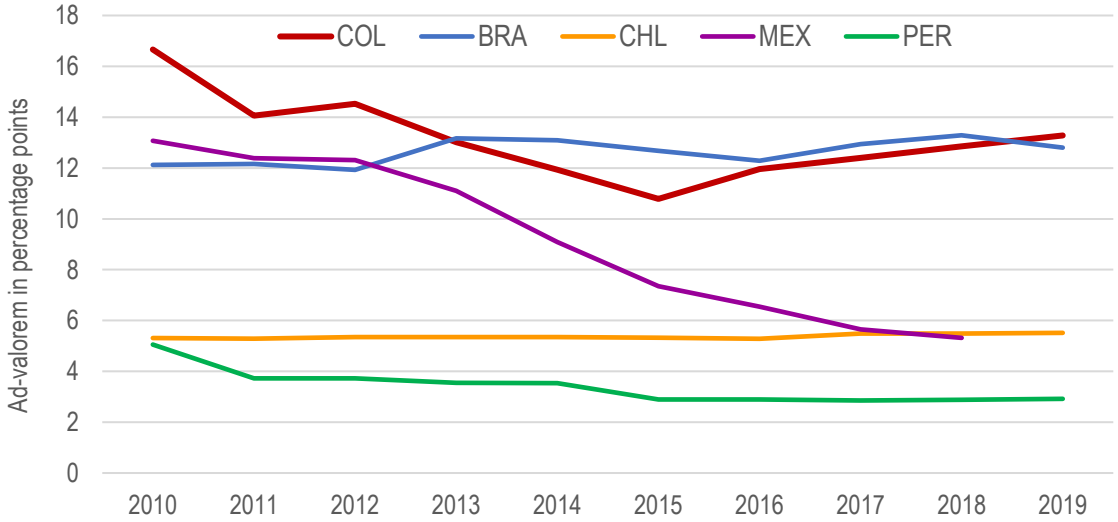
[11] Eslava, Laajaj and Kinda (2019), for instance, find that the computerization of imports in the 2000s led to significant reductions in import underreporting. Comparing computerized ports to those not yet computerized, they find that computerization led to an increase of 2.4 percentage points in the ratio of value of imports as declared in origin to their value declared in Colombia. This would imply an increase from an average 81.4% previous to the reform to an average 83.8%.

Figure 2. Trade (goods and services) as % of GDP



Source: WDI- World Bank.

Figure 3. Trade Restrictiveness Indexes for selected Latin-American countries - MFN tariffs



Source: Rivera, et al (2020) elaboration based on TRAINS, COMTRADE, using the elasticities and methodology by (Kee, Nicita, & Olarreaga, Import Demand Elasticities and Trade Distrotions, 2008). Note: The TRI represents the uniform tariff that would maintain welfare at its current level given the existing tariff structure (Anderson & Neary, 1996), using the methodology proposed by (Feenstra, 1995) and elasticities estimated by Kee, Nicita, & Olarreaga (2008).

Access to cheaper imported inputs and final products has implied gains in production[12], productivity and innovation that consumers see reflected in a much wider access to goods in the technological frontier than they used to see decades ago. It has enabled Colombia to increase the share of activity represented by imports and exports from 27% in the 1970s to around 37% in 2019 (Figure 1). However, the import and export share of GDP remains low by international standards, and the progress in internationalization is also poor in comparative terms (Figure 1).[13]

The reason may partially lie in the fact that tariffs remain higher than in regional peers. Colombia holds the fourth highest average tariff in Latin America, after Venezuela, Argentina, and Brazil, and average tariffs are five times higher than in Chile. (Rivera, et al., 2020)**.** Using Trade Restrictiveness Indexes -TRIs-, which measure "*the uniform tariff which is equivalent (in welfare sense) to a given protective structure*"[14] as a better way to measure the level of protection than average tariffs, Colombia shows a tariff protection level (MFN based) of 13,3% similar to Brazil, more than twice the level of Chile (5,5%) and Mexico (5,3%) and with a recent upsurge since 2015 explained by the increase in dispersion of tariffs instead of average levels (Rivera, et al., 2020) (Figure 3).

Moreover, significant tariff dispersion remained, and in fact worsened over the last two decades (Figures 4 to 6). Some products and product groups, especially in agriculture, textiles and apparel, and vehicles, are subject to high tariffs of up to 98%, imposing costs and negative protection for downstream industries and final consumers.[15] High dispersion of tariffs is exacerbated by the APBS (Andean Community's Price Band System) variable tariffs, which imply higher MFN tariffs when international prices of these products fall, and a reduction in tariffs otherwise (Rivera, et al., 2020). That is, while the general policy stance has been that of moving towards tariffs reduction and trade liberalization, actions on individual products have implied significant increases in protection for specific tariff lines. This likely reflects the difficult political economy that arises from openness to differential tariffs.

