Effects of Protectionism on Chilean Exporters: An Exploratory Survey

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Abstract

I conducted in-depth interviews with 15 chilean exporting firms on the main barriers they face in their export markets. The paper is not quantitative but rather derives some general conclusions and detects the most important non-tariff barriers facing these exporters. Some conclusions are:

- Firms are unable to make quantitative estimates of the global effect of trade barriers and are barely able to order countries by their degree of protectionism.
- Administrative procedures are, from the point of view of exporters, one of the most effective barriers to trade.
- Chilean exporters of manufactures to Latin America depend on trade deviation for a large part of their (relative) success.
- Brazil is significantly more protectionist than other Latin American countries, even though Chile has an FTA with Mercosur, of which Brazil is a member.
- Exporters perceived few non-tariff barriers to trade in their exports to developed countries.

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1 Introduction

Traditional protectionism consisted in tariffs on imported goods and services. However, it has been widely known, at least since the Tokyo Round of Gatt, that successive multilateral reductions in tariffs were being partially neutralized by increases in alternative forms of protectionism. These include contingent protection measures such as safeguards, antidumping and countervailing measures.[1] An additional set of protectionist measures (which we may call non-traditional), include administrative measures, invasive inspection of containers, the misuse of phitosanitary and other standards for protection, etc. The object of this paper is to document the failure of a straightforward attempt at measuring the global effect of all forms of non-tariff protection in the case of Chilean firms. As we know, any barriers to trade can be transformed into equivalent tariffs.[2] Therefore, the cumulative effect of all the non-tariff barriers to trade can be described by a tariff equivalent.

Since firms are the subjects of nontariff barriers, it seemed reasonable to assume that firms would be able to compute the effect of these barriers as reduced margin on their exports compared to a situation in which these measures were eliminated. Alternatively, they might be able to compare the relative margins between economies. Thus the aim of the survey was to explore whether the executives that were responsible for exports in a representative sample of Chilean firms were able to estimate these quantitative effect of these barriers, or alternatively, if they were able to estimate the additional affect of trade barriers in one country as compared to another.

Unfortunately, the executives were unable to make these computations, and even though they had all faced non-tariff barriers, they had never considered trying to quantify their effects on their own exports. In fact, executives were barely able to do an ordinal comparison of the effects of non-tariff barriers in different economies. This does not mean that the survey results were uninteresting, since there are several details that came out that are important.

First, the firms faced few problems in the developed economies and most of the barriers (specially administrative) were set by Latin American (and in some cases Arab) economies. However, these answers have to be qualified, since there are at least two possible explanations that do not involve higher non-tariff barriers in developing economies. First, it may be that since developed economies are large buyers, exporters adapt their products to their standards and other rules (a la Fischer and Serra (2001)), and since they do not change often, they are forgotten in their answers. Second, it may that the lack of stability of the rules in developing economies is the root cause of the executives attributing more protectionism to these counties.[3] These are speculative explanations, and have not been tested, so the working hypothesis has to be that developing economies use

[1] See Finger (1987). An examination of the impact of these measures appears in Prusa (1997).

[2] This is the basis of the tariffication of nontariff barriers during the Gatt rounds.

[3] The survey documents the executives' perceptions of protection, and not the levels of protection *per se*.

more nontariff barriers and as we show below, Brazil is the most protectionist economy in Latin America, from the point of view of Chilean exporters.

Antidumping and countervailing subsidy measures are well established and they have been examined from different points of view by a series of authors. These include Ethier (1982), who examines dumping as an equilibrium response to shocks in an world where fixed costs differ among economies, as well as Fischer (1992), Reitzes (1993) and Prusa (1994), who examine the strategic effects of antidumping laws on firm behavior.[4]

The empirics of antidumping and countervailing subsidy appear in Prusa (2001). A complete overview of AD appears in Blonigen and Prusa (2003, forthcoming). There has been far less work on other types of nontariff protection, such as the use of standards, administrative measures and other exceptional protectionist measures.[5] There has been even less work on non-traditional (as opposed to non-tariff) barriers, such as administrative measures, invasive inspection of containers, etc. The empirical analysis of these measures is it in its early stages. The papers collected in Maskus and Wilson (2001) and Deardorff and Stern (1998) are some of the few organized attempts at measuring these barriers to trade.

The next section provides a brief description of the Chilean economy. The third section describes the survey and the firms selected, the fourth provides the survey responses and the fifth section concludes.

