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**LEARNING AND EXPORTING: EVIDENCE FROM MEXICAN SUCCESSFUL
EXPORTING FIRMS**

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1. Introduction

Latin-American countries have substantially transformed their economies over the last decade, going from an import-substitution-based development strategy to one that seeks to open the economies to foreign competition by liberalizing trade and to adopt in general sounder macro-economic policies.

One of the relevant features of this change of economic policy is the growing importance assigned to exports. While the region was able to increase its exports during the eighties, mainly due to the fall of demand in the domestic markets, as a result of the severe economic crisis in most countries in the region, this increase of exports is harder to maintain when the economies recover.

Therefore, the question today for many Latin-American countries is how to sustain an increase in exports and to go beyond present export levels, when there is a recovery of demand, as well as exchange-rate appreciation. Most of the governments in the region have made increasing exports, particularly those with relatively higher-value added, a top priority of their economic agenda. Exports with higher value-added are emphasized because they are less sensitive to the fluctuations of the business cycle than the commodities the region currently specializes in, and also because they create higher productivity jobs, contributing thus to improve income levels.

However, while there has been a wide range of research on the changes that have taken place at a macro-economic level, investigations about changes at the micro-economic level have been scarce. More specifically, not much is known about how domestic firms became successful exporters, and what can be learnt from their experience at doing so. The same thing can be said about how useful export-promotion incentives are for firms: few studies have been done on how efficient they are at encouraging exports.

This is an obstacle for knowing more about firms' decision processes, particularly in relationship to exporting, as well as about the influence of the economic framework on firms' export behavior. The lack of knowledge on these matters hinders the efficiency of policies seeking to promote exports.

This paper presents the results of an investigation carried out in Mexican manufacturing firms with the goal of learning more about their export behavior. The main questions that the research wanted to answer were the following: What are the main factors that push a firm to start exporting? Is there a learning process resulting from exporting? Which export-promotion incentives do firms use and how do they evaluate those that they have access to? Which are the main export-obstacles? What is the influence of free-trade agreements on firms' export opportunities?

The first step in the research was to pick the sectors: the criteria used was to select sectors that were exporting goods with a relatively high-level of value-added and in which domestic firms played an important role. This meant excluding some of the industries in

which Mexico has been a successful exporter, such as the automobile industry those related to the electronics industry. The reason for doing so is that these last two industries are dominated by transnational corporations, which are less sensitive to export-promotion policies. Another criteria used was to exclude those sectors that were for all practical purposes dominated by one firm, such as is the case of the glassware industry where there is only one very large domestic exporter, Vitro. The logic behind this decision was the same one than that used in the case of transnational firms. Care was also taken not to pick sectors where export-success may have partially resulted from intrinsic natural-resources comparative advantages (such as basic oil industries) or from subsidies (such as may be the case for firms using subsidized corn as a main input). Finally, since the investigation in Mexico was a component of a larger research project that also included Chile and Colombia, the decision was taken to exclude in-bond processing firms, better known as *maquila*. Three sectors were chosen: food-processing, chemical products, and automobile-industry suppliers.

Once the sectors had been chosen, an initial selection of firms was made from companies mentioned in a publication that lists Mexico's main exporters (Expansión, 1995) and those included in an export directory published by BANCOMEXT, the Foreign Trade Bank. Entrepreneurial trade association executives were also consulted. The goal was to interview four leading firms in each industry.

Given the selection criteria, all the firms interviewed are large firms. Most of them appeared to be quite successful in their specific markets, if their market share is a good

indicator of such success (see table 1). All firms are exporters, although care was taken to pick some that didn't export significant portions of their output, so as to get more information about how firms start to export or increase exports.

Four interviews with CEOs or export managers were carried out in each industry, with the understanding that the information would be confidential. They were open interviews that included topics following a check-list. The interviews were conducted in Mexico City during May 1996. The firms' main features are presented in table 1.

The reason for including four firms in each industry is that interviewing one or two firms in each sector does not provide enough information for one to conclude whether the results are industry-specific or merely firm-specific. On the other hand, after four interviews in a given industry, the marginal benefits of an additional interview are quite low and not worthwhile the costs it entails in terms of time.

This paper is organized as follows: The next section presents a profile of the Mexican economy so as to enable the reader to have a better understanding of the economic and policy environment surrounding the firms included in the research presented later on. The main features of the Mexican economy up to 1994 are described in the first place to provide a long-term perspective, and then information is provided on the evolution of the main indicators since the economic crisis that began in December 1994. Section 3 briefly describes the main trade policies that influence firms' export performance, and then proceeds to provide a more detailed presentation of Mexico's export-promotion incentives.

Section 4 tells the main findings of the investigation in respect to the questions mentioned earlier. Finally, the last section sets out the conclusions.

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Table No.1: FIRMS' MAIN CHARACTERISTICS

Firm	Main Products	Market share in the domestic market	Organization	Number of plants (for firm interviewed)
A	Tuna fish Olive oil	14% 57%	Family-controlled conglomerate	3
B	Sauces Mayonnaise	70% 50%	Family-controlled conglomerate	7
C	Hot peppers	50%	Conglomerate	3
D	Orange juice	38%	Family-controlled conglomerate	4
E	Polyester	75%	US/Mexican firm	2
F	PVC resins	47%	Local group	1
G	chemical products for the building industry	n/a (most probably high)	Conglomerate	1
H	Glycol	n/a	Conglomerate	3
I	Automobile spare-parts	80%	Conglomerate	10
J	Radiator hoses (after-market)	90%	Family	1
K	Engine bearings Bushings	n/a (confidential)	Mexican investment funds	1
L	Leaf springs Disk brakes	88% 30%	Conglomerate	1

n/a: not available;

Source: Firm interviews by the author.

2. The Mexican economy¹

Mexico's Gross Domestic Product (GDP) was 230 145 million dollars in 1994, (at 1980 prices), the second highest of the Latin American and Caribbean countries, after Brazil. GDP growth rate for that year was 3.5%, while per capita GDP grew at 1.7%. Average per capita GDP growth for 1980-1990 was (- 0.4 %). The country's labor force is around 35 million persons.

Manufacturing's share of GDP has remained stable at about 22.5% of the country's output. It is the third highest share for that sector in the region, after Brazil and Argentina. Manufacturing GDP's growth rate was 3.6% in 1994, after a drop of 0.8% the previous year.

While GDP's growth rates over the past years have been quite mediocre, trade indicators have been more dynamic. Imports were 24.2% of GDP in 1994, up from 14.6% in 1980. Imports ratios had been growing steadily, particularly since import liberalization in the mid-eighties (see below). Exports in 1994 were 45155.3 millions of dollars (at constant 1980 prices), up from 15 511 millions of dollars in 1980 and 27 989.7 in 1985. Exports grew 9% in 1994, reaching 23.9% of GDP, up from 11.9% in 1980. Mexico was, in 1994, the second largest exporter in Latin America, after Brazil who exported 54 042.2 millions of dollars. It will probably become the first one this year.

¹ The data included in this section, unless otherwise specified, is from ECLAC (1996), Statistical Yearbook for Latin America and the Caribbean, 1995 Edition, United Nations, Santiago.

As a result, Mexico's degree of openness, expressed as the sum of exports and imports over GDP, has had a significant increase from 26.5% in 1980 and 28.2% in 1985 to 48.1% in 1994. As a point of comparison, Brazil's degree of openness for this last year is 32.1%.

