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FIRM COMPETITIVENESS IN CHILE, MEXICO AND VENEZUELA:  
NEW STRATEGIES FOR THE NINETIES

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## ABSTRACT

The Latin American countries have undergone important transformations during the past years. There have been radical changes in macroeconomic and trade policies and in the general economic environment, such as in matters relating to state intervention and the regulatory framework. These changes have been accompanied by an increase of the globalization of world markets. As a result, there are important changes at the macroeconomic level and in the way the economies of the region relate to the world economy. There have also been significant transformations in firm behavior. Yet, while there have been many studies on the macroeconomic changes that have taken place in Latin-America, the studies on the microeconomic ones are relatively scarce.

This paper presents the results of an investigation carried out with the goal of learning about manufacturing firm strategies and the changes in these strategies as a result of trade liberalization, globalization and transformations in the economic environment companies operate in. The main questions this research intended to answer were the following: are Latin-American firms in traditional consumer-goods manufacturing sectors changing their strategies or are they for the most part functioning like they did twenty years ago? how determinant is the influence of macroeconomic events on microeconomic ones and what is the margin that companies have for individual behavior? if traditional consumer-goods manufacturing firms' behavior is changing, which are the most important areas where these changes are taking place? what are the strategies of the most modernizing firms in the region, in these industries?.

The research concluded that the changes that are taking place in the countries of the region have brought about substantial changes in firm behavior. These changes are strongly influenced by the transformations of the macroeconomic and trade policies, as well as of the general economic environment. However, in spite of the importance of the influence of the economic environment on firms, the research also leads to the conclusion that there is a margin for firm strategy.

Innovative firms have adopted a flexible behavior and are upgrading their production and marketing capabilities. They have introduced significant changes in vertical integration, input procurement, technological innovations, incentive pay systems and management techniques, training, subcontracting, as well as in distribution and retailing.

The transformation that has taken place in the core of the manufacturing business was one of the most interesting results of the research. At least for the most innovative consumer-goods manufacturing firms, this core has shifted from being centered mainly on production matters to a point that combines manufacturing of goods with distributing these goods, and often other domestic and imported goods as well. This is the point of the production/distribution segment where manufacturing firms have greater chances of simultaneously increasing their profits and defending their market share.

Finally, the investigation also showed that the uncertainty surrounding economic policy leads to a substantial decrease in investment by firms. Uncertainty explains why more firms don't change, as well as why they often don't change faster. Uncertainty has a twofold negative effect on entrepreneurs' decisions to transform their firms. There is uncertainty about what they should do, as well as in respect to the sustainability of the economic policy.

This suggests that there is a role for government support for programs that seek to promote firm upgrading. To be effective, these programs should be designed and implemented in close coordination with the private sector. At the same time, it must be stressed that the most important role for policy is that of creating a stable economic environment in which firms can plan long-term investments.

## INTRODUCTION<sup>1</sup>

The Latin American countries have undergone important transformations during the past years. There have been radical changes in macroeconomic and trade policies and in the general economic environment, such as in matters relating to state intervention and the regulatory framework. These changes have been accompanied by an increase of the globalization of world markets. As a result, there are important changes at the macroeconomic level and in the way the economies of the region relate to the world economy. There have also been significant transformations in firm behavior.

Yet, while there have been many studies on the macroeconomic changes that have taken place in Latin-America, the studies on the microeconomic ones are relatively scarce. One of the first of these studies dealt with the adaptation by Chilean firms to the changes during the seventies and early eighties (Corbo and Sánchez 1984). In the recent years, as there appeared to be a consensus in most countries on what macroeconomic policies should be to achieve long-run stability, there has been a growing interest in doing research on the changes in firm behavior and the way manufacturing companies adapt to the new economic environment<sup>2</sup>.

This paper presents the results of an investigation carried out with the goal of learning about manufacturing firm strategies and the changes in these strategies as a result of trade liberalization, globalization and transformations in the economic environment companies operate in. The main questions this research intended to answer were the following: are Latin-American firms in traditional consumer-goods manufacturing sectors changing their strategies or are they for the most part functioning like they

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<sup>1</sup> I would like to thank Ricardo Bielschowsky, Jorge Katz and Joseph Ramos for many valuable comments that led to this paper.

<sup>2</sup> Baumann 1994, Bielschowsky 1994, Castillo, Dini and Maggi 1994, Katz 1995.

did twenty years ago? how determinant is the influence of macroeconomic events on microeconomic ones and what is the margin that companies have for individual behavior? if traditional consumer-goods manufacturing firms' behavior is changing, which are the most important areas where these changes are taking place? what are the strategies of the most modernizing firms in the region, in these industries?.

This investigation was carried out in medium and large-sized traditional consumer-goods manufacturing firms in Chile, Mexico and Venezuela. From the onset, the choice was made to focus mainly on traditional consumer-goods manufacturing firms, since it was assumed that they were among the most representative of medium and large-sized manufacturing firms that could be found simultaneously in the three countries. The sectors included covered a wide range of industries, but strongly emphasized garment firms, as a way of comparing firm behavior across countries in comparable sectors. Garment firms were chosen because they belong to a sector that was established several decades ago, not only in the countries included in the research, but in most other Latin-American countries as well. Furthermore, it was also interesting to study this sector because it has been strongly exposed to import-competition. The impact of globalization on the garment sector, at a world-wide level, also contributed to making it an interesting sector to study.

Over forty garment firms were included, but comparable data was only available for thirty-eight of them<sup>3</sup>. Hence, the conclusions presented in this article are inferred mainly from garment firms<sup>4</sup>. Interviews with firm executives through open-ended questionnaires were complemented with systematic plant-visits, as well as with meetings with trade-association representatives, industry experts and

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<sup>3</sup>see annex.

<sup>4</sup> However, they appear to be valid for other traditional consumer-goods manufacturing firms, such as footwear and leather products ones (Macario, Carla, 1996).

government officials. Firms were chosen so as to have a diversity of companies, but they do not make up a representative sample. Most of the interviews took place in 1993, but some were also done in 1994 and 1995. In some cases, initial interviews were complemented by new visits, so as to follow-up and obtain a better perspective of the changes of firm strategies over time. The investigation was carried out within the framework of the ECLAC/UNDP Project on Innovation and Competitiveness<sup>5</sup>.