2 A brief description of Chilean trade

Chile is a developing economy with a GDP of about 70 billion US$. It had a period of fast growth during the years 1985-1997, which averaged 6-7% annually. Since then, growth has been slow, averaging about 3% per year, though prospects are improving. It is a very open economy, with maximum tariffs of 6% (excluding sugar, wheat and oil imports) and average duties of 3.5% when we consider all the Trade Agreements the country has signed.

Chile has signed Free Trade Agreements with most economies in South America: Bolivia, Colombia, Ecuador, Peru and Venezuela and Mercosur.[6] Other agreements include: European Union, Canada, Mexico, the US, EFTA, Central America, and a non-ratified agreement with South Korea, that economy's first FTA. The fact that Chile has signed all these FTA's imply that in many cases, the only protection exporters face is non-tariff protection.

[4] See also Bagwell and Staiger (1990), Fischer and Osorio (2002).

[5] Among the few theoretical sources are Fischer and Serra (2000) on standards and the collection of articles in Bhagwati and Hudec (1996).

[6] Mercosur, includes Argentina, Brazil, Paraguay and Uruguay. The agreements with Mercosur and the other South American economies are *Acuerdos de Complementación Ecónomica*, a slightly more inclusive form of trade agreement, because it includes investment and other measures.

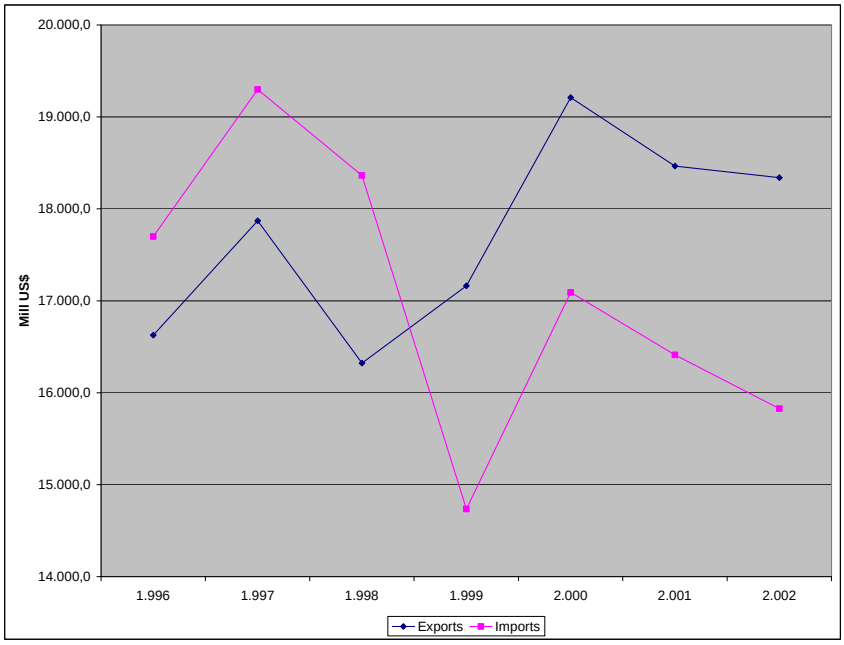

Figure 1: Chilean trade

Trade represents about 55% of Chile's GDP. Exports grew fairly rapidly until the Asian crisis of 1997, which led to declines in the prices of many Chilean exports. Exports volumes continued to grow, however, and the recent increase in exports prices means that the value of exports will probably surpass US$20 billion this year.

Chile has few nontariff barriers and few barriers to services, there is national treatment of foreign providers in sales to government and is generally regarded as one of the most open economies in the hemisphere.

Chilean exports (see table 1) are to a large extent based on natural resources, though in many cases they have been processed. Copper is the main export, with forestry products, wine, fruit, salmon and other seafoods are other important sectors.[7] Around 10% of exports go to Central and South America, 22% to Nafta countries, 20% to the European Union and the EFTA, and the remaining almost 50% is exported to Asia and Oceania.[8]

[7]Wine can be thought of as fruit plus capital, and salmon as fishmeal plus capital. So these products belong to a second stage of processing of the underlying natural resource. See Fischer (2001).

[8]The source of the data is Prochile, for 2002.

Table 1: The main Chilean exports, 2000.