However, an ever more significant change has been Mexico's increased specialization in exporting manufactured goods, 77.4% of FOB value of total exports of goods in 1994, including those of the *maquila* (the in-bond processing manufacturing process). While these numbers would certainly not be as high if exports of the *maquila* were excluded, the increased importance of manufactured products in Mexico's exports is an impressive transformation of the country's export behavior. It is also an impressive contrast with the other countries of the region, most of whom are still are mainly primary goods exporters.

Table 2: MEXICO: ECONOMIC INDICATORS

	1990	1991	1992	1993	1994	1995
GDP ^a	207 459.2	214 983.4	221 013.6	222 340.6	230 145.6	214 265.6
GDP growth rates ^b	4.4	3.6	2.8	0.6	3.5	- 6.9 ^c
GDP per capita growth rate	2.5	1.7	0.9	- 1.2	1.7	- 8.6 ^c
Exports ^d	36 169.8	38 920.3	40 075.7	41 186.2	45 155.3	79 543 ^{e,g,h}
Import ratio ^f	17.3	19.0	22.2	21.8	24.2	-
Export ratio ^f	21.8	22.1	21.7	22.7	23.9	-
Manuf. X ratio ^g	43.3	50.8	71.1 ^e	74.6 ^e	77.4 ^e	84 ^e

Source: ECLAC, based on official data.

^a Millions of dollars at 1980 prices;

^b Average annual rates at constant market prices;

^c CEPAL-México, Informe de la Coyuntura, Primer semestre de 1996, México, 1996; may not be comparable to other data;

^d Value of exports at 1980 constant prices;

^e Includes goods for in-bond processing (*maquila*);

^f Percentages of the Gross Domestic Product at 1980 constant prices; comparable data for 1995 is not yet available;

^g Percentages of FOB value of total exports of goods;

^h Millions of dollars at current prices;

Hence, Mexico's export structure today is strikingly different from that of 1980, when oil accounted for 60.9% of exports, and most other leading export products were primary agricultural or mining goods. While the main export product in 1994, including *maquila*, still is oil (10.9%), the next nine leading export items are all manufactured goods, such as passenger motor cars (8.3%), insulated wire and cable (4.8%), televisions (4.4%), engines (3.6%), and other products with high technological content such as electronic machinery or motor vehicle parts.

The surge of manufactured exports is mainly due to the transformations that have taken place in the Mexican economy after import protection was substantially cut during the mid-eighties (Ten Kate 1994). However, trade liberalization is not the only explanation, since many other countries in the region have liberalized trade in the same period, without reaching similar results. The level of industrial development attained by Mexico previously, thanks partly to import-substitution policies followed earlier and to the sheer size of the country's economy also was a contributing factor; the same can be said of the strategic decisions taken by TNCs who decided to localize production in Mexico, particularly in the Automobile Industry. However, it must be pointed out that import liberalization probably played a major role in TNC's decisions to localize their production in Mexico, in addition to the country's proximity to the US. The fact that it was highly probable that the North-American Free Trade Agreement (NAFTA) would be signed, as it was effectively, also was an important factor in TNCs decisions.

Another contributing factor to Mexico's export success is that the country's firms' have taken the deliberate decision to increase their exports, given the incentives provided by import liberalization, as well as by export-promotion policies and investment in human capital and infrastructure (Máttar 1996).

The crisis of the Mexican economy since the devaluation and capital flight of December 1994, after the growing deficit in the current account became unsustainable, plunged the country in the worst recession of over half a century. Domestic demand plummeted by 18% and GDP dropped by 6.9% in 1995, while per capita GDP fell by 8.6%.

The economy has started to grow again, starting the second quarter of 1996, but the country is still suffering the severity of the downturn. The push of export growth (28%) allowed to lessen the acuteness of the recession. Exports for the year 1995 reached 79 543 million dollars (at current prices) (CEPAL-Mexico, 1996). In 1995, manufactured exports were 84% of total exports of goods. Export growth has continued the first semester of 1996, thus maintaining the trade surplus that began with the economic downturn.

3. Policies

3.1 Trade policies

This section describes the main policies that influence firms' export performance. The first part briefly summarizes Mexico's policies in the past and the main transformations that took place in the eighties. The following one describes in greater detail the current export-promotion incentives.

Mexico's trade policies followed an import-substitution industrialization model since the late forties. Its main components were high tariffs, benchmark prices used as reference by customs and import licenses that varied over the years, but that at some periods covered most items produced domestically.

During the eighties, there was a radical change in the trade policy, as the Mexican government proceeded to liberalize imports, beginning with the economic crisis of 1982 (when the world price of oil dropped, cutting the country's export revenue), and making more significant changes from 1985 to 1987. Import license requirements that covered almost 100% of the domestic production in 1982 went down to 25.4% by December 1987, and then continued dropping, at a slower rate, to 16.5% in 1993. Tariffs were also dropped in different stages, reaching the range of 0 to 20% by 1987 (Ten Kate, 1994).

The most relevant trade policy change in the early nineties was that Mexico signed several free-trade agreements, the most important of which is obviously the North America

Free Trade Agreement (NAFTA) with Canada and the USA. Other trade agreements were signed with countries such as Chile, Costa Rica, as well as a joint one with Colombia and Venezuela (also known as the G3). The agreements that resulted in the strongest increases in trade were the ones with Chile and, above all the others, the NAFTA. Trade with the US, that already was Mexico's main trading partner has substantially increased, as has trade with Canada.

3.2 Export Promotion Incentives

This section describes Mexico's export-promotion incentives that deal with the availability of competitive inputs. It also sets-out the main features of the industrial policy program that sets guidelines for the automotive industry, since some of the firms included in the research manufacture auto parts, original as well as after-market. Finally, it presents BANCOMEXT, the country's export-support bank.

3.2.1 Schemes to allow access to competitive inputs

Mexico has several schemes to allow exporting firms to have access to competitive raw materials and intermediate inputs, markedly imported ones. These programs, that generally exclude oil exports, have been an important factor in the country's export growth. Although many countries have similar schemes, Mexico has been particularly successful at using them and allowing them to evolve throughout the years with a remarkable administrative flexibility, particularly when compared to other Latin American countries.

3.2.1.1 Drawback

Thanks to this scheme, companies can recover the amount spent on tariffs on imported inputs used to manufacture exports. This is a typical scheme that exists in many countries in order to compensate an anti-export bias. It is used mainly by firms that are occasional exporters. Firms that are regular exporters tend to prefer the other options described below. Exports under this scheme were 517 million dollars in 1995, 0.6% of the country's exports (Ten Kate and Niels, 1996).

3.2.1.2 Maquila²

The “*maquila*” program originally allowed firms located within in-bond processing zones to have free access to imported raw materials and, more importantly, components, to be assembled in the plants and then shipped back to the United States. The program has existed for several decades, and is mainly operated by firms located in the north of the country, that is in the border with the US.

However, since 1989, it is no longer restricted geographically and there are plants functioning under the *maquila* regime in other regions of the country. Still, plants do tend

² The research did not include *maquila* firms since one of the criteria used was to include comparable firms in the different countries included in the investigation. However, a description of this scheme was included in the present section so as to provide a point of reference for comparing the impact of the different export-promotion incentive mechanisms.

to locate preferably in the States in the north of Mexico, to be closer to the border. Firms operating under this scheme can sell a portion of their output on the domestic market.