This paper is structured in the following way: the second section describes the main characteristics of the behavior of a traditional consumer-goods manufacturing firm under import substitution; this section is partly based on the same interviews, as different firm executives were interviewed on the history of the firm. The purpose of the second section is to provide a point of comparison for the third one, the section that presents the main findings of the research concerning the behavior of a modernizing traditional consumer-goods manufacturing firm today. The last section recounts the chief conclusions.

Finally, a warning: while there are many different definitions and indicators used to measure competitiveness, in this paper the term competitive is used as a synonym of modernizer: when a firm is described as being competitive, this should be understood as the equivalent of an innovative firm, that is striving for survival and change, trying to find the most appropriate ways to adapt to a new environment, and as a result is relatively gaining market share.

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<sup>5</sup>ECLAC/UNDP RLA/88/039 Project on Innovation and Competitiveness. The interviews were carried out by ECLAC officials Mr. Wilson Peres, Ms. Martine Guerguil and the author.

## II. MANUFACTURING FIRM BEHAVIOR UNDER IMPORT-SUBSTITUTION

What were the main strategies of a firm that manufactured consumer goods under import-substitution?

This section tries to answer this question by describing the main features of the evolution of a representative firm.

The typical firm interviewed throughout this survey is a family company that was initially set up in small workshops, in sectors such as garment, shoe or a in small metal-casting plant. This small work-shop slowly expanded, buying new equipment, moving to new installations and became a manufacturing firm.

The transition from a small work-shop to a manufacturing plant was often quite difficult, risky and it faced competition from many other similar work-shops. Financial assistance for small firms was generally unavailable, so that one of the critical factors in the transition was being able to accumulate enough financial resources to expand. Hence, very few work-shops were able to be become manufacturing firms unless the entrepreneurs managed to be successful in obtaining sufficient funds, often thanks to family support or to sheer luck.

Initial production was generally organized following a reproduction of the way it was set up in the work-shop and slowly evolved towards one broadly based on the work organization in plants in developed countries.

Plant lay-out was often designed by the entrepreneur himself. The firm manufactured a wide variety of products, with unsophisticated design and quality standards. This was appropriate for a growing mass of

consumers who were just beginning to have access to manufactured goods, so that they weren't very demanding.

Management was generally the responsibility of family members and did not follow professional criteria. Production workers were paid fixed wages or, in some cases, on a piece-work basis, without strict quality requirements. Firms didn't provide training.

Most production operations were carried out internally by the firm. Subcontracting was very rare and only used for very specific operations that it was difficult to carry out in the plant itself or to satisfy unexpected surges in demand.

In general, inputs were manufactured domestically, given import-substitution policies, as well as the costs and delays involved in importing them from abroad. Larger firms tended to be vertically-integrated, manufacturing inputs for their own use, as well as to sell to other domestic firms. There was a powerful incentive for firms to become as integrated as possible since companies selling intermediate goods were often rivals in the finished product market.

Most goods produced were sold on the domestic market. It was generally difficult for consumer-goods manufacturers to export on a regular basis due to a combination of factors, such as the anti-export bias resulting from high tariffs or from non-tariff barriers; the relatively low levels of the exchange rate in most countries throughout nearly all of the import-substitution period; finally, transportation costs within the region were very high.

At the same time, tariff and non-tariff barriers in the other Latin-American countries, that would have been among the most interesting markets, also contributed in making exporting less attractive. Protectionism and transport costs made it difficult to export to the industrialized nations.

For the most part, firms tended to export occasionally to neighboring countries, particularly those with a lower degree of industrial development. Exports were countercyclical, increasing when there was a drop in domestic demand or a depreciation of the exchange rate. Products that were exported were the same ones that the firms sold on the domestic market. Incentives were set-up in such a way that most consumer-goods firms specialized in manufacturing for the domestic market, protected from external competitive pressures.

By the time the firm had been able to overcome the initial financial constraints and once it had been able to reach a certain production threshold, companies were generally able to have relatively easy access to the government's financial support, that provided credit at cheap and often subsidized rates. This allowed it to continue expanding. Once companies reached this stage, the pressures to increase productivity were not as strong as if the financing were private.

Simultaneously, when the firm managed to have a manufacturing plant of an adequate scale for the dimensions of the domestic market, competitive pressures from similar domestic companies were considerably reduced: the small dimensions of the domestic market often allowed it to be controlled by a limited number of firms that engaged in collaborative behavior, dividing it up in market shares that remained quite stable as time went by. Consumers were just beginning to acquire industrial goods, so they were not very demanding.

So, once the firm had achieved a minimum production scale level and a given share of the domestic market, the typical consumer-goods manufacturer would reach a plateau: it was perfectly possible for the firm to continue operating this way, with a family-style management. There were no strong pressures to push the firm to continue evolving. Its environment became quite stable and certain.

The lack of strong competitive pressures, once the firm had passed a certain threshold, had repercussions on the way production was organized: productivity increases, quality improvements and cost reductions were not compulsory. Hence, while production was broadly organized following the guidelines being used in industrialized countries, firms were not required to continue introducing the changes that would have allowed improvements in productivity and quality.

The import-substitution development model allowed the countries in the region to create a manufacturing sector. Without it, most countries would presently have a substantially smaller number of industrial firms. This model allowed the learning and evolution that allows to turn a work-shop into a manufacturing firm. It also contributed to adapting several generations of rural migrants into industrial production-workers. Furthermore, an important proportion of the manufactured goods the region exports nowadays comes from firms that exist thanks to import-substitution industrialization policies. However, by the 1960's, this model had become a constraint on the development of Latin-American countries (CEPAL 1994).

Between the mid seventies and the late eighties, most of the countries in the region proceeded to substantially transform their macroeconomic and trade policies, as well as most of the regulatory environment. These changes had a considerable impact on firms in the region, by changing the framework they were used to operating in and by submitting them to strong import-competition pressures. The desire

to know more about what is the behavior of manufacturing firms today was the driving force behind the research being presented in this paper.

### III. MANUFACTURING FIRM BEHAVIOR IN THE NINETIES

#### 1. Influence of macroeconomic and trade policies

What is the influence of macroeconomic and trade policies on firm behavior? The differences in behavior between firms in Chile, Mexico and Venezuela, as well as the evolution within a given country as time goes by are useful for assessing the importance of this influence.