Rank	Classif	Name	Value (1000's US$)	% Exports
1	7403	Refined copper	4.662.385	25,3%
2	2603	Copper minerals and concentrates	2.383.813	12,9%
3	4703	Cellulose	1.111.697	6,0%
4	0806	Grapes	693.448	3,8%
5	0304	Fish fillets and other fish meat	603.211	3,3%
6	2204	Wine	580.231	3,1%
7	0303	Frozen fish	490.610	2,7%
8	4407	Sawn wood	334.230	1,8%
9	2905	Acyclic alcohols	316.911	1,7%
10	7108	Gold	291.746	1,6%
11	0016	Services for ships	290.571	1,6%
12	7402	Unrefined copper	286.085	1,6%
13	0808	Apples, pears	256.269	1,4%
14	2301	Fish meal	235.345	1,3%
15	2710	Petroleum oils	174.070	0,9%
16	2613	Molibdenum	170.367	0,9%
17	0809	Peaches, apricots, cherries	161.337	0,9%
18	2801	Fluor, clorine, bromine and Iodine.	147.085	0,8%
19	2601	Iron minerals	141.879	0,8%
20	4401	Wood and chips	133.794	0,7%
		Total	18.425.000	100,0%

Source: Fischer (2001)

3 The survey

The object of this paper is to provide a preliminary evaluation of the non-traditional barriers to trade affecting Chilean exporters by means of semi-structured interviews with the executives in charge of exports in a sample of Chilean exporters (export specialists in the case of large firms). The ministry of economics already has an inventory (or *cadastre*) of all trade barriers affecting Chilean exporters.[9] However, this list of barriers makes no effort to compare the importance of the various trade barriers and their impact on exporters. This exploratory survey, on the other hand, is an attempt at evaluating, from the point of view of exporters, the relative importance of the different NTB's. Moreover, it provides a subjective evaluation of measures that are difficult to classify and describe in a cadastre.

Originally, the survey intended to evaluate the quantitative impact of the of standards and other NTB's on exports by having export executives provide the tariff equivalent impact of these barriers. In an initial pilot survey, it became clear that firms and executives are unable to make these cost computations. Given the results of the pilot survey, the survey changed into an examination of the qualitative effects of protection on firms. In any case, the failure of the pilot study suggests that large exporting firms should begin to study tariff equivalences of the barriers they face in order to make better choices of the markets of destination for their products as well as to know where expend their efforts at eliminating these barriers.

The firms had a wide range, ranging from firms that export hundreds of millions of dollars to others that export less than a million dollars or export only sporadically (see table 2). The range of firms includes firms whose main market is exports to those that export only sporadically. Some of the firms export primarily within the western hemisphere (Canada, USA and Latin America), while others specialize in the developed economies. The goods that are exported range from abalone to avocado and from medical gloves to gases.

One important conclusion is that most trade within Latin America is protected by free trade agreements that confer an advantage to Chilean exporters. This is a form of trade deviation, since at least some exporters can only export to those markets due to the tariff differential facing their exports as compared to more efficient third country producers.[10]

On the other hand, the complaints of the executives surveyed concentrated on the Latin American economies as compared to developed economies.[11] The economy in Latin America that receives the most complaints is Brazil. It imposes non-tariff trade barriers of all types, and in several

[9] See `http://www.minecon.cl`, catastro.

[10] For a theoretical analysis of trade creation and trade deviation, see Panagariya (2000). The political economy of the agreements is described in The World Bank (2000).

[11] Very few firms export to African and Saharan economies, but they all complain about the procedures and their lack of transparency, which appear to be worse than those of Europe, Asia and the Americas. Due to the few observations, it is impossible to determine whether this perception is significant.

Table 2: Surveyed firms

Name	Exports 2002 (US$ 1000's)	Products
CMPC	352,666	Cellulose
Madeco	66,138	Copper manufactures
Inforsa	61,072	Paper for newspapers
Coresa	8,426	Plastic packaging
Fabisa	0,552	Bycicles
Agricom	38,111	Avocados, lemons, grapes
Celulosa Arauco	478,235	Cellulose
Aserraderos Arauco	223,005	Lumber cut to shape
Goodyear	66,075	Tyres
Denasa	–	Detonators for mining
Córpora Aconcagua	32,894	Tomato paste, canned fruit, jams, pulp
C. Mallas y plásticos	68	Plastic bags
Madegom	409	Latex gloves
Seafood	3,592	Turbot and abalone
Indura	6,563	Electrodes and soldering wire

Source: Prochile web page, processed by the author.

cases dissuaded exporters from even attempting to enter the market or caused them to cease exporting to its markets. Those firms that export to Brazil usually consider it the most closed market in the Americas. Recall that Chile has had a Free Trade Agreement with Mercosur, and therefore with Brazil, for more than five years.