The *maquila* program has been very successful. In 1995, 39.2% of Mexico's exports came from these processing zones (Ten Kate and Niels, 1996).

3.2.1.3 ALTEX

This scheme allows firms that are recognized as regularly exporting significant amounts to carry out only simplified import and export formalities, as well as to recover the value-added tax of domestic inputs used for manufacturing exports. It has been in place since 1990. To qualify as ALTEX companies, firms must export over two million dollars or between 40 and 50% of their sales. Firms included in the ALTEX scheme had registered programmed exports of 5,684 million dollars in 1995 (Ten Kate and Niels, 1996).

3.2.1.4 PITEX

This program (*Programa de Importación Temporal para Producir Artículos de Exportación*) allows exporters to temporarily import inputs without paying taxes. It has the advantage over the drawback of allowing firms included in the program exemption from not only tariffs, but also from the value added tax, as well as from any anti-dumping penalties. Furthermore, there is a substantial reduction in cost due to the fact that there is exemption and not recovering of taxes (as with the drawback) and that fewer administrative formalities are required.

To be accepted in the PITEX, a firm must export at least 500,000 dollars a year or a certain percentage of its output that varies between 10% and 30%, according to whether the goods imported are raw materials or capital goods. In 1995, firms in the PITEX program exported 29.3% of the country's exports.

3.2.1.5 Incentives for indirect exporters

The above-mentioned export-incentive programs have been very useful for exporting firms. However, they had the disadvantage of not providing incentives for firms to become suppliers to exporters, since the export-incentive benefits go directly to firms that are themselves exporters. Recent changes were introduced in July 1995 with the goal of promoting links between exporting firms and the rest of the economy.

The new rules allow firms included in programs such as ALTEX, PITEX or *maquila* to issue “export-vouchers” (*Constancias de Exportación*) to domestic input suppliers, when the inputs are used for manufacturing exports. These vouchers enable these firms that are suppliers to export companies to be exempted from paying the value-added tax on the inputs they sell to exporters.

This incentive, a very interesting policy innovation in the region, enables to compensate a former anti-export bias: exporting firms did not have to pay the value-added tax when importing inputs (since they qualified as PITEX firms for example), but did pay it when purchasing inputs domestically. It was possible for these exporting firms to recover the value-added tax, but the present system is simpler and faster, since it turns a tax refund into a tax exemption. Another interesting feature present in the innovation is that the private firm in the PITEX, ALTEX or *maquila* program is the one issuing the voucher, so that there is a different relationship between the firms and the public sector, one more based on trust.

3.2.2 An ad-hoc policy: industrial policy for the automotive industry

The industrial policy regulating the automotive sector is presented here because of its impact on the firms included in the investigation, some of which are suppliers to the automobile industry. This industry is in fact the only one that still has a relevant industrial policy program in Mexico that is aimed at a specific sector, the *Decreto Automotriz*.

This program, that seeks to increase the domestic value-added component of automobile manufacturing, began in the early sixties and has been subject to several changes since then³. It is the only program still being enforced, of the various programs that were put in place in the eighties with the purpose of developing several industries, such as the petrochemical, pharmaceutical and electronics industries.

Its main requirements today are the following:

- a) Foreign capital investment in firms manufacturing auto parts is limited to a maximum of 40%. This requirement will be eliminated in 1998;
- b) Domestic value-added in assembly firms must be at least equivalent to 34% of total value-added. This rate has been cut from 60%, and will continue to decrease gradually until the requirement is completely phased out at the end of the year 2003.
- c) Assembly firms in the automotive industry need to export at least 80 cents for every dollar of imports; the rate was higher previously. This requirement will also be phased out at the end of the year 2003 (Ten Kate and Niels, 1996).

This sectoral program has been successful: automobile exports increased 45.3% per year between 1982 and 1995, while auto-parts exports grew at an annual rate of 16.8% over the same period.

³ A detailed description of the history of Mexico's national policy for the automotive sector can be found in Mortimore, Michael (1995) *Restructuring and International Competitiveness: The Mexican Automobile Industry*, ECLAC/IDRC Project "Productive Restructuring, Industrial Organization and International Competitiveness in Latin America and the Caribbean", Santiago.

The *Decreto Automotriz* has certainly contributed to increasing the number of auto-part suppliers in Mexico. Another significant factor have been the localization decisions of TNCs of the automotive industry.

3.2.3 Changes after NAFTA

Given that NAFTA implies a substantial cut of most tariffs between Mexico and its main export market, the US, most of these schemes will become less relevant as the different stages of the trade agreement are enacted. For example, by the year 2001, the *maquila* firms will be able to sell all they want on the domestic market, obviously after paying the corresponding tariffs if there are any.

Similarly, the other programs mentioned above, including the *Decreto Automotriz*, will be phased out for exports to the US and Canada. They will still be available for exports to countries other than the NAFTA ones, but will undoubtedly have a much smaller economic relevance, given the importance of the US and Canada in the country's exports.

3.2.4 BANCOMEXT

BANCOMEXT is the Mexican export bank. Its main programs provide exporters with assistance in the following areas:

- Information on foreign markets, such as tariffs and non-tariffs barriers, as well as on export opportunities in different countries;

- Financial and logistic support for firms participating in trade fairs;
- Export-financing.

BANCOMEXT provides exporters with information on what are the conditions to have access to foreign markets, such as tariffs and non-tariff barriers, rules of origin requirements and the specific terms of the free-trade agreements Mexico has signed.

It also provides firms with information on opportunities abroad. Reports on export opportunities in specific markets are written by BANCOMEXT's representatives in the bank's offices in other countries. These offices also provide some information support for individual companies and for trade missions. The Bank also covers a portion of the expenses incurred by firms when they participate in trade fairs abroad.

Export financing is BANCOMEXT's main purpose. Up to recently, the Bank operated essentially as a "second-floor" financial institution, that is providing export-financing funds to banks who were the ones directly dealing with firms requiring export financing. The Bank spent 14,183 million dollars on export financing in 1994. In the recent years, BANCOMEXT has started to allocate some of its funds directly to firms with the purpose of being more active in placing export-financing funds. For instance, in 1994, 16.2% of its loans were given directly to firms as a "first-floor" financial institution (BANCOMEXT, 1995).

4. Main findings

The main goals of the investigation in Chile, Colombia and Mexico were to elucidate whether economies of scale were a critical factor that pushed firms to export and to find out whether there was learning within firms while exporting.

In the specific research carried out in Mexico, the questions were the following: What are the main factors that push a firm to start exporting? Is there a learning process resulting from exporting? Which export-promotion incentives do firms use and how do they evaluate them? Which are the main export obstacles? What is the influence of free-trade agreements on firms' export opportunities? This section presents the main answers to these questions.

However, before continuing, it must be pointed out that from the onset there is a selection bias: the firms included in the research are successful exporters. This was done in purpose because it was interesting to learn how the successful companies manage to export. The idea was precisely to learn from them. However, this selection most probably has a greater impact on some of the results than on some others; for example, export obstacles may be underestimated since these successful exporting firms possibly have perceived fewer obstacles than firms that were unable to export. However, the other results are more robust.

4.1 Main factors of firms' export decision

CEO and export managers interviewed were asked when the firms first started trying to export and what was the main factor that pushed them to do so (table 3).