Most Chilean firms maintained their production levels or increased them in the year that preceded the interviews. This is due to the general macroeconomic stability and to sustained growth. It was also due to the fact that the firms that had managed to survive the shock of the industrial restructuring at the end of the seventies and beginning of the eighties were relatively strong, even under the pressure of increased import-competition.

Mexican firms had a two-tier behavior: most of them had a sharp drop of up to thirty per cent of their output in response to the slow rate of growth of the Mexican economy up to 1993, and to increased import penetration. Meanwhile, several firms that invested heavily in upgrading and/or that exported had increased output.

In contrast, most Venezuelan firms had a sharp drop in output due to the considerable decrease in demand that resulted from the political uncertainty in the latter part of 1992 and a very strong competition from imports.

Macroeconomic changes appear to have become even more relevant for manufacturing firms after trade liberalization. For example, an appreciation of the exchange rate results in a substantial increase of import-competition, in a very short period of time.

Another evidence of the impact of macroeconomic trends on firm behavior is the evolution of exports by Chilean firms: while in 1990, several of the companies surveyed in this country belonged to a category that could be called of "moderate exports", those that regularly exported between five and fifteen percent of their output, by 1992 this category in Chile was empty. Firms had either opted out completely of the export market or had substantially increased their export efforts and increased the percentage of output they exported. The growth of domestic demand combined with an appreciation of the exchange rate polarized the firms' export behavior, pushing most of them to focus exclusively on the domestic market while those who wished to continue exporting had to become increasingly specialized in the export market. This is illustrated by the fact that while, for firms interviewed in given sectors, the number of exporting Chilean firms decreased as the exchange rate appreciated, average exports for those that exported regularly went from 15.6% of their output in 1990 to 44% in 1992.

The fact that the evolution of the firms' output was heavily influenced by macroeconomic events in the three countries shows the importance of the macroeconomic environment for firm behavior.

Similarly, there is a clear link between exporting behavior and the degree of openness of the economy: none of the Venezuelan firms were exporting at the time of the interviews (March 1993), while there were several exporting firms in Chile and even more so in Mexico. These two countries had liberalized trade before Venezuela and it was clear that there would be no policy reversal. Instead, Venezuela liberalized trade late in the eighties and, at the time of the interviews, there were serious doubts that this policy would be sustained. The events that have taken place in Venezuela since then proved that this was a correct assessment of the situation.

The strong influence of macroeconomic and trade policies on firm behavior shows that the implications of these policies must be carefully evaluated. This becomes particularly important at time when several countries in the region are undergoing strong currency appreciation. Similarly, the implications of uncertainty in respect to policy and the consequences it has on firm behavior must also be taken into account. An example of this is what took place in Venezuela from 1993 on. Another example is what is happening in Mexico since December 1994, although further research must be carried out to evaluate the implications of these recent events on manufacturing firm behavior.

## **2. Margin for microeconomic behavior**

However, in spite of the importance of the influence of the economic environment on firms, the research also leads to the conclusion that there is a margin for firm strategy: not all Chilean firms were modernizers, not all Venezuelan firms were going under.

Some firms can manage to be competitive in spite of an adverse environment and of being in a subsector where there is very strong import-competition. One example of this are two Venezuelan firms that were

willing to continue investing, training their personnel and to search for new survival strategies, while most firms in that country were seeing their output drop and their market share dwindle due to the recession and to import-competition. These modernizing firms had gambled that they would survive and were following an active upgrading strategy in order to be competitive.

Another example can be seen in several Mexican industries characterized by particularly strong import-penetration, such as the garment and shoe industries. While there were many firms in these industries that closed down, there were several surviving firms that were doing remarkably well thanks to efforts to adapt themselves to the new environment.

More research should be carried out on individual firm strategies and the capability that some firms have to learn and adapt themselves to a new environment. There is much to be learnt from these firms and knowing more about their strategy would be useful for policy design. Efforts should also seek to provide economic theory with a more solid theoretical framework for analyzing the scope for microeconomic behavior (Nelson 1991).

### **3. Changes in firms behavior**

The general behavior of a manufacturing firm under import-substitution, such as it was described above, is still an accurate description of the behavior of some firms today. However, the research allowed to conclude that the behavior of many firms in the region is undergoing substantial changes.

The interviews with firm executives and private-sector representatives carried out during the investigation showed that the entrepreneurial environment is very dynamic and that changes are taking place. It is

possible that many more transformations are occurring than those that can be perceived at a more aggregate level, partly because some are still incipient and also because many of the changes are in conflicting directions.

Manufacturing firms that want to survive have been forced to change their strategies, adapting them to their new environment. This has required substantial investments, that can be very costly given the limited availability of long-term financing, as well as the high interest rates that have prevailed in the region, particularly under stabilization policies.

According to the information gathered during this investigation, what are the changes in consumer-goods manufacturing firms in Chile, Mexico and Venezuela, today? this section addresses this issue, first by describing what is the behavior of most modernizing firms and then by concentrating on some specific points where there have been major changes.

Modernizing firms are specializing their production, decreasing the number of production lines, while they have increased the variety of goods manufactured within the production lines they decided to preserve. They are decreasing the size of lots, as well as the time that it takes to produce them. They are also decreasing inventories, particularly those of final goods.

To achieve this, companies are changing their lay-out, following the advice of external consultants, that they hire themselves or that are contacted through foreign firms, such as clients or companies they have a license from. The changes in the lay-out are no longer conceived as something that will remain in place for a long time, but rather with flexibility and the willingness to change it regularly as changes in demand require to do so.

The changes in lay-out are carried out with the purpose of easing the production flow and improving quality control. The possibility of having an automatized control of the production flow also enables the firm to have precise information on individual worker productivity and to quickly detect bottle-necks.

The most modernizing plants are those that have been able to systematically apply production standards and efficiency goals, following Fordist practices. This has enabled them to substantially increase productivity. Production routines have also been modified to introduce more quality check-points and, in the most advanced plants, to increase individual worker responsibility for quality standards. In respect to whether flexible specialization and greater worker autonomy are replacing Fordist practices, the research confirms the findings of a previous case study in the Brazilian shoe industry that "suggests that more important than the boundaries are the connections between Fordism and flexible specialization" (Schmitz 1995).