Some of the important problems affecting Chilean exporters in Latin America consist in bureaucratic and administrative problems on arrival. In many cases, exporters prefer to export FOB, so that they do not face these difficulties directly. The advantage is that the importer, who has the local know-how, is the one that deals with these bureaucratic difficulties, which in many cases may involve payments to these bureaucrats. For other firms, which have their own local distributors in the foreign markets, this is not possible, and they must face the gamut of trade restrictions. As an example consider the case of Mexico, where one problem is the propensity of custom officers to set containers on the ground for some inspections, which adds considerably to total costs.[12] Argentina and Peru have accused some Chilean exporters of dumping. In a few cases these accusations have prospered and the exporters are excluded from those markets.

Moreover, there are some self inflicted problems for exporters due to Chilean procedures. Those include the rigid schedules of the SAG (Servicio Agrícola y Ganadero, which supervises

[12]The charges for putting containers on the ground and putting them back on carriers are high, and there are costly delays associated to these revisions.

the quality of exports of agricultural goods) and Sernapesca (which plays a similar role in fishing and aquiculture exports). Similarly, the Foreign Ministry is very slow in performing the signature verifications required for some markets, such as those in Arab economies.

These difficulties imply that there are at least two areas in which the government can have a positive effect on exporters. First, it can improve administrative procedures, increasing the flexibility of the work schedules of the inspectors associated to different services or by increasing the speed of the procedures at the Ministry of Foreign Relations. Second, it might be useful that the same ministry would examine the administrative procedures in the destination markets (perhaps through a program of interviews similar to the present survey) and would act directly with the governments of the importing economies. This should lead to improvements in procedures.

4 Survey responses

4.1 Pilot study

The first four companies were part of an initial pilot program of surveys, in order to determine whether the survey could be carried out. As has been mentioned, the original objective was to determine a quantitative tariff equivalent of tariff measures.

CMPC Its exports are mainly cellulose, an homogenous forestry product –a precursor to paper– that is distinguished mainly by the type of production process and particularly by the use of chlorine in it.[13] The firm has a global market and exports to Europe, Asia and Latin America, with similar margins in all markets.

The executives responsible for exports were unable to estimate the cost of nontariff barriers in their destination markets. They are adamant that these restrictions exist and that they are costly. In some cases, they are able to determine the different costs of similar procedures across economies. The executives also questioned the need for physical (in many cases destructive) revisions of container cargo. The main executive was unable to provide even a ranking of protectionism among the various economies.

Madeco Exports copper tubes sheets, wires and other copper manufactures. Sixty percent of its exports go to Latin America. Exports to the USA and to Latin America face few problems except in Brazil, which imposes many restrictions. Among others there are different measures adding up to a tariff equivalent of 25-30%.

[13]Since protectionism in this product is linked to environmental concerns and chlorine laced effluents contaminate rivers.

Table 3: Exports of CMPC, 2002

Economy	US$ FOB
Holland	62.528.304
Italy	40.294.060
China	35.126.078
South Korea	30.387.485
Germany	27.803.768
Brazil	19.553.969
France	16.842.870
Japan	15.885.774
Peru	15.391.834
Taipei	14.111.052
Colombia	13.632.719
Venezuela	12.513.635
Indonesia	10.898.547
Other	37.696.017
Total	352.666.102

Source: Prochile

Table 4: Exports of Madeco

Economy	US$ FOB
USA	13.518.510
Brazil	12.533.731
Venezuela	7.210.450
Germany	6.156.665
Austria	6.089.937
Colombia	5.352.288
Ecuador	4.835.632
Peru	2.239.503
Mexico	1.908.635
Argentina	1.779.328
Other	3.913.471
Total	66.138.154

Since Madeco had not obtained the ISO 9000 standards, it had some problems in Europe, but the firm expected them to be temporary, until it obtains the certification. Exports to Australia have faced problems, since the containers have been fumigated and placed under quarantine, which raises the costs of storage as well as increasing the cost of capital. Even though this is an outwards oriented firm, the executives had trouble even understanding the concept of the quantitative cost of a non-tariff measure. They were, however, able to establish an ordering of economies in terms of protectionism. Brazil is the most protectionist economy, followed by Europe and Australia and then Latin America and the US (which usually includes Canada).

Inforsa Exports newsprint paper. Though most economies do not impose restriction on these imports, due to the opposition of the written press, they face restrictions in certain economies.

Table 5: Exports of Inforsa

Economy	US$ FOB
Peru	13.828.272
China Rep. Popular de	7.320.404
Venezuela	6.386.975
USA)	4.881.729
Brazil	3.969.397
India	3.816.193
Dominican Republic	3.309.378
England	2.805.611
Ecuador	2.603.281
Bolivia	2.037.875
Colombia	2.019.870
Vietnam	1.934.546
Paraguay	1.756.320
Uruguay	1.496.041
Other	4.402.063
Total	61.072.214

Source: Prochile

Some of these problems are due to the existence of monopolies or imperfect competition. An example is provided by the costs of maritime transport to Brazil, which are 66% more expensive than shipments for similar distances to other economies. The higher cost is due to a restriction to transport between the two countries to ships of either flag, and the fact that the main Chilean company is the owner of the Brazilian shipper.