The first conclusion is that there is a strong relationship between the initial decision to export and recessions. Five out of the twelve firms stated that the main reason for starting to export was the drop of domestic demand during a recession. Moreover, nine of the companies took the decision to export on a year in which the Mexican economy was either entering or in the mist of an economic crisis (1982-1985, 1994, 1995)⁴. Hence, it appears that recessions in the domestic economy are a powerful export incentive, a fact that seems reasonable.

⁴ Another one, firm K, did not begin to export during a recession year, but did so thanks to the initiative of a CEO who had previously been burned by the crisis of 1982; at that time, he had been in charge of a firm that had large foreign currency commitments and no exports. After what he recalls as a traumatic experience, he decided that any firm he was responsible for would export at least 30% of its output, so as to reduce its vulnerability.

Table 3: FIRMS' EXPORT BEHAVIOR

Firm	When export decision was taken	Why export decision was taken	Exports as a percentage of output	Main export markets
A	1985	a	8%	Central and South America
B	1965 (US) 1994(L. Amer)	b a	10%	USA Latin America
C	1982	c	15%	USA
D	1993	d	4%	USA Brazil Rest of Latin-America
E	1994	e	52%	USA Central and South America Europe
F	1983	d	50%	Europe Latin-America
G	1994	a	3%	Central- America Cuba
H	1982	d	30%	USA Taiwan Korea
I	1995	a	1%	Venezuela Colombia Chile
J	1982	a	10%	Central-America
K	1990	f	30%	USA Venezuela Colombia Chile
L	doesn't know (firm changed property)	d	80%	USA

a Drop of domestic demand.

b Demand from Hispanic consumers in the US.

c Started exporting so as to get hard currency needed to expand plant size.

d Plant capacity larger than share in domestic market.

e Head office in US decided to localize all production for this product in the plant in Mexico.

f Manager decided firm had to export to decrease vulnerability during recessions, particularly in relationship to commitments in hard currency.

Source: Interviews by author.

The second conclusion, closely related to the previous one, is that the need to find markets for excess capacity is what pushes Mexican firms to export. This is a different result from the one obtained in the interviews in exporting firms in Chile. In the last country, it appeared that instead of excess capacity, economies of scale were the main export factor: firms needed to manufacture on a larger scale in order to decrease unit cost and thus be competitive on the domestic market. They needed to export even if the domestic demand was growing steadily. An example can be found in the Chilean Printing Industry (Macario, forthcoming). Instead, Mexican firms export to use their idle productive capacity.

This outcome is related to the difference in size between the Chilean and Mexican domestic markets. While the Chilean one is relatively small for most products, in the Mexican case there is a significant number of industries for which the domestic market is large enough. The exception would be those industries in which operating at world-level scale implies plants whose output is larger than most domestic markets, including the Mexican one. Such is the case for example of many petrochemical industries.

The third conclusion is related to the persistence over time of the decision to export. Even if the firms included in the research tended to begin deploying export efforts due to recessions, once they entered the foreign markets, they apparently decided to maintain that presence abroad. This may not be representative of the export behavior of most firms, since apparently many firms enter exports markets, but conserve a presence in them for only

short periods of time⁵. However, it shows a change of attitude of the managers in Mexico's larger firms, in the sense that their export activity may decrease during economic recoveries, but it continues.

The companies included in the research tend to be large firms and hence have the financial capacity to maintain a presence both in the domestic market and export ones, once the fixed cost of the activities required to enter foreign markets - such as trips abroad for initial contacts and trade fair participation, financing market studies and hiring representatives - is covered. This result is a significant change from the behavior of most Mexican firms in the past - that is before the eighties - as well as from that of companies in many Latin American countries, with some exceptions such as Chile.

4.2 Learning when exporting

One of the most interesting features of the interviews with executives of successful exporting firms dealt with how firm managers learnt to export. While it has become customary for government representatives, as well as for private sector ones, to state that increasing the number of exporting firms is a prime concern since it would increase export revenue, diversify exports and increase the linkages between the export sector and the rest of the economy, the number of exporting firms is still relatively small in most Latin American countries. Therefore, learning from those that have been successful at exporting was a topic that made the research at the firm level appealing.

⁵ One of the goals of the present Mexican administration is to make firms' presence on export markets a more permanent one. This responds to their perception that many firms remain for only a short period in the export markets

Furthermore, knowing more about what firms learn when exporting allows one to establish whether it is true that exporting firms have, over time, greater learning opportunities in matters such as product characteristics, technologies, organizational and marketing techniques, that result in dynamic economies of scale.

The questions asked in the interviews tried to capture two different kinds of learning:

- a) Learning directly related to how firms export;
- b) Learning that is export related in the sense that it takes place when the firm is either manufacturing for export markets, establishing contacts with clients abroad, and so forth, but that goes beyond the export process itself; this would be a kind of learning that is accessible to firms because they are exporting, but that may take place in areas not directly related to exporting itself.

4.2.1 Learning to export

Most export managers said that they began to export by traveling abroad, trying to contact clients and going to trade fairs, first as observers and later on with their own stand.

The first step was to get information about potential markets abroad, as well as on the tariff and non-tariff barriers to have access to those markets. The next one was to find out which were the most important trade fairs for their industry, as well as the more

(interview with SECOFI officials).

appropriate ones for the specific product the firm was exporting. For example, while there are many trade fairs for the shoe industry, some of them are adequate for relatively smaller firms, because they attract mainly retailers who sell directly to the consumers; meanwhile, others are more appropriate for a firm manufacturing a very high volume of output, since they are aimed at large firms who sell to department stores in the United States. There are also other industries in which trade fairs are not important for the business transactions that are effectively carried out there, but rather simply because they provide information on the state-of-the-art in that particular industry and on who are the main competitors.

Therefore, the first issue that must be addressed when exporting is that of information, not only that related to trade issues, such as tariff and non-tariffs barriers, but also to more industry-specific features. The second one is financing the search abroad, that involves traveling to trade fairs, sometimes setting up a stand, sending samples, as well as, more generally, learning about the foreign markets and making contacts.

Setting up a network in the United States was often relatively easy for Mexican entrepreneurs thanks to the close links with the Hispanic community of Mexican descent. In contrast, it was more difficult for firms trying to export for the first time to other countries, such as the Latin American ones. In these countries, establishing contacts was often a trial-and-error process, that required a greater investment in trips abroad and learning about the different commercial practices in each country, such as credit modalities clients expected and so forth. Similarly, selecting a representative can be risky and unpredictable when there is imperfect information about markets, legislation and representatives' reputation.

Hence, the first two main stages in learning how to export were obtaining information and establishing a network abroad. This demands that firms have the willingness and capability of investing in trying to build up an export market. Learning to export is expensive, hard and can be very frustrating in the short run; it requires a substantial investment of time and money, as well as persistence and flexibility. This condition is a *sine-qua-non* and can not be underestimated. It is probably what determines in last instance why a firm becomes an exporter, while a similar one will be unable to do so.

While the firms' determination to export is a necessary condition, it is important to point out that investment in exporting is sub-optimal because the company will not be able to capture all the benefits of its investment. Once it has gone to the expense of obtaining the information, traveling to the trade fair, contacting potential buyers and exporting to them, it is much easier for another firm in the same industry to target - from the onset - that same market that the first pioneering firm has targeted after several costly steps. This is an area where there are externalities, in the sense that the first firm investing in opening up markets abroad will not be able to capture entirely the benefits of doing so; other firms may also benefit from this pioneer activity. In fact, several of the export managers interviewed mentioned that their firm had taken into account other companies' export success when evaluating the possibility of launching export efforts; they also mentioned that it had been easier for them to decide where to export after finding out about other firms' success in a given export market.