Quality has also improved thanks to substantial upgrades in design capability as professional personnel is hired and automated equipment is put in place.

The desire to improve quality and to attain efficiency goals have led firms to modify pay systems. These changes, described below, are an indication of firms' disposition to find pay systems that are functional to their needs to upgrade productivity and quality standards.

The changes in the organization of production and in pay systems are accompanied by changes in management practices, as firms go from a family-based management style to one following professional guidelines. These changes are in response to an increasingly competitive environment, but often coincide with a generational transition within firm ownership.

The following points describe the areas in which the most important changes are taking place.

a) Vertical integration

An area where the changes in the macroeconomic and trade policies have resulted in changes at the microeconomic level is the degree of vertical integration within firms. High degrees of vertical integration were advantageous under import-substitution policies because firms selling intermediate goods had considerable market power, particularly when they would sell to firms that were rivals in the finished product market. However, one could presume that this would no longer be the case given the increase of the options for input procurement outside the country resulting from trade liberalization.

In effect, during the interviews in vertically-integrated plants, there was evidence that often nowadays a high degree of vertical integration has gone from being an asset to being a liability for firms as it restricts their flexibility for input procurement. On several occasions, managers in charge of producing final goods complained about having to use inputs made within the same firm, an obligation that restricted their possibilities of purchasing a variety of inputs at low costs, in a reasonable period of time. In most cases, it was not only cheaper for them to buy inputs outside the firm, but the delays involved were also reduced. Every one of the vertically-integrated firms said that they were using increasingly lower proportions of inputs produced within the same firm.

The shock has been particularly severe for plants manufacturing non-competitive intermediate goods, since not only has there been a decrease in the inputs they manufacture for plants within the same firm, but the demand for their goods from other firms within the country has plummeted. Quite often, unless

they provide a very competitive input, vertically integrated plants are an obstacle to the flexibility that firms need to operate with nowadays, in order to be able to respond quickly to changes in demand.

Some companies have begun to address this issue by clearly setting up different firms within a conglomerate and decreasing the obligations of firms to buy inputs from related plants. In several cases, the move towards vertical disintegration has gone even further as firms that were formerly integrated have separated into different firms, including separate ownership. This allows firms to specialize in separate segments of the production sequence, gaining economies of scale.

b) **Utilization of imported outputs**

A counterpart to the decrease in vertical integration has been the significant change in input procurement, as firms in the three countries use increasing amounts of imported inputs. This was something that could have been expected after trade liberalization processes combined with currency appreciation. There was evidence of this in the three countries, as all firms had increased the utilization of imported inputs in the past three years.

When comparing the countries, Chilean firms used higher percentages of imported inputs than their Mexican and Venezuelan counterparts. This is probably due to the fact that trade liberalization started earlier in Chile than in the other two countries, as well as to the relatively small dimensions of the economy, that puts a constraint on obtaining a wide variety of inputs domestically.

For firms that were not vertically-integrated, trade liberalization was an opportunity that allowed them to buy a greater variety of inputs, often of better quality and at lower costs. The use of imported inputs has played an important role in firms' strategy to become more competitive.

c) **Technology**

A rough estimation of the technological level of the firms was made by comparing equipment during the interviews with firm executives, as well as during the visits to the plants.

The first finding is that when the technological level of firms in the same sector across countries is compared, the differences are surprisingly much smaller than what could have been expected given the differences in the sizes of the economies. While it is true that some of the firms with the most advanced technologies were Mexican, the average gap doesn't seem to be very wide between similar industries in the three countries.

In contrast, there is a wide dispersion of technological levels between firms in the same industry within a same country. This was the case for Chile and Mexico, as well as for Venezuela. This dispersion is an evidence of the heterogeneity of Latin-American industry. At least in traditional consumer-goods manufacturing sectors, different technological levels seem to be able to coexist side-by-side. This dispersion appeared to be greater in Mexico than in the other two countries.

It was also surprising to find that, for large and medium companies, there is not a systematic correlation at the firm level between the size of the firm and its technological level. Several of the largest firms interviewed had in fact quite low technological levels, while some medium firms had better equipment,

as well as more modern management practices. This may be due to the fact that some large firms, that are older and accustomed to operating in an import-substitution environment, are addressing other issues such as increasing firm flexibility and subcontracting, before introducing technological innovations.

Similarly, there also appears to be a lack of systematic correlation between investment in hard technology and firm competitiveness, in the sense that several firms had relatively sophisticated equipment, without being very competitive. For example, some firms, particularly in Venezuela, had relatively advanced equipment that they often didn't use.

However, while a relatively high technological level does not imply that the firm is competitive, the reverse does seem to be true: more than the present degree of technological level, what seemed to characterize modernizing firms was the search for ways of upgrading their technological level, by looking for the precise equipment that would allow them to solve specific problems.

In other words, more than the expense in capital goods for the whole plant, what characterized modernizing firms were the efforts to, in a way, fine tune the incorporation of technology in the plant, and to do so systematically, on a permanent basis.

d) **Incentive pay systems and management techniques**

In most firms in the region production workers are still paid based on fixed wages, that are function of the time spent at the work-place and are often linked to the evolution of the minimum wage. Some firms also pay by piece-work.

However, the goal of improving productivity and quality has led many firms to explore new pay systems. A growing number of firms interviewed in the course of the research are trying out new ways to pay production workers that would result in productivity increases. For example, most of the highly exporting firms were using new schemes to pay their production workers, schemes that are innovative, at least in respect to current practices in the region. Such schemes include incentives to reward attendance and achieving quality, as well as productivity goals, that are set on the basis of international industry standards.

Mexico was the country where efforts in this direction were most frequent. Half of the firms interviewed in that country had innovative pay schemes in which attendance and quality incentives could amount to up to half the workers' monthly wage. They were clearly doing so in order to find the pay system that would best enable them to improve their productivity, as well as the quality of their products. There are even a few firms in Mexico that are paying an extra bonus function of the worker's capability and willingness to work in different positions within the plant. Similarly, follow-up visits to Venezuelan firms at the beginning of 1995 showed that the most modernizing firms in this country were also training workers to be able to carry out multipurpose tasks.