The executives were able to order destination economies according to the ease of access to their markets. Brazil is clearly the most protectionist market (and not only due to the higher shipping

costs). Mexico is another difficult market due to its high inspections charge and the fact that it inspects all of the cargo originating in South and Central America in search of drugs. In many cases, this damages the cargo. Venezuela is another economy that sets restrictions to the imports of newsprint. In markets such as Peru, Argentina or Ecuador, protection levels are lower.

Fabisa Produces bicycles under licence and under its own brand name (Bianchi and Alpina, respectively) for the Chilean and Latin American markets. It uses a network of exclusive distributors in its export markets.[14] It exports approximately 30% of its production, amounting to approximately US$0.5 million.

Table 6: Exports of Fabisa 2002

Economy	US$ FOB
Peru	208.537
Mexico	125.327
Ecuador	98.587
Colombia	40.348
Bolivia	32.860
Paraguay	29.221
Venezuela	14.868
Uruguay	2.356
Total	552.104

Source: Prochile

The export manager was able to order the different destination markets according to their level of non-standard protectionism, even though he had difficulties in distinguishing between economies with similar levels of protection (the ranking is from more to less protectionist):

1. Brazil: The firm does not export to that market since the 95-96 season, due to the combination of high tariffs, administrative barriers and the lack of seriousness of local distributors.

2. Colombia: Imposes a complex and cumbersome procedure that involves manually listing serial numbers on the bicycles, which only applies to firms which have serial numbers on their exports, and therefore does not apply to competitors from Asia.

3. Mexico has cumbersome administrative procedures.

4. Peru has a cumbersome pre-embarkment procedure and bill of lading difficulties.

[14] Apparently, it is able to export due to trade diversion caused by the FTAs signed by Chile with Latin American economies.

5. Ecuador has relatively few problems and the administrative costs are no more than 1%.

6. Bolivia also does not have important restrictions to imports.

7. Venezuela restricts imports using quality standards which favor its own assembly plants, specially since the norms appear not to be totally defined. The country risk is high and imports face many bureaucratic hurdles.

8. Argentina places no restrictions in imports, except for those due to corruption in the administrative apparatus. It is one of the few economies in which the bill of lading does not represent a problem.

Coresa Produces containers of various types: metal containers for agricultural industry, polypropylene sacks and cloth and *raschel* nets. It exports approximately US$8.5 million, representing, on average, 45% of its production, mostly going to other Latin American economies.

The firm has faced problems in Argentina, where tariffs were raised to 30%, excluding it from the market of polypropylene sacks. In an attempt to evade these tariffs, it bought a plant in Argentina so it could export polypropylene cloth for manufacture into sacks. It was then accused of dumping cloth and had to agree to a minimum price that left it out of the market again. Imports of *Raschle* netting face a 32% tariff after a change in the customs classification.[15]

Brazil is another market that is closed for sacks, because even though exports face only an 8% tariff, it imposes a non-tariff barrier by requiring that sacks have *batch* labelling, which adds significantly to costs and applies only to non-Mercosur sacks. Brazil is also totally closed to imports of metal containers. Both Argentina and Brazil impose costly physical inspections. In general, Mercosur –with the exception of Uruguay– is very protectionist on the market segments covered by this company.

In Peru, there is non-reciprocity, since their sacks are imported under the general tariff (now 6%), whereas the company's exports face a 20% tariff. Moreover, local sack producers have pressured for a series of non-tariff barriers. Sacks for fishmeal are allowed entry only temporarily, so they can only be used for Peruvian fishmeal exports and not for local consumption. It is difficult to export to Bolivia due to the combination of non-tariff barriers, the high transport costs and the administrative costs.

Colombia, Ecuador, Venezuela and Mexico pose no serious problems.[16] However, in Mexico the firm has been careful to keep no more than 5% of the market, so as not to provoke a protectionist response due to a lobby of domestic producers.

[15] Recall that Argentina is a member of Mercosur, with which Chile has signed an FTA.

[16] Except for the difficulties with letters of credit in Venezuela.

Even though Coresa does not operate in Europe, it believes it is a relatively closed market. There are no problems with exports to the US. When asked for a ranking, the most protectionist economy was Brazil, followed by Argentina and Peru, while the other economies pose fewer restrictions.