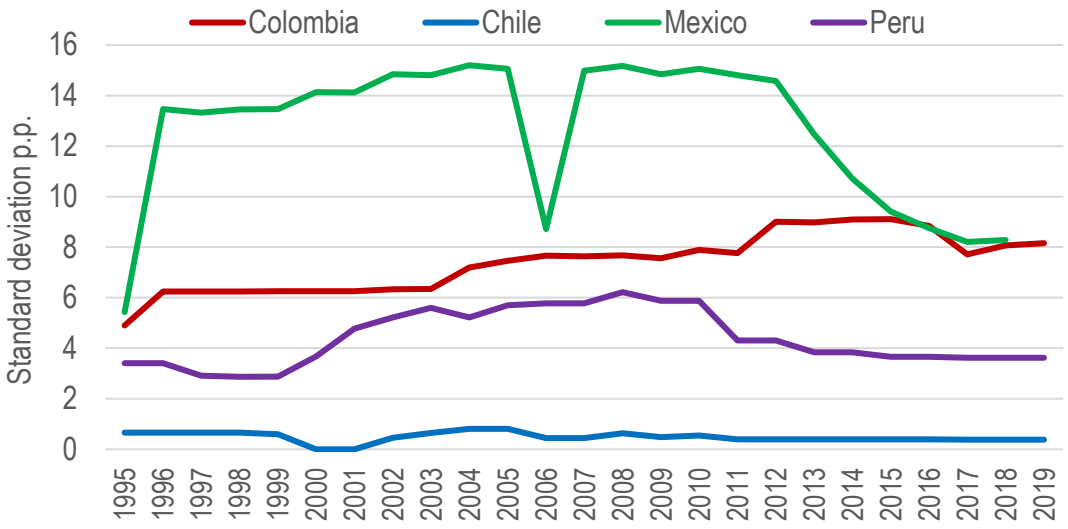
[12] Carranza, et al (2018), show a positive relation between aggregate production for manufacturing sector, and also for the dynamics of industrial firms sales and production with the access to imported inputs and the reduction of tariffs for those inputs.

[13] Eslava, Haltiwanger, Kugler and Kugler (2013), Fieler, Eslava and Xu (2018)

[14] Definition based on Anderson & Neary (1996). TRIs calculated using MFN tariffs at 6 digits of the HS 1988-92 nomenclature, using simple averages from national tariff lines using UNCTAD-TRAINS data. See Kee, Nicita, & Olarreaga (2008) equations 28 to 33 on how to calculate TRIs.

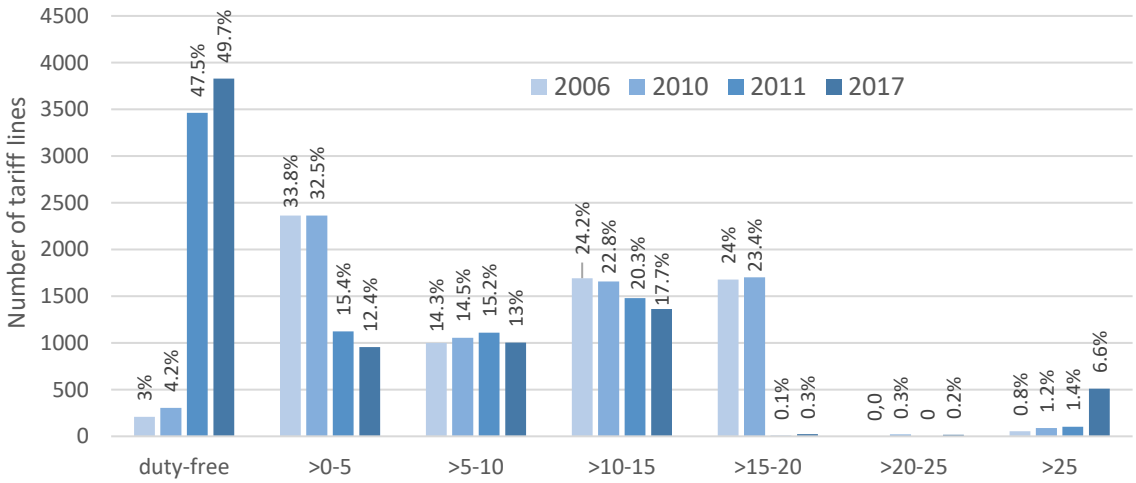
[15] See, e.g. the international trade chapter in the Informe Nacional de Competitividad 2020.

Figure 4. Tariff dispersion: evolution over time



Source: Taken from Rivera, et al (2020). Data from UNCTAD-TRAINS (the tariffs of the APBS[16] are not considered)

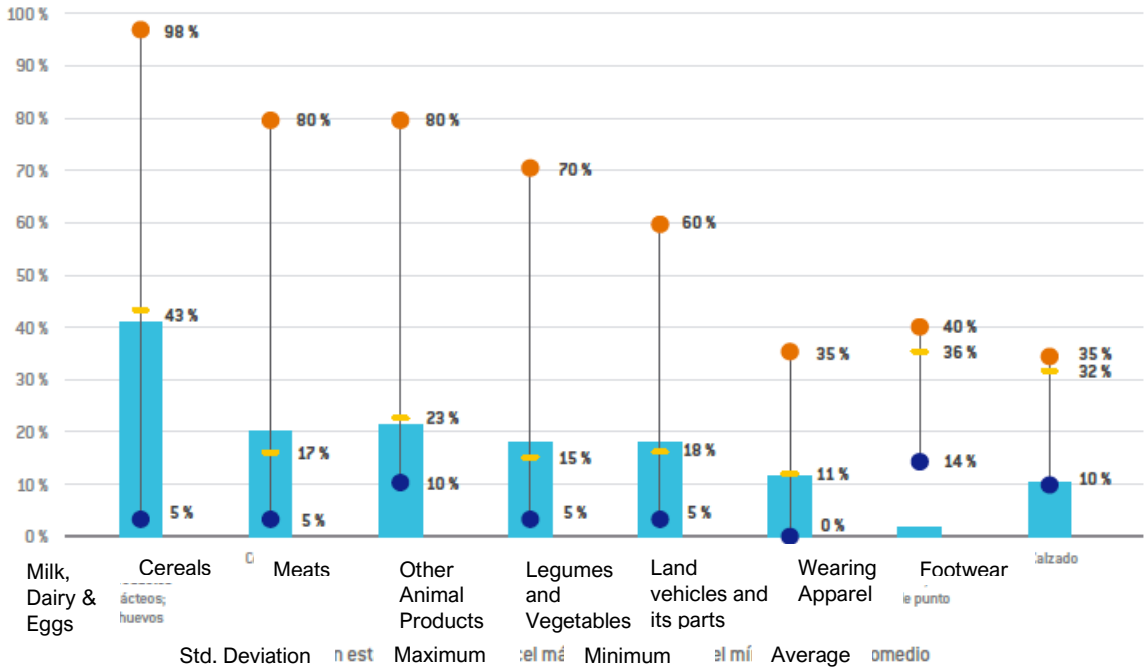
Figure 5. Frequency distribution of most favored nation (MFN) tariff rates in Colombia



Total number of tariff lines: 6993 in 2006; 7.273 in 2010; 7.292 in 2011 and 7708 in 2017.
Note Figures indicate the percentage of the number of tariff lines
Source: Taken from Rivera, et al (2020). WTO's Secretariat calculations, based on data provided by the Colombian authorities.