Simultaneously, the companies that were introducing new ways to pay their workers were also among the most dynamic ones, as well as the most innovative firms in other areas, such as in the introduction of new management techniques. In fact, this last characteristic is almost a pre-requisite for incentive pay, since it is not possible to set up more sophisticated pay systems than the ones most frequently used in Latin-America without having procedures that allow careful monitoring of the productivity and quality

of the work of individual workers<sup>6</sup>. The managers of these modernizing firms say that one of their most important competitive advantages is precisely their human resources practices. While it is not clear yet which are the most efficient systems, companies are clearly aware of the fact that improving productivity and quality requires innovations in incentive pay systems.

e) **Training**

Most firms in Chile and Venezuela provided very little training for their workers. This was particularly surprising in the case of the first country given that Chilean firms can get a tax credit to cover the cost of some training activities and that entrepreneurs believed that deficiencies in human capital were among the most important competitive disadvantages they face (Macario, 1995).

Meanwhile, Mexican firms appeared to be much more willing to spend resources training their personnel, even if on average, the amount spent is quite small. Some of the companies interviewed even had small schools in the plant where not only training, but also general education, programs were provided.

Mexican companies' greater disposition to train their workers is probably due partly to a combination of the generally low average educational level of the work force and the various training programs being offered by the governments (Federal as well as Regional).

However, the main explanation for Mexican firms' greater training efforts is their willingness to achieve a substantial increase of their productivity levels to counter successfully the competitive pressures they

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<sup>6</sup> In fact, one of the innovations most frequently observed was the introduction of computerized systems that allow the control of the production flow, as well as of inventories.

are being submitted to. Those firms that are investing greater resources and energies in training, are precisely the same ones that are trying to overhaul their entire organization.

f) Subcontracting

When import-substitution policies were predominant, there were firms in the region that subcontracted part of their production, but this tended to be rather an exception than a frequent occurrence. Most large firms were not under great pressures to decrease costs and they had a relatively stable market share. If new operations had to be carried out on a regular basis, they ended up being done internally in the firm. Subcontracting was generally carried out for very specialized tasks or for unexpected surges in demand.

Nowadays, circumstances appear to have changed radically. One of the most relevant changes that were noted during the interviews was the remarkable increase of subcontracting by firms in the region. This increase results from changes that are occurring both on a global level, as well as within the region.

In the first place, there has been a considerable surge of international subcontracting as firms establish dynamic networks on a worldwide basis, thanks to the decrease in transportation costs and improvements in telecommunications (Dicken 1992).

Meanwhile, in Latin-America, trade liberalization processes combined with an appreciation of the exchange rate have exposed firms in the region to very strong competitive pressures. Many companies have been forced to downsize and decrease costs. Subcontracting plays a key role in firms' survival strategies, by allowing them to decrease fixed costs and to respond more quickly to changes in demand.

Most of the firms interviewed had increased the manufacturing operations they subcontracted during the recent years. Moreover, most of them expected subcontracting to increase substantially during the years to come. Some of them subcontracted the manufacturing of products they had previously produced internally in the firm, but for which production lines had been closed down. In other cases, firms had decided to centralize product design and subcontract most of the manufacturing process.

While an increase of subcontracting could have been reasonably foreseen at the beginning of the investigation, the importance that this practice has attained in Chile, Mexico and Venezuela is quite surprising. Not only has the practice of subcontracting within the country itself become prevalent, but there were many firms that were subcontracting abroad. In some cases, the principal firm subcontracted a firm in a border country that had a cheaper and better trained work-force, as was the case for the Venezuelan firms that subcontracted operations in Colombia. In other cases, the companies had decided to gain a competitive edge by going to the region that produces the goods that are taking market-share from them: that is, they subcontracted directly in Asia.

This practice, that is being carried out in a large variety of sectors, is particularly widespread in garment and footwear manufacturing. Rather than letting themselves be displaced from Latin-American markets by Asian products, firms have decided to subcontract at least some production-lines directly in Asia.

While some firms have gone all the way, practically shutting down domestic production and concentrating instead in distribution, most firms have reacted in a way that allows them much more flexibility in the long-run: they subcontract production in those lines in which they are less competitive, while trying to become very competitive in the production-lines they still retain. This way, if there are changes such as a depreciation of the exchange-rate, they will still have manufacturing capabilities and can then increase

domestic production. Meanwhile, this strategy allows them to defend their market share in the domestic market, particularly given exchange-rate appreciation and the remarkable surge of Asian exports, at low costs and ever-increasing quality.

This practice is much more widespread than what is publicly perceived. Entrepreneurs are reluctant to mention it, more so in Mexico and Venezuela than in Chile, because they fear negative reactions and because many trade-associations are demanding government protection against unfair competition from Asian products. They are also reluctant to reveal what is one of the key elements of their competitive strategy. The fact is that the most competitive firms in the region are doing it and this strategy is very sensible: it allows the company to survive and concentrate on manufacturing the products they are competitive in.

g) **Distribution and retailing**

For most manufacturing industries, distribution and retailing did not play a key role when import-substitution policies were prevalent, with the goal of creating a domestic industrial sector. Productive activities were favored over distribution and it was much easier to obtain subsidized credit to set up an industrial plant than for outlets. Furthermore, industrial manufacturers had substantial market power over retailers who did not have much choice in purchasing their merchandises. Hence, production was emphasized over retailing; even if manufacturers often distributed their own goods directly to consumers, the core of the manufacturing business was in the plant.

Presently, circumstances have dramatically changed for most of the traditional consumer-goods manufacturing industries. By opening up their economies, Latin-American countries have allowed their

consumers to choose among a wide variety of goods. Import-penetration is very strong. Retailers no longer are restricted to goods produced domestically. This has produced a shift in what makes up the substance of manufacturers' activities.

This shift became obvious in the course of the investigation in Chile, Mexico and Venezuela. Most of the firm executives of modernizing firms said that their main concern was becoming competitive in distribution and getting name-recognition for their brand. They say it is the single most important factor to ensure the survival of their manufacturing activities, as the market is flooded with goods from other countries.