Table 7: Exports of Coresa 2002

Economy	US$ FOB
Peru	2.942.008
Argentina	2.891.357
Colombia	1.869.871
Mexico	281.719
USA	206.963
Ecuador	78.943
Portugal	60.829
Uruguay	54.763
Venezuela	40.001
Total	8.426.453

Source: Prochile

Arauco Producer of paper, cellulose and wood cut to shape that exports to most of the world. It faces problems in the Middle East, which requires large amounts of documentation, which in turn requires signature verification at the Chilean Foreign Office. This is a cumbersome procedure and the Foreign Office approves at most five signatures per day.

The company exports a lot of paper to Asia (Korean Rep., Taipei and Japan), which require packing lists with special formats. The Popular Republic of China asks for unnecessary phitosanitary certificates and has incoherent and cumbersome rules, but it remains an attractive market.[17]

The firm finds it difficult to export to Brazil due to the need for certificates of origin and because of problems with invoices. Peru, Ecuador (which changes its rules frequently) and Central America require phitosanitary certificates for sawn wood imports. Mexico requires the original bill of lading and generally works though problems subsist.

In developed economies, the firm's exports face no problems, except in the USA, when the quota limit for the tariff exemption under GSP is reached. The economies that are most protectionist are those of the Middle East and Northern Africa. Central America and Ecuador are also difficult. Brazil is not a problem –because the company almost does not export to that market–, and it is entirely closed to wood exports.

[17]The manager mentions that the Agriculture and Animal Husbandry Service is efficient in obtaining the certificates.

Table 8: Exports of Arauco

Market	US$ FOB
China, Pop. Rep.	161.548.242
Italy	51.329.105
Belgium	46.451.225
Taipei	45.773.304
Korean Rep.	36.563.615
Thailand	23.496.329
Indonesia	19.000.560
Spain	16.514.775
Japan	13.503.697
Colombia	12.786.839
Venezuela	11.627.715
France	9.738.154
Brazil	5.944.732
Other	23.956.970
Total	478.235.263

Source: Prochile

Goodyear Produces mainly tires, though it has production lines of car batteries and conveyor belts which represent about 8-10% of sales. It exports about US$65-70 million a year, of rubber based products with a price of US$80/100lb. Goodyear plants around the world have specialized and export to each other.

The Chilean plant is quite modern and productive. It exports 1.2 million tires to Mexico, 0.8 million to the US (racing tires and *value line* tires sold as generic tires by large department stores). Current production is 2.5 million tires with plans for producing 7.5 million in 2005. Goodyear exports to all of Latin America, Canada, Europe (including BMW), and US$1 million in tires for Wrangler jeeps in Australia.

Exports to Mexico are fairly simple, except that they require a certificate of origin that takes 3-4 days to obtain. Recall, however, that these tires are exported to another Goodyear branch, which reduces the lobbying pressure of domestic competitors. Mexico does impose security restrictions and requires certification of new tire models, a process that can take up to a year.

The bureaucracy in Brazil is worse than in Mexico, with delays of a month to obtain an import licence, plus a security certificate from a State laboratory. In general, exports to Brazil face many problems. The other markets in Latin America are smaller and less protectionist and this also occurs in the other markets of the firm. A ranking of protectionism indicates that Brazil is the most protectionist, followed by Mexico (basically due to its bureaucracy), followed by the other

Table 9: Exports of Goodyear

Country	US$ FOB
Mexico	25.822.901
USA	15.980.237
Bolivia	10.534.064
Peru	2.719.369
Argentina	2.511.441
Colombia	1.818.343
Ecuador	1.509.238
Other	4.958.928
Total	66.075.520

Source: Prochile

economies at similar protection levels. Colombia is a particularly open market.

Indura Is a firm that produces and exports gases such as oxygen, nitrogen, carbon dioxide and argon, as well soldering electrodes. It sells about US$100 million a year, of which approximately US$7 million are exported.

Table 10: Exports of Indura

Country	US$ FOB
Mexico	1.413.321
Ecuador	1.265.101
Colombia	838.069
Peru	740.522
Argentina	733.889
Venezuela	620.093
USA	429.259
Other	523.435
Total	6.563.686

Fuente: Prochile

Normally its markets are Latin America (45% to Mexico, 20% to Colombia, 20% to Venezuela). About 8-10% of exports go to the USA. One of the major costs Indura faces with its imports are the physical inspections on departure and arrival. Another problem is due to the fact that any problem with the bill of lading means the container will be set on the ground, with the associated costs.