[16] APBS: Andean Price Band System

Figure 6. Nominal Tariffs by chapter; average, maximum and minimum. Colombia, 2019.



Other animal products not elsewhere expressed. Note: It does not include the effect of the APBS.
Source: Taken from CPC (2020), based on DNP's data.

Box: Agriculture

Agriculture is one of the most promising sectors for the internationalization process of the Colombian economy. The world market shows a growing demand for food and agriculture intermediate goods, given the growth of world population and the increase of per capita income in a number of emerging economies (particularly Asian emerging economies like China). At the same time, Colombia has a comparative advantage in the production of agriculture goods, given its endowment of two factors which are becoming increasingly scarce in the world: land and water. Colombia has around 20 million hectares of harvestable land (around 20% of the total area of the country), of which only 5 million hectares are currently cultivated, and is one of the top ten water-abundant countries in the world. [17]

However, Colombia has not taken advantage of those favorable conditions, and its agriculture exports have shown very little dynamism in the last decades. While in the last

[17] Colombia has 22 million hectares of harvestable, 4 million are agroforestry and 15 million are livestock. However, only 5 million hectares are used for agriculture and more than 34 million hectares are used for livestock. (IGAC, 2012). More info: http://www.siac.gov.co/sueloscolombia#:~:text=El%20IGAC%20(2012)%20reporta%20que,y%2015%20millones%20vocaci%C3%B3n%20ganadera.

3 decades (1992-2019) agriculture exports multiplied by 20 in the case of Perú, 7.4 in the case of Chile, and 6.8 in the case of Brazil, in Colombia they have only grown by 2.9 times, and still represent only around 18% of total exports. This stagnation is the result in part of a very low diversification of the exportable goods basket. Colombia's main agricultural exports today are basically the same as 50 years ago (coffee, flowers and bananas), and since then only few products have become new exporting bets for the country (some of them with promising business' models, like avocado, but some others with productivity problems, like palm oil).

This missed opportunity for internationalization of the Colombian agricultural sector has been the result of a mindset of both public and private sectors, which tend to see more problems than opportunities in the world market. It is evident that a segment of the world market is distorted by the agricultural policies of big producers (like the United States and the European Union), but it is also true that those subsidies cover only a number of products, mainly crops form temperate zones, which implies large opportunities for tropical zone countries.

Colombian authorities should take into account the successful cases of neighbor countries that have become dynamic agriculture exporters. That is the case, for example, of Perú (whose producers share some of the conditions of Colombian middle and small size producers) and Brazil (whose producers share some of the conditions of Colombian large producers, especially the potential producers of 'Altillanura').

These cases and some other successful experiences reveal a number of policies necessary to address the main existing bottlenecks for the modernization and internationalization of the agriculture sector. First, the government should increase its investment in the sector, but not through direct transfers to the producers (which currently represent the larger portion of public investment in the sector) but via the provision of public goods, such as roads, irrigation facilities and improved phytosanitary services.[18] Second, it is key to strengthen legal security about land property, one of the most challenging dimensions or rural Colombia. In order to achieve this objective, it is essential to have a coordinated work of the government, the Congress and the Judiciary system. Particular attention should be devoted to solving the limitation that impose the Ley 160 to the establishment of large production facilities that can exploit economies of scale, given the restriction represented by the legal concept of Agriculture Familiy Unit (UAF). Likewise, special attention should be paid to strengthen physical security conditions by the state forces, given the vacuum of power that the peace agreement between the Colombian government and the FARC left in several rural areas.

However, not all the opportunities for Colombian agriculture are related to large scale production units. Products like tropical fruits, vegetables and herbs have significant opportunities in the world market, face an increasing demand and are not affected by the

[18] See Perfetti J.J. (Ed), 2018.

developed countries subsidies (Reina & Zuluaga, 2003). These products are often cultivated in small and middle-size properties, which require an especial effort to improve productivity via technical extension and to build producers' associations to reach homogenous and large enough production to meet world demand. It is worth recalling that Colombia has had a long and fruitful experience in technical extension and association mechanisms building, as the case of the Federación Nacional de Cafeteros shows.

As it has been stated throughout this document, technological change is a key condition to foster an increase in the productivity of a specific sector. The adoption and diffusion of new technologies should be a priority goal for both public and private agents, in order to take advantage of the opportunities of the internationalization of the agriculture and agroindustry sectors. The lessons from successful agriculture exporting countries show the importance of technology, not only in improving productivity, quality and phytosanitary compliance, but also in other dimensions such as the adaptation to local environment and the effective technological extension.

A public policy aimed at fostering technological change should take into account the research and technology experiences of the few successful agricultural export cases of Colombia, but should also acknowledge that an important portion of that new technology will have to come from the rest of the world. In both cases, it will be necessary to develop effective mechanisms to guarantee the diffusion of technological solutions for productive units of different scales. In that sense, public policy should support both the research and development centers of large-scale private producers, providing the financial means to reduce the private sector risks of testing new technologies, buy should also aim at the effective diffusion of successful technological solutions among medium and small-scale producers, through extension mechanisms.