Because of this goal, simultaneous to the decrease in the degree of backward vertical integration, there is a substantial increase in investment to increase the degree of forward integration: for many manufacturing companies, insuring a presence of their brand in the domestic market and a strong retail structure allows them to insure that they will survive as a firm.

While this situation was noted in Chile, Mexico and Venezuela, it was most evident in the first of the three countries. Almost all of the firm executives interviewed in this country said that ensuring a good retailing system was of the uppermost importance to them; sometimes the company itself owned the retail stores; sometimes it didn't; but in any case, this is a crucial aspect of firm strategy.

The fact that this was also observed in Mexico and Venezuela, but was not as prevalent as in Chile, may be due to the fact that the Chilean domestic market is relatively small, so that grabbing market share is more important. It may also be simply a result of the fact that Chile liberalized foreign trade before Mexico and Venezuela, and that the first country is a forerunner.

Whichever the reason, the fact is that while the trend was much more significant in Chile, the importance of establishing solid distribution networks was also a key element of the strategies of the most competitive firms interviewed in Mexico and Venezuela. One Venezuelan firm executive who runs a very interesting, innovative firm stated the following: "If I had any investment resources available, I would open new stores". Similarly, the CEO of the Mexican firm that was among the best organized manufacturing plants visited believes that his greatest competitive disadvantage is his lack of forward integration.

Another indication of the importance of this trend is the fact that many companies that were investing were actually concentrating most of the resources on improving the distribution of the firm's products, more than in manufacturing itself. In fact, technological innovations, such as on-line sales and inventories, were often introduced with the same purpose. Similarly, firms frequently tend to focus training efforts on marketing employees rather than on production workers.

A strong distribution network also allows manufacturers to distribute imported goods, thus defending the market share of their own brand as this provides them with the opportunity to have some control over the prices at which competing imports are sold, as well as of making profits off of their sales. This strategy appears to be very sound, from the manufacturer's point of view, as it allows firms to benefit from import surge and to continue manufacturing in the production lines in which they are still competitive, while simultaneously retaining market share.

h) **Exporting firms**

What were the differences between modernizing firms and those that regularly export a significant proportion of their output (over fifteen or twenty percent)?

In respect to sales and employment, the exporting firms included in the investigation were quite similar to those that exported only occasionally, exported regularly a small percentage of their output or didn't export at all. While exporting firms tended to have slightly higher employment and sales levels than non-exporting firms, the differences were not significant between the two groups, for a given industry.

There does appear to be a minimum sales threshold beneath which it is difficult to find firms that export regularly. This is probably due to the fixed costs involved in exporting, such as purchasing equipment that enables the firm to achieve better quality and those of getting clients abroad, as well as the paperwork required to export. However, above a certain level, there no longer seems to be a systematic correlation between firm size and export activity: while in a given sector most exports are effectively carried out by large firms, there are medium-sized firms that export and many large firms that don't export at all. The growing number of Latin-American medium firms that are exporting is an interesting phenomena that deserves further studies.

However, the one area where the difference between exporting and non-exporting firms was significant was the greater concern that the former ones have for quality improvement. Exporting firms are increasingly exporting goods manufactured according to export-market specifications, instead of simply exporting goods that are identical to the products they sell on the domestic market. The importance of quality for exporting firms has implications on lay-out specification, as well as on training and incentive

pay systems. Exporting firms trained more frequently than non-exporters and tended to be among those that have introduced more innovations in pay systems.

Exporting and selling in the domestic market should not necessarily be viewed as a trade-off: these are often actually choices that can be interrelated, particularly in small economies such as the Chilean one. It may be that a firm needs to export in order to attain the scale that allows it to be competitive in the domestic market. Exporting also provides learning opportunities for firms, as they learn how to satisfy requirements in more demanding markets. This learning has positive spill-overs in the domestic market. Simultaneously, a solid standing in the domestic market allows the firm to bear the cost of going into new export activities.

The investigation lead to the conclusion that in traditional consumer-goods industries, there are not significant differences between large and medium-sized modernizing firms that focus mainly on the domestic market and exporting firms, with the only exception of quality and the learning opportunities provided by exporting. It may be said that in general exporters behave as modernizers, but that not all modernizers are exporting.

#### **4. Flexibility**

The previous sections have described how the most innovative consumer-goods manufacturing firms in Chile, Mexico and Venezuela are undergoing important changes in the way production is organized, in vertical integration and input procurement, as well as in management style and in pay systems, among other features. Companies are adapting themselves and learning how to be competitive in the new economic environment prevailing in the Latin-American countries.

However, more than a massive over-haul of the firm that is carried out once and for all, the most relevant feature that characterizes these innovating companies is the flexibility they have to continuously improve their performance, for example thanks to the ability to pin-point the areas where bottlenecks are most severe. Transformations are now carried out on a permanent basis sometimes by small changes at a time. These transformations do end up leading in the long run to a massive over-haul of production practices, but of a different nature than what can be achieved in a once and for all effort.

The importance of such flexibility should not be underestimated: firms that have the highest success rate (and highest survival rate under very adverse shocks such as companies in Venezuela) are those that are able to react quite rapidly and adapt to new circumstances. This flexibility plays a role both in production and in distribution.

For example, one of the areas where there is evidence that flexibility is important is in enabling firms to have more adaptable production systems that allow them to react to changes in consumer demand and to produce a wide variety of goods within a reduced number of production lines. Changes in production are increasingly demand-led. The time it takes for firms to introduce changes in response to changes in demand has decreased.

Another area in which this flexibility is critical is the ability the firm has to react to changes in the exchange rate, retaining a minimum production capability that enables them to cover their market share, while having the willingness to rapidly become themselves distributors of some lines of imported goods when there is a substantial appreciation of the exchange rate.

The strategy of becoming the main importers of goods competing with the firm's own products and distributing them through the firm's own distribution channels was one of the strategies that was hesitantly adopted by a few firms in Chile in the late seventies and early eighties; in retrospect, this strategy was to become very successful.

Entrepreneurs have learnt from this past experience, and the most successful and resilient firms in the three countries are those that have the flexibility to rapidly become importers and distributors of competing imported goods. They have realized that it is the best way to be able to manage prices and to set prices of imported versus domestically produced goods according to their production capabilities. While continuing the production of their most competitive goods, this strategy allows the firm to use its own distribution channels. Behind this strategy is the idea that if the firm doesn't do this, another firm will seize the opportunity and displace it.