Brazil is an economy to which it is impossible to export. Even though tariffs are low, there is

a special tax of 5% that applies only to imports, as well as other taxes known as the AFR, which has a cost of US$ 350 (compared to the equivalent cost of US$ 30 in Chile). Ecuador is also a complex economy to export to, since it has inspections that cost US$180 + VAT, with the risk that the container is set on the ground, which delays the process by 15-20 days. A protectionist ranking would be: 1. Brazil, 2. Ecuador, 3. Peru, 4. Argentina, 5. Colombia- Venezuela, 6. Mexico, 7. Canada and the USA.

Madegom A small firm that makes latex gloves. It exports about US$400 thousand a year, i.e., around 40% of annual sales. Its exports are possible due to trade deviation caused by free trade agreements of Chile and other Latin American economies.[18] In general, the firms faces few problems in its export markets: Colombia, Mexico, Peru, Paraguay, Ecuador and Argentina. Brazil asks for a sanitary certificate that requires nine months of processing. The firm has not made efforts to export to Brazil, among other things, because of capacity limitations. Most other economies –except for Mexico– have no domestic production, which is the main reason there is no protectionism. The executives at Madegom were unable to rank economies according to their protectionism.

Table 11: Exports of Madegom 2002

Table 12: Madegom

Country	US$ FOB
Colombia	156.370
Argentina	85.360
Mexico	73.604
Ecuador	45.425
Bolivia	19.401
Peru	13.107
Spain	11.111
Paraguay	5.134
Total	409.511

Source: Prochile.

Seafood Two linked companies (Spasa and Seafood Resources) that produce and exports aquiculture products, specializing in *turbot* and *abalone*, two high value species. The company exports most (84%) of its production of abalone to Japan and most of the rest to the US. The export prices are US$9/kg for turbot and US$24/kg for abalone. The company exports mainly to developed

[18]Trade deviation also occurs for production destined for local consumption because the main input, latex, is imported from Guatemala, without tariffs.

markets, so it does not face some of the problems facing firms that exports to other markets. It faces competitive pressures in Europe, both due to the higher transport costs as well as the high tariffs in those economies. However, tariffs should fall with the FTA between Chile and the UE, which should increase exports substantially, as their lower production costs will compensate for their higher transportation costs. There have been some lost opportunities due to the fixed schedules of the local SAG inspectors. In general, protection is not a problem for this company.

Table 13: Total exports Spasa and Seafood Resources (Abalone and Turbot)

Country	US$ FOB
Japan	1.431.361
USA	1.156.984
Switzerland	218.495
Italy	221.138
Spain	278.177
Hong Kong	203.918
China	144.997
Germany	140.287
Other	178.223
Total	3.971.741

Source: Prochile

Córpora Aconcagua Is an agricultural firm that concentrates in exports of tomato concentrates, fruit juices and pulp, canned peaches, marmalades and other agricultural manufactures. It exports about US$33 million a year.

Apart from Japan, its main export markets lie in Latin America, where it is protected by the Free Trade Agreements signed by Chile. On the other hand, it finds it difficult to compete in Europe or with European exporters due to the subsidies they receive, specially in canned peaches and in tomato paste.[19] It also faces problems in exporting to Brazil, though this seems to be improving in 2003.

Denasa A firm dedicated to the production of detonators, explosives and other products for mining. It is a subsidiary of a US firm. Though it does export sporadically under special conditions, it has never encountered problems.

[19] In this regard, they are willing to pursue countervailing subsidy procedures against Mexican imports of European provenance.

Table 14: Exports of Córpora Aconcagua, 2002

Country	US$ FOB
Mexico	8.860.451
Japan	3.743.758
Ecuador	3.383.046
Venezuela	2.971.996
Dominican Republic	1.461.570
Colombia	1.399.429
Brazil	1.389.452
Argentina	1.202.340
Peru	1.058.426
Thailand	1.013.500
Other	6.409.974
Total	32.894.315

Source: Prochile

Mallas y plásticos A small firm that produces plastic bags and exports sporadically, when it finds attractive opportunities, and does not consider it an important market. For that reason, it does not have a clear opinion on the problems of protectionism in the export markets.

Table 15: Exports of Mallas y Plásticos 2002

Country	US$ FOB
Peru	34.973
Argentina	27.444
Bolivia	6.754
Total	69.171

Source: Prochile.