Colombia already has the general framework for these public policies to be developed. A National System for Agriculture Innovation (SNIA) was created in 2017 (Law 1876), comprising three subsystems: (i) innovation and technological development, (ii) technological extension, and (iii) human capital development. However, more than three years later, SNIA shows very few developments. Besides the selection and appointment of the main officials and representatives to the SNIA, very few effective actions have been taken.[19] The government should accelerate the implementation of the SNIA and reorient its priorities aiming at the effective development and acquisition of new technologies that allow the effective internationalization of the agriculture sector.

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[19] Parra-Peña R., Puyana R. y F. Reyes F. "ANÁLISIS DE LA PRODUCTIVIDAD DEL SECTOR AGROPECUARIO EN COLOMBIA Y SU IMPACTO EN TEMAS COMO: ENCADENAMIENTOS PRODUCTIVOS, SOSTENIBILIDAD E INTERNACIONALIZACIÓN, EN EL MARCO DEL PROGRAMA COLOMBIA MÁS COMPETITIVA", Fedesarrollo, 2021.

Special attention deserves the objective of attracting foreign direct investment to the Colombian agriculture sector. With very few exceptions, productive practices are outdated and technological change is needed. Recent experiences show that, given the right policies, foreign and local investment may make a huge difference in productive terms. The case of the 'altillanura', a 2,8 million hectares area located in the eastern planes of the country, is a good example. Ten years ago, the government issued a CONPES document 3797 of 2014 "Policy for the integral development of the Orinoquía: Altillanura" (DNP, 2014) establishing the policies required to develop agriculture and cattle raising in the region. Although some of the recommendations have not been implemented yet, some others have, and provided the signal of public interest for the private sector to invest. In the last ten years the area harvested in the 'altillanura' multiplied by five, from 50.000 to 250.000 hectares, and could grow ten times more. At the same time, production has multiplied by 32, showing a huge increase in productivity. Notwithstanding these improvements, the 'altillanura' case currently faces some of the same needs than the rest of the Colombian agriculture sector to reach an adequate internationalization, i.e. legal and physical security, and transportation infrastructure to reach the world market.

Most of Colombian current agriculture policies, public institutions and entrepreneurial attitudes reflect a protectionist position, consistent with a view that sees more threats than opportunities in the world market. As explained in this document, although tariff barriers have decreased in Colombia since the early 1990s, there's still a large dispersion, and it is the agricultural sector which has the highest tariffs[20]. This is the result, in part, of a special tariff system (Sistema Andino de Franjas de Precios-SAFP), which was originally designed to isolate the domestic market prices from international market volatility, but which eventually proved to have a protectionist bias. Additionally, some other mechanisms designed to 'stabilize' domestic prices (Fondos de estabilización de precios), also imply a protectionist bias since they generate a subsidy to exports financed with rents captured via the high domestic prices of the protected market (Meléndez, 2014; Reina & Zuluaga, Elementos para modificar el Fondo de Estabilización de Precios para el, 2011). Likewise, a big number of Colombia's NTBs is concentrated in the agricultural sector.

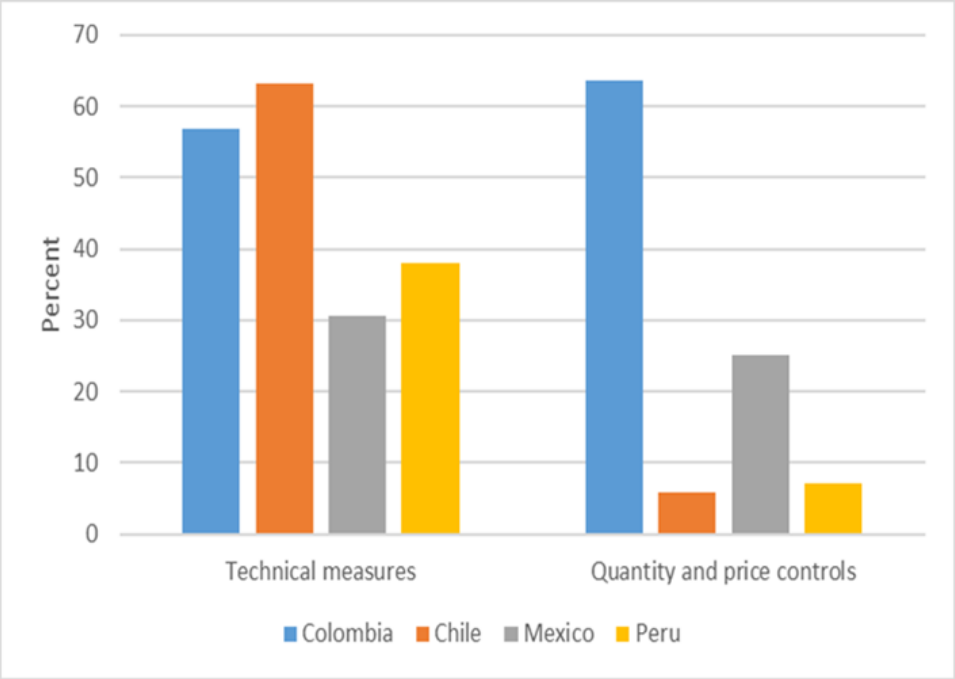
[20] Rivera, et al (2020), show in graph 4 of the paper, that average tariffs and dispersion measures by SITC 4 sections, with and without the effect of the SAFP.

The excessive protection of the Colombian agriculture not only represents an anti-export bias por domestic producers, who often prefer to sell their products in the protected domestic market than abroad, but also implies additional costs for other producers down the value chain and for the final consumers. In this sense, the excessive protection of the agricultural sector seriously limits the ability of the agroindustry value chain, one of the most promising of the country, to internationally compete and export.

Any effort to strengthen the internationalization of the Colombian agriculture and agroindustry value chain should include a thorough review and adjustment of its protection mechanisms (SAFP, fondos de estabilización, esquemas de precios mínimos, etc.) A special commission should evaluate in a lapse of nine months the protectionist anti-export bias that each of these mechanisms may involve, and suggest immediate adjustments to the government, whenever necessary.