Still, while becoming distributors of imported goods is a strategy that is increasingly being put in practice by enterprising Mexican and Venezuelan manufacturers, and continually practiced by the Chilean ones, it is not always readily recognized by them, since they are reluctant to admit that they are becoming strong importers of competing goods.

Summary table: Manufacturing firm strategies in the nineties

	Modernizing firms	Non-modernizing firms
Areas in which differences are highly significant	<ul style="list-style-type: none"> <li>- Flexibility for the continuous introduction of changes in production and distribution in response to changes in demand and in the macroeconomic environment (such as the exchange rate);</li> <li>- Hire external consultants for upgrading;</li> <li>- Productivity is systematically measured;</li> <li>- Innovative incentive-pay systems;</li> <li>- Professional management;</li> <li>- Production changes are demand-led;</li> <li>- Strong increases of subcontracting based on long-term relationships;</li> <li>- Strong interaction between production and distribution;</li> <li>- Whenever possible, closer ties with retailers or significant increases in retailing carried out by the firm itself;</li> </ul>	<ul style="list-style-type: none"> <li>- Rigid passive behavior;</li> <li>- Exclusive reliance on in-house expertise;</li> <li>- Detailed productivity data is unavailable;</li> <li>- Traditional pay systems;</li> <li>- Family-based management;</li> <li>- The limited changes are decided in response to production concerns;</li> <li>- Subcontracting is non-existent or quite limited;</li> <li>- Firm focuses exclusively on production;</li> <li>- Loose ties with retailers;</li> </ul>
Areas in which differences are significant	<ul style="list-style-type: none"> <li>- Substantial decrease of vertical integration: related plants become independent firms;</li> <li>- Significant increase in the utilization of imported inputs</li> <li>- Efforts to improve design capability;</li> <li>- Decreases in inventories;</li> <li>- Regular changes in lay-out;</li> <li>- Reduction of the number of production lines;</li> <li>- Increased product diversity within production lines;</li> <li>- Quality is important;</li> <li>- Individual worker responsibility for quality;</li> <li>- Technological innovations are introduced at key points, after thorough assessment of existing bottlenecks;</li> <li>- Technological innovations are introduced regularly on a continuous basis;</li> <li>- The firm provides training for its workers;</li> </ul>	<ul style="list-style-type: none"> <li>- Decrease of vertical integration;</li> <li>- Increase in utilization of imported inputs;</li> <li>- Limited design capability;</li> <li>- Maintain large inventories;</li> <li>- Rigid lay-out;</li> <li>- Maintain the number of production lines;</li> <li>- Limited product diversity within production lines;</li> <li>- Quality is not a priority;</li> <li>- Quality control at a few points of assembly line;</li> <li>- If introduced, technological innovations are bought in a package, without responding to a careful assessment of the plant's strengths and weaknesses;</li> <li>- Technological innovations are introduced in a once-and-for-all decision;</li> <li>- The firm does not train its workers;</li> </ul>

### **5. The shift in the core of the manufacturing business**

In addition to the importance of flexibility for firm strategy, another relevant feature in the changes that are occurring in firm behavior is the shift in what constitutes the core of firm strategy.

Under import-substitution, manufacturing firms had a relatively advantageous position in respect to distributors and retailing firms: they could get credit at preferential rates, special permits to import inputs, lobby to stop imports of competing goods once they had set up local production facilities, among many other advantages. Even if some manufacturing firms were also retailers, the core of the manufacturing business was in production.

Today, the situation for Latin-American manufacturing firms is radically different. They face a vigorous competition in the domestic market, both from imports and from other domestic firms that are trying to defend their market share. Consumers have also grown more demanding as they have had access to a wider variety of goods, not only due to trade liberalization, but also to the appreciation of the exchange rate.

A competitive manufacturing firm today not only has to upgrade the organization of production, but it must have an active and aggressive strategy in retailing. Trade liberalization, particularly in a context of currency appreciation, has significantly increased the importance of distribution and retailing. The most innovative manufacturing firms studied in the course of the survey are those that had a network of retailing outlets, with the goal of preserving market share in the domestic market and benefiting from selling imported goods. Retailing also allows the manufacturing firm to increase their profit margins since it is in essence a non-tradeable activity, in which profit margins have soared in the recent years. Doing

this also allows the firm to flexibly manage a product mix of goods manufactured in their own plants with imported goods, depending on the evolution of the exchange rate.

The follow-up interviews carried out in Venezuelan firms during 1995 showed that the most competitive firms were putting in practice a strategy to decrease the amount of goods they sold to intermediaries and increase the proportion of good they retail themselves. Firm executives say that the key survival strategy for the firm is to improve the distribution network and retail most of the products themselves.

The transformations in the way the Latin-American economies integrate into world markets have had significant consequences for manufacturing firm behavior. Manufacturing firms need to upgrade their supply capabilities by responding to changes in demand. This upgrading is crucial for firm survival. However, in order to be able to do that, manufacturing firms first have to be able to defend their presence in the market. What has changed with trade liberalization, globalization and the changes in the firms' economic environment is precisely the core of the manufacturing business: to survive and become competitive, manufacturing firms must improve their marketing capabilities and transform their supply capabilities in order to do so.

## **6. Uncertainty**

Macroeconomic stability and certainty that economic policy would be sustained were among the most important positive characteristics of the economic environment mentioned by Chilean and Mexican entrepreneurs during the interviews. These were carried out in 1993, before the Mexican crisis that begun with the devaluation of December 1994.

In contrast, one of the main obstacles to investing in upgrading and in export-oriented projects by Venezuelan firms interviewed during 1993 was the uncertainty surrounding economic policies. This was confirmed by the follow-up interviews in Venezuelan firms during 1995, that showed that firms that had pursued active upgrading policies were either in an extremely vulnerable position or bankrupt, while those that had adopted a passive attitude had benefitted from their decision not to upgrade.