The interviews also showed that there are differences between industries in respect to the importance of marketing efforts abroad. While there are some sectors in which they are crucial, such as for the food industry, there are other industries in which the important point is to establish contact with brokers dealing with their products; once that is done satisfactorily, the export manager's primary concern no longer is to maintain a visible presence at trade fairs, but rather setting up the exports logistics. There was a striking contrast between the export managers interviewed in consumer-products manufacturing industries, who were actively looking for new markets and in close touch with changes occurring in those markets, and those in charge of exporting commodities, who in fact would more appropriately have been called "exports-logistics" managers.

The research allowed to conclude that beginning to export involves a significant learning process: export managers, particularly those exporting goods other than commodities, have to do an in-depth search of potential markets, learn about products being demanded, manage to get into distribution channels - a feat that can be very difficult sometimes- , participate in trade-fairs, persuade clients that they have supply capabilities and when they finally get an order, hope that the client will make new orders and not jump to a cheaper supplier at the smallest variation of the exchange rate.

The interviews also showed that firms benefit from receiving government export-support in the initial phases, when they could easily be discouraged by the time and money investment required by the export activity.

4.2.2 Learning while exporting

In addition to knowing more about how firms learn to export, the research tried to establish whether exporting provided the firm with learning opportunities in areas such as product characteristics, quality certification, marketing, service and so forth. If this were true, there would be an argument for encouraging exports and providing support for firms seeking to enter the export markets, because it would provide domestic firms with an opportunity for upgrading their production capability, that would in turn make them more competitive in the domestic market.

Seven out of the twelve firms interviewed in Mexico mentioned areas in which exporting had made them upgrade the quality of their product and allowed them to know what the standards were, as well as how to reach them.

Firm A, for example, had to change the jars and the labels used for its products; it also modified some parts of the production process, particularly those related to quality control requirements, in order to satisfy FDA norms in the products exported to the US. While these changes were initially introduced for products manufactured for the export markets, before long they were applied to all the firm's output, hence upgrading quality for the domestic market too. The other firms of the food processing industry had similar stories of modifying their production process to enable them to export, and then introducing the changes in all the production lines.

The reasons for extending the changes to cover all output and not only that going to export markets in general are two-fold: in the first place, it has become too costly to have different standards for export products than for those intended for the domestic market; in the second place, many firms realized that introducing these changes allowed them to recuperate part of their domestic market share, that had been lost to import-competition.

Selling to countries with demanding requirements, such as the United States and Japan appears to be particularly useful for learning when exporting. In the case of the food-processing firms, the FDA seems to have played an important role in allowing firms to upgrade the quality of their products. The fact that their norms are clearly defined also is very helpful. This is an important difference with the sanitary requirements of many Latin-American countries that are perceived to be in fact non-tariff barriers.

The client-supported learning also took place in firms that are in sectors other than food-processing and in countries others than the US. Firm F is a chemical company that started exporting in the early eighties, when Mexico set forth its first big manufactured-products export push by setting up industrial complexes with the purpose of selling abroad. The firm's export manager says that Japanese clients were difficult and demanding, but provided an important learning opportunity.

Similarly, Firm J, an after-market radiator-hoses manufacturer, has improved the quality of all its output after entering export markets. The firm's CEO went to a

considerable effort to try to export in Central America. Doing so, he realized that the quality of his products did not satisfy international standards. He hired a chemist to help him to progressively adapt the quality of his inputs to these norms. Today, all of his output conforms to international standards and that has allowed his products to gain market share in Mexico itself. He also believes that the demands of the export process pushed him learn to perfect his distribution system, a learning that also has had positive spillovers in his domestic distribution system.

Therefore, it can be concluded that exporting does provide significant learning opportunities for firms involved in the process, not only in areas directly related to the export process, but in other ones as well.

However, while direct exporting appears to provide important learning opportunities for manufacturing firms, the same can be said of being an indirect exporter, by being a supplier to firms that are at world-class level in their industry.

Firm K for example, has been manufacturing engine bearings and bushings for automobile industry assembly plants in Mexico. In this process, it has received several quality awards, such as Q-1 from Ford and other similar ones from Nissan. Being recognized as a first quality supplier to these world-class firms has in its turn made it easier for the firm to enter export markets. While the firm managers had to go to considerable efforts to establish their presence in markets abroad, in terms of learning about how business was carried out, for example in South American countries, they were not required

to upgrade their product's quality, since it was already recognized as being outstanding. From that perspective, the link between having a presence in international markets and learning for upgrading remains; but it doesn't have to be necessarily by exporting directly: being an indirect exporter to a industry that is recognized as being the best is sufficient.

Nevertheless, it must be pointed out that "learning while being an indirect exporter" will generally be restricted to those industries and countries that have top-quality products; it will probably take place more frequently in Mexico, and for some industries in Brazil, than in the other countries in Latin America who do not have manufactured exports that satisfy international standards.

The learning that takes place while exporting and the positive impact it has on firms' competitiveness is an additional factor that promotes a more permanent presence in the export markets: several CEOs mentioned that while they began to export because of the need to use excess capacity, the learning they have had while exporting is such that it has encouraged them to continue to export even when domestic demand has recovered. Although the fall of domestic demand had been an export-push factor, the learning, in addition of course to the export revenue, has encouraged them to conserve a presence abroad.

4.2.3 Conclusion: Exporting and learning by exposure to international standards

The interviews showed that there is an important learning process that takes place when firms are starting to export and once they have started to do. This learning takes place in areas directly related to exports, as well as in other areas whose link with the export activity is not as direct. While the economic importance of this learning process is difficult to assess with greater precision, there does seem to be evidence that it contributes significantly to upgrade firms' presence both in the export markets and in the domestic one.

Another interesting finding is that in most exporting firms in Mexico today, the standards for products manufactured for the domestic market are not very different from those aimed at export markets. While upgrading is often introduced at first in plants or production lines set up for export, they are effectively introduced later on in the rest of the production lines of the firm. This is due to the cost of managing different standards, as well as to the fact that the Mexican economy today is much more exposed to import competition than it was ten or fifteen years ago. At any rate, it is a substantial change for anybody having visited manufacturing plants in the early eighties. This also enhances the spillovers of the learning process that takes place while exporting.

The learning that takes place in the domestic market itself when the firm is a supplier of a world-competitive industry, such as the automobile industry in Mexico, allows one to take the point further: what pushes most firms to learn when exporting is the increased competition they face when they try to market abroad and the exposure to

international standards. Hence, learning is stimulated by competition and exposure to the standards of top-quality products. In most countries in Latin America - with the exception of some industries in Mexico and maybe Brazil - exporting provides greater competition opportunities than the domestic market. Hence, it also provides firms with greater learning and upgrading opportunities.

4.3 Export-promotion incentives: usefulness for exporting firms

In addition to the objective of knowing more about how firms begin to export and what they learn in the process, the research also intended to find out if firms had received government export-support when trying to export. One of the goals was to evaluate the impact of export-oriented institutional support. It was also interesting from a comparative perspective, to compare government export-support in Chile, Colombia and Mexico.