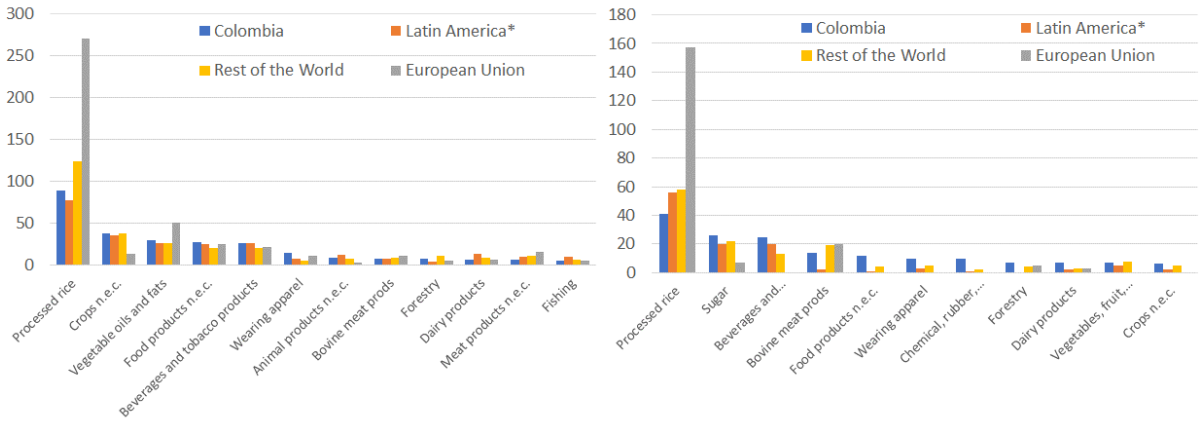
At the same time, non-tariff barriers to trade (NTBs) have proliferated, implying levels of equivalent tariff protection that reached a peak of 123% in 2000 and remained close to that level since (García J., 2014; Botero, García, & Correa, 2018). While NTBs have in fact increased around the world, and Colombia is similar to peers in the share of products covered by technical non-tariff barriers (including sanitary and phytosanitary is similar in Colombia than in peers), Colombia stands out in the extremely extended use of quantity and price controls (Figure 7). Also in the level of tariff equivalent protection that NTBs represent; based on the ad-valorem tariff equivalent of NTMs estimations of Kee & Nicita (2017), Colombia presents a relatively high effect of this measures for agriculture, food and beverages, textiles and apparel, compared to Latin America, especially the non-technical ones.

Figure 7. Share of products subject to NTMs in Pacific Alliance countries, 2016



Source: (Signoret & Tovar, 2020), authors calculations based on UNCTAD data.

Figure 8. AVE *of MNAs estimates by GTAP sector 2012-2016*



*Source : DNP based on Kee & Nicita (2017). Zero values 0 (cero) indicate a nule effect, or not estimated. *Latin america: Argentina; Bolivia; Brasil; Chile; Costa Rica; Ecuador; México; Perú; Paraguay; Uruguay; Venezuela; Honduras.*

Many NTBs, especially technical barriers, are well grounded on the need to protect consumer health and safety, or on the intention to level the playing field vis-à-vis trade partners who have themselves imposed such measures. But many are difficult to justify on these grounds. In these cases, they constitute a particularly dangerous form of trade

protection. By contrast to tariffs, NTBs do not generate fiscal income, so that their effects may become pure deadweight losses. And many NTBs are difficult to characterize as such, and therefore escape regulatory analysis on the basis of their impact on trade. This is the case of multiple measures and procedures conceived and approved outside the realm of trade policy, but whose direct effect is to restrict trade. One example is regulations on cargo weight stations, ports among them. Another is regulations to fight drug trafficking that restrict the ports through which certain merchandise-- used as inputs in the production of narcotics but also in many other processes—can be imported.

Cost increasing non-tariff measures conceived as pure protection are never justified since they waste real resources and are an opaque way of achieving their objectives. These attributes make them clearly inferior to tariffs. Restrictions to ports of entry are sometimes imposed with the surprising intention of increasing transportation costs. These, as well as quantitative restrictions to exports to force their producers to sell to local upstream industries, to give just two examples, are hard to understand on grounds other than unjustified protection against international competition and the preservation of rents of influential economic private agents.

Restrictions to ports of entry are also imposed sometimes with the intention to reduce smuggling (Kee & Forero, 2020)**.** Such is the case, for instance, of textiles and apparel. Increasing customs capabilities at ports, so they can all become authorized ports of entry, is a clearly superior alternative to these restrictions. Entry port restrictions increase the local price of goods from certain origins and in certain regions of the country, generating distortions that affect aggregate efficiency.

NTBs and high tariffs protecting individual products or sets of products affect the competitiveness of downstream producers, and are frequently adopted ignoring those costs. Though downstream exporters have access to Plan Vallejo[21] and can therefore circumvent tariffs for their imported inputs, the same is not true of NTBs that increase the cost of those inputs. Moreover, producers selling exclusively to the local market (many to subsequent exporters), and even some exporters that do not fulfil technical requirements, do not have access to Plan Vallejo. Finally, there are administrative costs and barriers to enjoying the benefits of Plan Vallejo, though important progress has been made by allowing Plan Vallejo imports authorizations to be processed through the International Trade Single Window[22].