Agricom A firm dedicated to exporting fresh agricultural products such as avocados (its main product representing almost 50% of sales), lemons, grapes, nectarines, cherries and other fruits. Exports in 2002 were US$38 million. It exports 98% of its production of avocados to the US. Lemons are exported to Japan and to the US. In avocados, the firm observes no problems, except for the cumbersome phitosanitary controls, problems with the cooling chain in the USDA and other minor problem. Another problem is the advantages that trade deviation gives to Mexican avocados (though these will disappear with the FTA between Chile and the USA). There is a marketing board, but this is not a problem as Chilean firms can participate in the mechanisms for

fund disbursal. Antiterrorist measures have created some problems for shipments. Japan poses no problems, except those that relate to the special quality requirements. Europe is also not a problem for this exporter.

Table 16: Exports of Agricom, 2002

Country	US$ FOB
USA	26.396.889
Japan	6.726.026
Mexico	1.684.494
England	678.248
China	427.985
Holland	404.117
Spain	391.562
Saudi Arabia	321.153
Other	1.081.165
Total	38.111.641

Source: Prochile

In Latin America, the firm encounters problems in Mexico due to incorrect manipulation and the typical problems with the bills of lading. According to the company, there are no problems exporting to Brazil –but they do not export to that market–. Saudi Arabia imposes many restrictions: monopoly issuance of import licences, requires special documents and it is impossible to export directly, since it is necessary to go through a local importer. An ordering of protectionism would be: Saudi Arabia, ex-socialist economies, USA, Mexico (because of problems with the customs legislation), and Japan due to the existence of sporadic marketing orders.[20]

5 Results of the survey

This is an exploratory survey, an as such the results are not conclusive. Nevertheless, there are some conclusions that can be derived from these results. First, the main object of the survey, which was to determine the quantitative effect of non-tariff barriers as they were perceived by exporters, was a failure. Exporters have a very vague idea about the impact of these types of measures and tend to confuse minor inconveniences with major problems. Moreover, it is possible that exporters do not perceive major markets as protectionist because they have already adapted all their processes to those markets, whereas smaller markets could appear to be more protectionist because

[20]Not e that in the two cases in which Arab economies are mentioned, there are no exports to Brazil, normally a sign of extreme protectionism.

the fixed cost of adaptation has to be divided among fewer units, as described in Fischer and Serra (2000). Moreover, it may be that exporters are confused by the constantly changing pattern of protection in Latin America and believe it is more serious than developed country protection, when in fact there may be higher levels of protection in developed countries, but these are fixed.

It appears that there is a need to develop accounting systems within firms that attempt to measure the costs of non-tariff barriers to their exports as a means of basing their export decisions. At most, exporters were able to order economies on an ordinal scale of protectionism. Nevertheless, this allows us to obtain a few results. In general, it appears that rules are more widely respected in developed economies. These economies may have higher quality requirements but once these are satisfied, the problems facing exporters are relatively minor. The Middle East appears to be highly protectionist, but the sample of economies involved and firms that export to them is too limited, so this conclusion must be qualified. In any case, it is not a significant market for Chilean exporters, representing less than 1% of exports. Latin America, on the other hand, is an important destination for Chilean exports and they face various problems. Brazil is clearly the most protectionist market in the sample, and this can be tested. Since six interviewees mentioned Brazil as the most protectionist economy, two mentioned the Arab economies and the remainder were unable to decide on which economy is the most protectionist, we can test the null hypothesis that Brazil is no more protectionist than the other Latin American markets, conditional on the fact that the executive has a protectionist ranking. Considering the average of seven economies to which the typical firm exports, we have that the probability of observing the results, conditional on the ability to rank economies is

$$p = \frac{7}{7^6} \ll 1\%,$$

indicating that the probability that Brazil is no more protectionist than the other markets in Latin America is much smaller than 1%.

Latin American protectionism often takes the form of administrative protectionism, even though contingent protection measures are also often used in combination. It is very common for local firms to recur to lobbying for protection. Exports of sacks to Argentina were stopped via the use of special tariffs, and when the company started local production, importing the required materials from Chile, these imports were also blocked via antidumping regulation. In Colombia, bureaucratic measures such as the revision of serial numbers in bicycles can have significant costs. In Mexico, customs procedures can be complex and may require "greasing" (by local importers) the officers in order not to practice destructive inspections or setting the container on the ground with the attendant costs. Brazil has a host of administrative measures, such as special taxes –not tariffs, even though they mainly fall on imports– and import licences. There are many exporters that

prefer to avoid Brazil altogether, given the difficulties it poses for exporters.

Venezuela is not categorized as very protectionist, but there are many problems with financing imports (letters of credit) under the current conditions. Peru and Ecuador are economies with intermediate degrees of protectionism, and in some sectors protectionism can be important, while others pose no problems.

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