To begin with a policy instrument that is not properly an export-promotion one, but that is important for the export behavior of the spare-parts firms included in the research, that is the *Decreto Automotriz*, the interviews lead to the following conclusion: there is no doubt that thanks to the specific industrial policy aimed at the Automotive Industry, Mexico has managed to build-up an impressive sector of firms that supply the automobile assembly plants; this policy has also allowed these firms to progressively acquire a significant export-supply capability. This is one of the cases in which industrial policy has been very successful. The firm managers interviewed in these firms all agreed that they would never have been able to acquire the expertise in this area without the *Decreto Automotriz*; it

undoubtedly has played a major role in building up an export-supply capability in the industry.

In respect to export-promotion instruments as such, most firms had benefited from government export-support (table 4). Support provided by BANCOMEXT, and sometimes by SECOFI, in terms of providing information on foreign markets, publishing export directories with companies' references and providing assistance for participation in trade fairs appears to have been important in the initial stages for most firms. As discussed earlier, this support does correspond to those areas that are crucial for a firm that is starting to export. Hence, it appears that export-support has had a positive effect on Mexican firms seeking to establish initial contacts with export markets, as well as on those who need continued support.

Table 4: GOVERNMENT EXPORT-RELATED SUPPORT

Firm	Main products	Government support for export activity
A	Tuna fish Olive oil	BANCOMEXT (information, trade fairs) Incentive for indirect exporters
B	Sauces Mayonnaise	BANCOMEXT (information, trade fairs and financing) ALTEX Incentive for indirect exporters
C	Hot peppers	BANCOMEXT (information, trade fair; have used financing in the past) Incentive for indirect exporters
D	Orange juice	BANCOMEXT (trade fairs) SECOFI (strong support)
E	Polyester	Sells to clients of head office in the US PITEX
F	PVC resins	BANCOMEXT (have used financing in the past) PITEX, ALTEX
G	Chemical products for the building industry	BANCOMEXT (information)
H	Glycol	BANCOMEXT (information, trade fair and financing in the past); no need today since they have a good network of brokers.
I	Automobile spare-parts	BANCOMEXT (information, trade fairs)
J	Radiator hoses (after-market)	No support when exports began; Entrepreneur financed all himself BANCOMEXT provides some trade-fair financing support today.
K	Engine bearings Bushings	BANCOMEXT (some support, not much) ALTEX
L	Leaf springs Disk brakes	BANCOMEXT (financing in the past) Claims that BANCOMEXT does not have the industry-related knowledge to provide efficient support. PITEX

Source: Interviews by the author.

One of the interesting findings was that there are differences in terms of the relevance of export-related information and trade-fair support, that is the need firms have for it and how adequate it is in satisfying firms' requirements. The interviews showed that there are significant differences in this respect between firms and these differences are industry-related. Sustained government support appeared to be much more important for industries aimed at markets where there are frequent changes, for example in consumers' tastes, than for industries exporting commodities. In these last industries, the important step is to manage to insert the firm in a network of brokers; after that, the exporting process mainly consists of setting up the export logistic. Besides, firms exporting commodities tend to be very large firms who have less need for government support in matters related to exporting.

BANCOMEXT has also provided firms with export financing. This support was crucial in the early nineties when it was very difficult for firms to get credit; at that time, exporting had the added benefit that it provided firms with loans that they wouldn't have obtained otherwise (Macario, 1995). It is still important today, although firms - mainly the larger ones - find that they can sometimes get financing at better rates in financial institutions other than BANCOMEXT. The reason is that the Mexican crisis of December 1994 sharply increased the rates at which BANCOMEXT is able to get funds abroad. This rate increase was transferred to the loans the export bank makes in the country, since it does not subsidize interest rates.

However, BANCOMEXT's rates for export financing are probably relatively more competitive for smaller firms than they were for the large ones interviewed for the investigation. The firms interviewed are quite large and have access of a wide variety of credit options, both within the country and abroad. That is not the case for smaller firms.

In respect to export-promotion schemes for firms already exporting, such as the drawback, ALTEX and PITEX presented earlier, the research showed that these are widely used by Mexican firms⁶. Seven out of the twelve firms were exporting in the framework of some export-promotion scheme such as ALTEX or PITEX. Furthermore, the reason that some of the other firms were not in one of these schemes was either that they were barely beginning to export (such as G and I), or that they did not use enough imported inputs to make it worthwhile.

The export-promotion incentives used in Mexico appear to be very efficient and have evolved over the years to progressively adapt themselves to the firms' requirements. This finding is consistent with previous research on the topic (Macario 1995).

There is however, a novelty in export-promotion schemes; that is the incentive for indirect exporters that seeks to decrease the anti-export bias and to promote the links between the export sector and the rest of the economy (see section 3.2). This scheme, that was introduced in July 1995, is already being used by three of the firms interviewed. Although it is yet too early to evaluate the impact it will have and to know whether it will

⁶ There is no result on the *maquila* export-promotion scheme since no *maquila* firm was included in the investigation.

contribute to fostering tighter links between exporting and non-exporting firms, it is a very interesting policy instrument that should be followed up. It may become a useful example for other countries in the region.

4.4 Main export obstacles

Firm executives interviewed in this investigation found that there are no significant export obstacles for exporting to the United States and Canada⁷. While some entrepreneurs still complain about export-related red tape in Mexico, which obviously discriminates in favor of larger firms, there is a consensus about the fact that it has been considerably reduced and that it does not represent a significant obstacle. Transportation to the United States also appears to be working quite well. There are complaints about how ports operate and about railroad transportation, but there is a belief that things will improve soon. The only problem mentioned by some firms was the difficulty in getting hold of empty containers to ship export goods as a result of the plummeting of imports after December 1994.

Exporting to countries other than the NAFTA ones does present more obstacles. These export obstacles include paper-work requirements in the importing country, inadequate infrastructure, irregular shipment schedules and difficulty in consolidating shipments. These obstacles appear to be more acute in the case of Central America: in some cases, it is cheaper and faster to ship goods to Chile than to Central America.

⁷ As indicated earlier, this is the section whose results can be questioned from the point of view of selection bias. However, the results seem to be quite consistent with previous research in exporting firms in Mexico (Macario, 1995).

Red-tape obstacles in the countries where exports go to, particularly Latin-American ones, can turn into non-tariff trade barriers. Venezuela, for example, requires a government institution to provide quality certification for every shipment of after-market automobile parts, although the exporting firm is certified as a provider to large automobile firms in Mexico and the US. This occurs in spite of a free-trade agreement signed by that country with Mexico, and Colombia. Certificates of origin seem to provide similar administrative non-tariff trade barriers⁸.

Transporting export goods to countries out of North-America also seems to be quite difficult. Mexico's roads and, in general all of the country's transportation systems, are set-up for exporting to the US. This is reasonable since it is the country's main trade partner. However, it complicates matters for firms trying to export to other regions, as many have tried to do since the onset of the 1994 economic crisis.

Export managers also complained about the insufficient shipment frequency and the difficulties for consolidating loads. It is quite possible that these difficulties will decrease as the export of goods to other countries, such as the Latin American ones, continues growing. Yet, they do represent an export obstacle for firms trying to export today.

⁸ Note that issues can always be seen from a different perspective: while Mexican manufacturers mentioned on several occasions that obtaining certificates of origin was a cumbersome procedure, Chilean entrepreneurs claim that they are facing unfair competition from Mexican firms who would be exporting after-market parts that are in fact not manufactured in Mexico, but instead in Asia. The main reason for getting by with this practice would be, according to the Chilean manufacturers, the laxity of the procedures required by Mexican authorities for obtaining certificates of origin. Whatever is the real reason for the loss of market share by the Chilean firms in question, this event shows that simplifying administrative procedures is not always that simple, and that complex negotiations may be involved.