It is clear that a thorough revision to the long list of current NTBs is necessary, leading to a removal of those not justified on technical grounds. However, this is a daunting task not only

[21] The especial import-export program "Vallejo Plan", grants tariff and VAT exemption for imports of raw materials, intermediate inputs, and capital goods and its parts, used in the production of goods and services for export. It requires the exporter to be certified, on the basis that a percentage of the value of imported goods ends up being exported as finals products or services. The

[22] Trade Single Window is an electronic platform for registered users to lodge import and export trade documents for the customs and other agencies act on their mandated activities of regulation and supervision.

because of the number of NTBs in place but also because, by contrast to tariffs, NTBs are not systematically recorded and many are not easily identified as NTBs.

We thus **recommend the following actions:**

- **The creation of a high level commission with the technical support of the National Planning Department and the Ministry of Trade** that should undertake the following tasks:
    - **Compile a list of all existing quantitative restrictions to imports and restrictions to ports of import entry**. A first version of the list must be completed within three months of the creation of the commission, made publicly available for comments, and finalized within six months of the commission's creation.
    - **Order the removal of all restrictions included in the aforementioned list with a timeline that allows producers affected by the decision to undertake actions to accommodate to the new policy stance, and to recover from potential COVID-related damage. The automatic removal of specific restrictions can be challenged by state agencies or interested parties.** Measures proposed for revision must be presented, studied and decided upon by the commission within one year from the date of announcement of the list of restrictions to be eliminated. The study of these challenges requires a full regulatory impact analysis carried under DNP's Methodological Guide for the preparation of Regulatory Impact Analysis[23]. This analysis must include the interaction of the challenged regulation with tariffs and other NTBs.
    - **Establish a mechanism by which any existing regulation can be challenged by interested parties on the basis of it constituting an unjustified barrier to trade. This includes tariffs and regulations that are challenged as NTBs. These challenges should be decided upon by the commission after full regulatory impact analysis carried under DNP's Methodological Guide for the preparation of Regulatory Impact Analysis.** A reasonable timeline for the resolution of cases must be set. The implementation of decisions must, in turn, be subject to a timeline that allows producers affected by the decision to undertake actions to accommodate to the new policy stance, and to recover from potential COVID-related damage.
    - **Identify, in the context of regulatory analysis, expected damage to specific sectors or producers from the removal of challenged NTBs and propose public interventions to help those affected to upgrade in order to accommodate to the new policy stance.** Those interventions may include efforts to foster commercial links with downstream industries benefitting from the removal of NTBs. Any support policy should include a sunset clause.
    - The commission should have power to decide upon all quantitative restrictions and NTBs currently in place, as well as new restrictions proposed while mandatory

23 More information: https://www.dnp.gov.co/programas/Grupo-Modernizacion-del-Estado/Paginas/Material-de-interes.aspx

regulatory impact analysis for all new regulations, as mandated by Decrees 1074 of 2015 and 1468 of 2020, is not fully implemented.

- **Effectively implement the requirement that all new regulations, NTBs and tariffs included, are subject to regulatory impact analysis** as mandated by Decrees 1074 of 2015 and 1468 of 2020[24]. Regulatory impact analysis should include mechanisms for interested parties to express concerns on the basis of proposed regulations constituting undue barriers to trade, and for those concerns to be effectively analyzed.

- Current tariffs that exceed the average tariff by 5 percentage points or more must also be subject to a cost/benefit analysis, and a potential reduction decided upon by the proposed commission.

- The commission should be set a clear target to align the overall level of protection through the combination of tariffs and to best international practices of countries that choose internationalization as part of its development strategy, as we recommend Colombia should do.

Logistics and trade facilitation

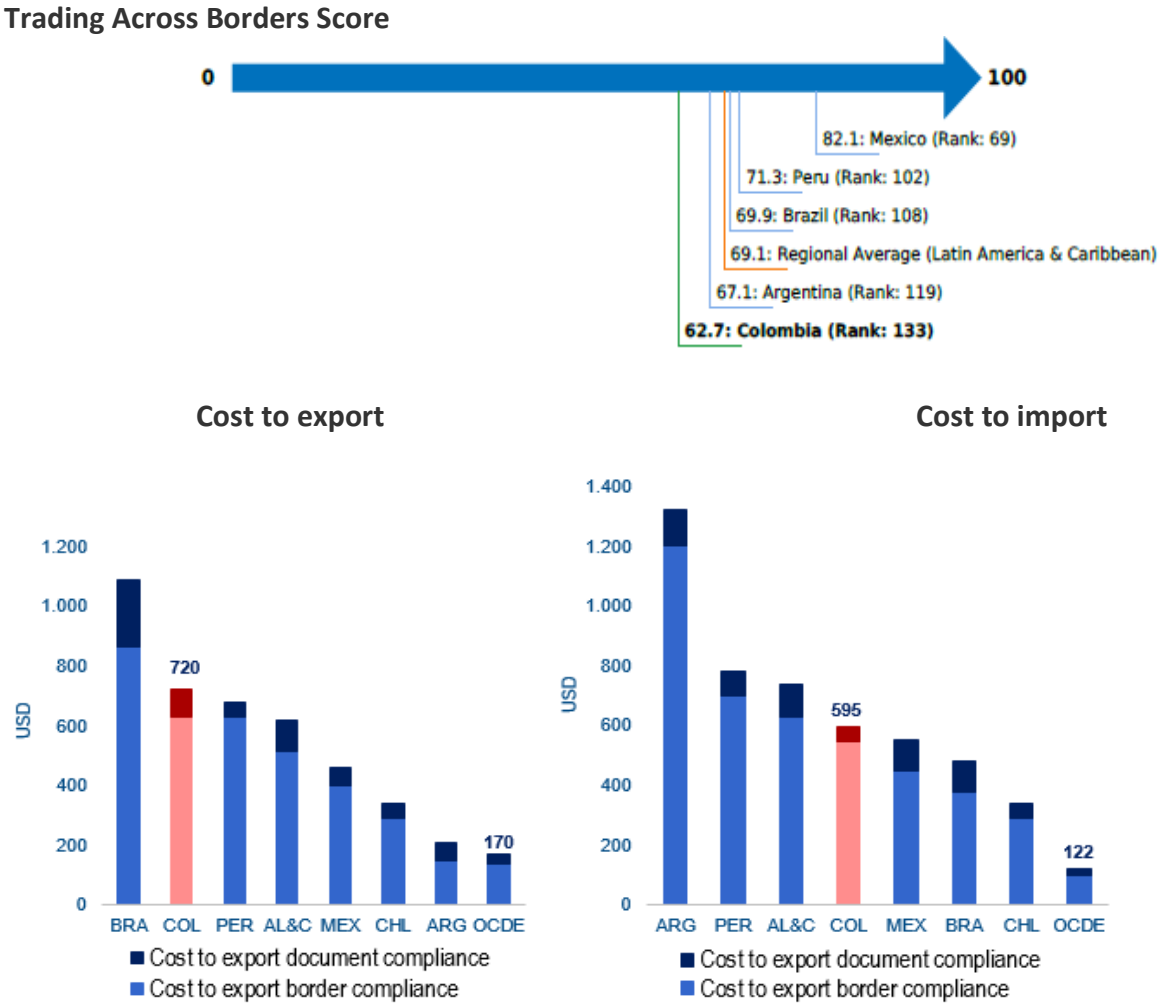
Beyond tariffs and non-tariff measures, there are barriers to the international trade of goods and services that stem from the procedures and regulations that apply to the processes of importing and exporting. Those barriers can limit trade considerably. There is evidence, for instance, that the manual processing of imports that was usual at customs in previous decades depressed imports and induced import under-reporting, negatively impacting value generation at firms that rely on imported inputs and tariff collections by the government. The computerization of imports in Colombia in the 2000s was associated with a significant increase in imports and tariff collections at reformed ports, 40% of which is attributable to reduced under-reporting and the remaining 60% to real increases in transactions, and led to sales, productivity and exports increases at medium-sized firms that use inputs imported through those ports.[25] This is, obviously, just an example of how powerful procedures and logistics and, ultimately, technological advancement influence actual trade.