4.5 Influence of free-trade agreements on the firms' export opportunities

The company executives interviewed for the investigation said that the free-trade agreements Mexico has signed with other countries in the recent years have had a significant positive effect on firms' export opportunities. Of the twelve firms included in the research, ten had benefited from these free-trade agreements. The other two, that hadn't benefited from these trade negotiations, were a firm that already was exporting to the US before NAFTA was signed and another one whose main export market was Central America, and who still faced many barriers.

Of these trade negotiations, the one that has had the strongest impact has been of course NAFTA, with the United States and Canada. This agreement has not only expanded the companies' export opportunities, but also allowed them to have access to competitive inputs, something that has also contributed to enhance the firms' competitiveness.

However, the other free-trade agreements signed by Mexico in the early nineties also have had beneficial effects, particularly because tariff levels in Latin America tend to be, before trade-agreement negotiations, quite high, hence much higher than those of the US. Therefore, the marginal effect of the decrease of tariffs of these agreements can be quite significant. For example, the G3 agreement signed with Colombia and Venezuela has provided some new opportunities for many firms, as has been the case with the one signed with Costa Rica.

However, of the free-trade agreements signed with Latin American countries, the one with Chile has been the most beneficial one for Mexico. Trade between the two countries started increasing as soon as the agreement was signed in 1992. In fact, most Mexican products are exempted from tariffs since January 1996.

The reasons for the increase in trade, in addition to the tariff reduction, are as follows: a long-term structural reason is that the two economies are specialized in different products, so that Chile exports goods such fish-meal and fresh fruits to Mexico, while Mexico exports manufactured goods to Chile; other factors have been the increase in demand by Chilean consumers, thanks to the sustained growth of that country in the recent years, for precisely those goods in which Mexico has competitive advantages, such as cars and electronic appliances; furthermore, the effect has been magnified by the dramatic shift of relative exchange rates between the two countries after the devaluation of December 1994. Finally, the fact that Chilean import procedures are transparent and streamlined, particularly when compared to those of other Latin American countries, has also contributed to the trade increase.

In contrast to the agreement with Chile, other negotiations such as the one known as the G3, have not yielded the same substantial benefits for the firms included in the research: the reason is that, even after signing the trade agreement, Colombia and Venezuela have a series of non-tariff trade barriers that were not included in the negotiations, but that are an obstacle to increases in trade; among these are requirements

such as sanitary conditions, the need to carry out long and cumbersome formalities for each shipment and so forth.

In the longer run, in addition to increased trade, the entrepreneurs interviewed believe that the free-trade agreements have another positive effect, in the sense that it influences firm investment, and most particularly, localization decisions. For example, they are clearly aware of the fact that NAFTA has played an important role in many TNCs' decision to set-up or revamp their plants in Mexico. Similarly, the investments of Mexican firms in Chile, in sectors such as the food industry, where Bimbo bought Ideal, and the infrastructure sector, where Bufete Industrial bought Ovalle-Moore, were partly determined by the free-trade agreement between the two countries.

The fact that free-trade agreements have had an important impact on firms' export opportunities suggests that much care has to be taken when negotiating them, for instance in respect to taking into account trade diversion and of being aware of the strategic decisions about who will be the country's major trade partners; it appears that these points were effectively taken into account when negotiating the free-trade agreements Mexico has signed in the early nineties. However, another feature should also be taken into account in the course of the negotiations, that is that the agreement effectively will increase trade opportunities and that it will not be hindered in fact by non-tariff trade barriers, such as administrative formalities, as has been the case for example with Colombia and Venezuela.

5. Conclusions

The research questions that prompted the investigation in Chile, Colombia and Mexico, were the following: do economies of scale play an important role in firms' decision to export, in the sense that firms decide to do so because of the need to have a larger market, that will in turn allow them to have economies of scale and to use a technology that enables them to have a competitive product? do exporting companies have, over time, greater learning opportunities in matters such as product characteristics, updated technologies, organizational and marketing techniques, thus exhibiting dynamic economies of scale thanks to knowledge accumulation?

In the particular case of the investigation in Mexico, the questions were the following: What are the main factors that push a firm to start exporting? Is there a learning process resulting from exporting? Which export-promotion incentives do firms use and how do they evaluate those that they have access to? Which are the main export-obstacles? What is the influence of free-trade agreements on firms' export opportunities?

The research carried out in Mexican firms that were successful exporters showed that economies of scale did not play an important role when firms were deciding whether or not to export. In most industries in the country, the relatively large size of the domestic

market is such that firms can operate at an output level where they can have economies of scale without the need to export⁹.

While there are obvious exceptions in industries in which using the latest technology requires a level of output that is greater than the domestic market, such as is the case for example of the petrochemical industry, this is mainly true for industries manufacturing commodities. In most other industries, the Mexican domestic market appears to be large enough when the economy is not in a recession.

In fact, most of the Mexican firms interviewed in the investigation initially decided to export because of the need to compensate for decreases of demand in the domestic market. So rather than economies of scale, the main factor that explains the initial decision to export is the need companies have of making better use of their installed capacity when there is a downturn of domestic demand.

The second question that induced the research was whether learning took place in firms when they were exporting. In this respect, the results of the investigation were

⁹ This result contrasts with that of the research carried out in exporting firms in Chile, where it appeared that the relatively small size of the domestic market requires firms in a significant number of industries to export if they want to have access to economies of scale (Macario, 1996). This allows one to conclude that there is a difference between large and small economies in the sense that smaller economies don't provide firms with markets that are large enough to let them achieve economies of scale; large economies, on the contrary, do provide firms with larger markets that allow them to achieve economies of scale; this has implications on whether or not firms need to export to have access to economies of scale and produce at an efficient level of output. This in turn implies that it is more important to provide export-support in smaller economies than in larger ones, if one of the goals is to encourage firms to produce at a more efficient level and therefore be more competitive.

definitively positive. When firms decide to export, they get on a learning curve that allows them go acquire a significant amount of knowledge.

The learning that takes place within firms while exporting is related to two areas: there is the learning that is directly related with the exporting activity itself, and also another kind of learning, the one that takes place when the firm is exporting and that has a much wider range.

The learning that is directly related to the exporting activity is the one that is required for the firm to try to attempt entering export markets. To do this, the firm must acquire a capability in the following areas: it must learn where to obtain information on tariff and non-tariff barriers, on the potential demand in export markets, on prices of competing products, on relevant trade fairs, as well as on what product characteristics are desirable. Similarly, it must learn which are the available export-promotion incentives, particularly those that are most appropriate for the firm, as well as where to find out about export financing and insurance. Finally, it must find out about the export logistics that will allow them to put their products on the export market within the required deadlines.

The investigation showed that there is a substantial learning process related to these matters when firms begin to export. It also showed that government support in these areas appears to be very useful in allowing firms to successfully overcome these initial barriers.

However, in addition to showing the importance of the learning that takes place in export-related areas when firms are trying to get into markets abroad, the investigation also showed that there is a substantial amount of learning that takes place in other areas when firms are exporting. The interviews with export-managers, as well as the visits to the plants, showed that there is a significant learning process that takes place within firms as they adapt their production and distribution process in order to satisfy export-market requirements. For example, firms often need to change the characteristics of their product in order to have access to markets abroad. This in turn requires introducing innovations in the production process, such as different inputs, new stages in the production process, different quality-control procedures and changes in the way the product is presented to the consumer. Similarly, other transformations take place in the company's organization to enable it to be capable of managing the logistics of exporting on a regular basis.

This second type of learning that takes place while exporting, without being necessarily directly related to export activities, plays a key role in firms' export activity in the sense that it is what finally determines whether the firm has a long-run export-supply capability, beyond the fact that it was able to occasionally place its products on the export market. Furthermore, it has the important advantage of placing the company on a learning curve that is steeper than that of firms catering only to the domestic market.

The outcome is that the firm is able to not only have export-capability, but in the process of being exposed to the top standards in its industry and to greater competition, it also acquires the capability of learning more quickly and being more competitive in the

domestic market. Moreover, the positive spillover effects of this learning is enhanced by the fact that most firms no longer have different production lines, according to whether products go to the domestic or export market, but are increasingly manufacturing their export products on the same lines as the ones for the domestic market.

This learning capability requirement, that is at the same time an obstacle for firms trying to export and an advantage for those who are successful at doing so, is crucial at a time when the changes of demand have accelerated. Enabling and encouraging more firms to get on such a learning curve could have important positive effects on upgrading firms' competitiveness. The exposure to competition and world-level standards in a given industry, in addition to allowing firms to have access to the tools that enable them to acquire the knowledge required to compete in such markets, is probably one of the most efficient and significant kind of support public policy could provide, both in small and large economies.

Hence, although there are differences between small and large economies in respect to how important economies of scale are for firms deciding whether or not to export, there are fewer size-related differences in respect to learning when exporting. While it is true that larger economies can often provide greater learning opportunities than smaller ones, as was shown by indirect exporters in Mexico, exporting appears to provide important learning opportunities for firms as it exposes them to an intense competition and to international standards. This is true both in large economies and small ones.

The learning opportunities provided by exporting are such, that while most firms interviewed in Mexico stated that the main reason for their decision to export was to use temporarily underutilized excess capacity, once they were exporting, the greater capabilities acquired thanks to export learning was, obviously in addition to export revenue, one of the most important reasons that encouraged them to try to maintain a presence in export markets.

Therefore, it is possible to conclude that learning while exporting enables firms to get on a steeper learning curve and allows them in the long run to have dynamic economies of scale thanks to knowledge accumulation.

The research also wanted to establish whether firms were using export-promotion incentives, such as programs that allow them to have access to competitive inputs, as well as institutional support for export information and financing. The results showed that Mexican firms do make extensive use of the export-promotion incentives available to them, such as the PITEX and ALTEX programs, as well as of the support provided by BANCOMEXT in terms of export information and financing. While there is place for improvement, such as a further reduction in export formalities within some programs¹⁰, the export-promotion incentives available to Mexican firms appear to have significant positive results. They also seem to play a crucial role in the initial stages of exporting, when firms need information about how to access foreign markets and financing to go to trade fairs.

¹⁰ The interviews with government representatives both at SECOFI, the Trade Ministry, and at BANCOMEXT, the Foreign Trade Bank, showed that many efforts are being carried out to increase the efficiency of export-promotion incentives, for example by simplifying administrative formalities. Furthermore, the establishment of COMPEX, a department within SECOFI that seeks to promote a collaboration between the private and public sector in export-

In effect, while one of the explanations of Mexico's export success can be found in previous industrialization policies and in the proximity to the United States, it must be pointed out that another of Mexico's competitive advantages is policy-related: in spite of complaints about red-tape required for exporting, export-incentive programs such as PITEX and ALTEX are very efficient in enabling firms to export and play an important part in explaining the country's export success.

This policy-related advantage, that results from the government's will to increase exports, is also possible due to the administrative capability that the Mexican public-sector has thanks to its highly-qualified professionals and the flexibility it has to adapt mechanisms to firms' needs. Mexican entrepreneurs often complain that the government is rigid and takes too long to change, but compared to other public-sectors in Latin-American countries and their administrative capabilities, Mexico has clear advantage. The new incentive for indirect exporters is an example of this.

The firm executives interviewed during the investigation found that there were no significant export-obstacles within Mexico. While some infrastructure areas still appear to be deficient, such as the railroads and port facilities, there was a general feeling that quite a bit of progress has been made in recent years and that more will be made in the near future.

related matters and to solve specific problems, shows that the government has the will to make further progress at this respect.

Export obstacles abroad appeared to be more significant. The export formalities required to import in Central American countries, Colombia and Venezuela, as well as the difficulties for consolidating loads and obtaining transportation for those destinations are an example of the obstacles mentioned.

Some of these obstacles, such as cargo consolidation, will be less of a constraint as trade between Mexico and these regions grows. Others will require negotiations between governments, as is the case for example of the import formalities required in Venezuela. However, taken altogether, export obstacles did not appear to be an important constraint for the firms included in the research¹¹.

Free-trade agreements were viewed by firm executives as playing a decisive positive role for Mexican firms. This of course is true of NAFTA, but also of the free-trade agreements with other countries, particularly in the case of Chile. The opportunities provided by these agreements, that opened up new markets for Mexican firms, has been particularly well received by the private sector companies after the severe economic crisis began in December 1994.

What are the policy implications of the results of this investigation? The lack of significant export obstacles and the efficiency of the export-promotion incentives suggest that the road being followed presently is the right one. Similarly, the decision to expand Mexican firms' markets by signing free-trade agreements seems to have yielded positive

¹¹Nevertheless, it must be pointed out that this result may be influenced by a selection bias: the firms were chosen precisely because they were successful exporters.

results, although care should be taken to avoid requirements that are not negotiated in the agreements, such as import formalities, from being export obstacles

In respect to the conclusion about the importance of the learning that takes place when firms export, it suggests that the current export-promotion incentives and the export support provided by BANCOMEXT should be maintained. The support provided by BANCOMEXT allows many firms to overcome the initial obstacles they meet when trying to export and, later on, enables firms to continue exporting, thanks to the effective financial support.

However, the importance of learning when exporting, in areas not directly related to exporting itself, and the positive effect it appears to have on the firms' competitiveness, on the domestic market as well as abroad, suggests that more should be done to provide firms with the opportunity of such learning. Programs to enhance learning can include organizing visits from abroad, both from consultants and from buyers¹², as well as trips abroad by groups of entrepreneurs, technicians and employees to visit plants in their same industry. Another possibility is to have experts make presentations dealing with those specific areas in which domestic firms appear to be experimenting bottlenecks. More sophisticated support could include productivity-enhancing projects in specific sectors over a given period of time.

¹² BANCOMEXT has a program to develop export-supply capability that seeks to organize manufacturers and to put them in contact with buyers from large department stores from abroad. This is the kind of program that enables learning to take place and that could serve as example for other countries in the region.

Whatever specific policy option is chosen, care must be taken to insure that it promotes productivity increases and not protectionism; that it allows firms who have the potential to be competitive to become so, without allowing firms who do not have this potential, to in fact be artificially competitive over a long period of time, only thanks to government support; to make it as neutral and short-lived as possible; and, finally, to insure a close collaboration, both in design and in implementation, between the public and the private sector.

Having policies that encourage learning by firms, so that they can progressively upgrade, seeking to reach as much as is possible the international standards in their specific industry, is probably one of the most important roles of public policy, if the goal is to enhance the competitiveness of the firms in the region. Providing incentives for firms to export, whether directly or indirectly, is a powerful instrument to encourage this learning.

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