Procedures at Colombian customs are still costly, however. As of 2020, Colombia ranks 133 of 190 economies among the countries with the highest export costs in terms of obtaining, preparing, and sending documents needed for transport, inspection, and clearing of products, both for the country of origin and the country of destination. (Trading Across Borders index). The cost of exporting in the country is 324% higher than the average for Organization for

[24] DNP's guidelines for regulatory impact analysis: https://www.dnp.gov.co/programas/Grupo-Modernizacion-del-Estado/Paginas/Material-de-interes.aspx
[25] (Eslava, Laajaj, & Kinda, 2019)

Economic Cooperation and Development (OECD), while the corresponding figure for the cost of importing is 388% (Figure 9) (World Bank Group 2020). An exports operation takes an average of 112 hours in Colombia compared to an average of 13 hours in the OECD[26]. This adds to high transit costs in a country with intricate geography and subpar infrastructure. Sanitary inspections and inspections for narcotics interdictions are among the reasons for delayed procedures. Many of these inspections still require the handling of physical paperwork or manual operations.

Figure 9. Doing Business 2020 Trading Across Borders Results



Source: World Bank Group, Doing Business Study, 2020.

[26] Doing Business Report 2020 (World Bank, 2020)

Large established exporters and importers are able to circumvent these costs by becoming "Operador Económico Autorizado" (OEA), a status that facilitates and speeds up procedures, especially inspections and the filling of paperwork, in front of both Colombian authorities and those in partner countries. The OEA mechanisms essentially coordinates Customs and other border agencies (ICA, INVIMA, and Antinarcotics Police). Mutual Recognition Agreements for OEAs exist with the Pacific Alliance (Mexico, Peru, Chile), Andean Community (Peru, Ecuador, Bolivia) and Costa Rica. There are plans to extend the OEA status to agents like port terminals and operators[27]. However, by August 2020 only 188 firms enjoyed that status (CPC, 2020). Since the status is aimed at firms that have a history of established exporting or importing activity, by definition it targets those that have effectively overcome costs to transacting with the rest of the world.

A roadmap is necessary to effectively expand the reach of the OEA status. CONPES 3993 (2020) depicts some such measures. Others include the more effective dissemination of information about the existence of the OEA status alternative and about requirements to become an OEA, as well as those aimed at increasing the recognition of OEA by partner countries.

The targeting of the OEA status to experienced importers and exporters places the burden of the cost of trading with the world precisely on the businesses that face the most difficulties in dealing with them: smaller producers attempting to enter the export and import markets. Although the OEA mechanism is useful and it need to be supported and scaled up, finding ways to simplify those procedures and reduce those costs for all firms involved in international trade is clearly superior to finding ways in which a few can circumvent them, and must be pursued. Priority should thus be given to logistics improvements accessible to all exporters and importers, both established and upcoming. Improving the capacities of Customs and other border agencies capacities is thus a priority. The following specific actions are recommended:

- **Deepening the reach of Prior to Arrival Import Declaration (PAID)[28].** This mechanism remains underutilized; only 14% of air cargo declarations and 13% for maritime mode are processed using PAID procedures, although its use imports clearance times by around a half (DIAN, 2020). One reason behind the underutilization of PAID is a lack of knowledge about its existence and procedures (CPC 2020). Another is the fact that the use of PAID is mandatory for specific sectors and there are strong sanctions for lack of compliance and errors, which are assimilated to smuggling, leading to the perception by many operators that the PAID is a mechanism for sanctioning rather than one for trade facilitation (CPC, 2020). Moreover, the pre-clearance procedure is de facto not applied to air cargo, as

[27] The extension of the Authorized Economic Operator program to port installations and operators was implemented by the DIAN Resolution 48 of May 15, 2020.

[28] PAID implies that the formal import declarations are done before its means of transport arrives to the national customs territory. This process facilitates the processing of imports into the country, but also security and risk management by the customs office, reducing times and cost for importers.

declarations are only processed after the shipment has physically arrived, even though advanced reception of data occurs.[29]

- **Implementing, in a short time horizon, a fully integrated system of border crossing supported by modern electronic processing and handling.** Strengthening Information and Telecommunications Capabilities at DIAN, in accordance with the recommendations of 2020's CONPES 3892, is part of this effort but not enough no reach its goal. Other necessary aspects are:
    - Harmonizing data requirements across agencies and aligning them with international standards and business practices is also necessary.
    - Effectively speeding up the interoperability of the Single Window platform with the systems of Customs and other agencies involved in the processing of imports and exports transactions. This should also lead to joint unified and enriched risk profiling, as well as simultaneous inspections as required by CONPES 3982.
    - Enhancing connectivity with the systems of the Customs and Ports agencies of trade partners.
    - Implementing the Single Window for Maritime Operations must also be implemented as stated in CONPES 3982.
    - Expanding the reach of the scanner program at ports. 37 scanners currently operate at eight ports, which have significantly reduced inspection times and the degree of intrusiveness of inspections (CPC, 2020). The program must reach other ports and be strengthen with the acquisition and operation of complementary equipment, such as density and radiation detectors (CONPES 3993).
- **Accelerating the design and publication of a battery of indicators on port efficiency, port by port,** required from the Superintendency of Ports by the CONPES 3892 of 2020, **and establishing specific goals on port efficiency**. The achievement of such goals is to be monitored using the said indicators.
- **Effectively modernizing the postal service, as required by CONPES 3982 of 2020.**

Free Trade Zones, though potentially useful to attract investment, have introduced additional distortions that need to be addressed.

Special Economic Zones (SEZs) are structures that provide infrastructure support and favorable customs and tax treatment in a geographically delimited area (e.g. UNCTAD 2019). They are widespread across the world, and as such have become an investment attraction tool necessary for competitiveness. SEZs have the potential to solve market and policy failures within the delimited area, attracting investment that would be otherwise inhibited by those failures. They may also foster productive clusters to the extent that there may be economies of scale and spillovers from the joint location of complementary businesses in the same area and the infrastructure support within its borders. Internationalization may result from streamlined customs procedures and from a potential for exporting from attracting new investment (World Bank, 2020).

[29] (Checcucci E. and Saslavsky D., 2021)

However, SEZs also imply differential treatments with respect to firms outside the zone, creating productivity-decreasing distortions in the form of relative disadvantages for domestic producers who are outsiders to the SEZ (UNCTAD, 2019). Therefore, SEZs whose purpose is to solve policy failures are not substitutes for reforms that solve those failures economy-wide, but rather shortcuts to speed up those reforms in specific areas while they can be implemented at a general level, given political economy constraints (World Bank, 2020). Their use must therefore be concurrent with an agenda to address costly regulations and policies economy-wide.

The international evidence about positive effects of SEZs on investment, job creation and internationalization is mixed. Though there are many examples of SEZs that have been successful in attracting investment, on average SEZs do not display exceptional performance relative to the rest of the economy, and examples also abound of SEZs that did not attract the expected investment influx or otherwise failed to exhibit extraordinary growth (World Bank, 2017, 2020; UNCTAD, 2019). In the end, the success or failure of SEZs as tools for growth, technological advancement and internationalization depends highly on their design and implementation. SEZs that are successful in attracting large investments, job creation and internationalization require a series of conditions: they should address specific market or policy failures and do so effectively; be large and closely connected to well developed markets for inputs and outputs, as well as to ports; have clear strategic goals, aligned with fostering spillovers, clusters and value chains.

Colombia has an extensive regime of SEZs ("Zonas Francas"), where companies face a reduced corporate income tax rate of 20% rather than 30% or more, no VAT or custom duties for imports, and simplified customs procedures. Colombian SEZs have displayed mixed results (Rodríguez et al. 2021). Though exporters and large job creators are disproportionately located in SEZs, there is no clear causal relationship between the creation of the SEZ and the higher probability of exporting or creating jobs. 50% of SEZ investors, for instance, report that they would have undertaken the same project in absence of the SEZ benefits. And, although exporters have disproportionate presence in SEZs, most activity in these zones is aimed at the local market. The regulation of SEZs is not aligned with clearly established strategic goals or cluster-generation purposes.

Colombia recognizes "free points", i.e. single-company SEZs that need not respond to specific locations. In Colombia free points double in number multi-company SEZs. Free points exacerbate concerns about lack of regional strategic focus and potential for manipulation in the granting of SEZ status, which also imply greater potential for productivity-decreasing distortions relative to the general regime. Since the points are allocated to individual companies, free points also fail to take advantage of potential economies of scale in infrastructure and streamlined procedures.

The SEZ mechanism requires a major overhaul:

- Each SEZ should be grounded in a clear strategic goal that addresses a specific set of market or government failures. Performance targets should be ambitious and specific to that strategic goal. The monitoring of the SEZ performance should include the evaluation of complementary actions in the design and implementation that are necessary to

achieve that goal. Strategic goals themselves should be ambitious and transformational, which also implies that they should establish and monitor clear internationalization targets even if exports requirements cannot be imposed given WTO restrictions.

- The granting of free-point status for individual companies should be revised and substituted for traditional multi-company SEZs, or at a minimum subject to additional requirements that guarantee spillovers in the region, value chain or sector, and to the demonstration that the SEZ need be single-company to achieve its strategic goal effectively and/or timely.
- SEZs should also be aimed at solving policy and market failures that limit the international mobility of human talent, thus impeding the spillovers that should result from it. That is, simplification of migratory procedures should also be a value added of SEZs (concurrent with the strategy recommended in this report to reduce those barriers at the overall economy level).

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