An illustration of this can be seen in the specific cases of the two largest garment manufacturers interviewed in Venezuela, that will subsequently be called firm A and firm B. When the first interviews took place (March 1993), these two firms had decided to adopt what were clearly two different strategies: firm A had decided that it would continue operating largely the same way it had operated under import-substitution and that it would not invest in upgrading production capability, nor in improving the quality of the goods it manufactured. This conservative strategy was also adopted for exports, in which the firm decided it would not invest any resources.

Instead, firm B had decided to invest a substantial amount of resources into a complete upgrading of the firm's production capability, both in terms of quality of the goods produced and in the volume of production. To achieve this, they hired international consultants who redesigned the plant and trained the employees. Simultaneously, technological innovations were introduced as new equipment was purchased and production procedures were transformed. The company's goal was to cope with the strong import competition in the domestic market and then continue to expand its markets by exporting.

At the time of those initial interviews, it seemed that firm A would slowly die due to increased import competition and to its inability (or the lack of interest of its owners) to react to the change from an import-substitution model to that of an open economy. Meanwhile, the strategy of firm B would allow

it to become competitive in the new prevailing environment, to survive to import-competition in the domestic market and to export regularly.

When the follow-up interviews were carried out two years later, in 1995, circumstances were strikingly different. The new Venezuelan government had decided to revert several of the policy reforms carried out at the end of the eighties and beginning of the nineties. While trade liberalization policy was not formally backtracked, it was so in practice by an exchange control that made it quite difficult for firms to access hard currency for imports, including inputs. Import competition had thus been slashed. Furthermore, the pegging of the exchange rate simultaneous to a high rate of inflation made it extremely difficult for manufacturing firms to export.

Given these circumstances, firm A had been relatively successful thanks to the decision to not invest in upgrading the plant to defend the firm's position in the domestic market, nor in exporting. This strategy allowed the firm to have a solid financial position without having incurred in debts. This strategy was proven successful by the fact that the changes in economic policy, such as the exchange control, resulted in a substantial decrease of import-competition, while there was a simultaneous increase of interest rates. Hence, firms that had adopted a passive attitude and had decided not to change their strategy and not to upgrade benefited from the decrease of import competition in the domestic market and from a sound financial position.

Meanwhile, firms that had invested in upgrading production capability were hurt by the increase in interest rates. For example, firm B was in severe financial difficulties having gotten into debt to finance the upgrading. Although it was still able to export, exports had been curtailed by the obstacles for importing good-quality competitive inputs, such as the exchange control, as well as by the appreciation

of the exchange rate. Complex and discretionary administrative procedures also made importing and exporting very difficult. So, firms that had invested in upgrading and tried to become competitive were in the end losers when compared to those that adopted a passive attitude.

It is clear that in the long-run this situation will not last. Venezuela cannot support an artificial exchange rate forever. Neither will it always be able to sustain policies that tend to limit import-competition. Venezuelan firms will eventually be in a competitive environment once again. Under those circumstances, firm A will clearly be forced to change or it will lose a substantial amount of market share, while firm B will reap benefits from its investments.

In the meantime, Firm B will undoubtedly gain market share even if the economy does not open up, thanks to its upgrading efforts. When interviewed in 1995, this company was also gaining market share because so many domestic firms were failing. The question is whether firms that invested in upgrading will still be operating in the long run or if they will have gone under in the meantime, due to the burden of the financial cost of upgrading and to the reversal of the economic policy.

Furthermore, firms that had believed the government's claims that trade liberalization would be sustained and that they should invest in export-oriented projects, were those that were the most damaged by the policy reversal. The appreciation of the exchange rate that resulted from the exchange control and the pegging of the currency in an inflationary process made their exports less competitive on foreign markets. The obstacles to import inputs that resulted from the exchange control and red-tape in customs were an additional difficulty for those firms that had increased the use of imported inputs as one of their upgrading strategies.

The interviews carried out throughout the investigation showed that the uncertainty surrounding economic policy leads to a substantial decrease in investment by firms. There is no incentive for firms to invest in long-term projects, when policy reversals and macroeconomic instability render the rate of return unpredictable.

The comparison between firm behavior in the three countries included in the research shows that uncertainty explains why more firms don't change, as well as why they often don't change faster. Uncertainty has a twofold negative effect on entrepreneurs' decisions to transform their firms. There is uncertainty about what they should do, as well as in respect to the sustainability of the economic policy.

In the first place, entrepreneurs are often aware that they must change the way their firms operate, but are not certain of what changes should be carried out and how things should be done. This implies there is a role for providing them with technical support on best-practice through public/private sector networks.

However, the uncertainty that probably has the most negative impact on firms' upgrading decisions is whether trade liberalization will be sustained or not. If this policy is not completely credible, many firms will be reluctant to change their behavior. This lag can result in many more firms going under than what should reasonably be expected. The strong deindustrialization process that took place in Chile in the late seventies is an example of this.

The conclusion that can be drawn from this is that it is of the uppermost importance that significant policy changes be credible for firms to change their behavior and try to become more competitive. But it is also possible to conclude that, if there is uncertainty, it makes sense that more firms don't change or that they

don't change faster. Upgrading requires the firm's disposition to change its behavior, to invest heavily, as well as certainty that the new policies are here to stay.

#### IV. CONCLUSIONS

Manufacturing firms in Latin-America are undergoing substantial transformations in order to be competitive in the new conditions that are characterized by trade liberalization, globalization and in general by transformations in the economic environment. There are still many firms that are adopting a passive or reactive attitude, and whose behavior is quite similar to the one described in section two. However, the overwhelming majority of entrepreneurs in the region are aware that they must change the way they operate. These changes are already taking place: most firms have a completely different behavior than the one they had ten or fifteen years ago.

These changes in firm behavior are strongly influenced by the transformations of the macroeconomic and trade policies, as well as of the general economic environment. Evidence of that can be seen in the differences in firm behavior across countries.

However, irrespective of the economic environment, there are firms in the three countries that are changing their behavior, through particularly innovative and aggressive strategies. While Venezuelan firms on average tended to be more passive and reluctant to change than the Chilean and Mexican ones, the most competitive Venezuelan firms had strategies that were surprisingly similar to those of the most aggressive firms in Chile and Mexico. Much is to be learnt from the behavior of these firms, particularly for policy recommendations.

In general, there were no differences between exporting firms and modernizing firms that sell mostly on the domestic market. The exceptions seem to be that exporting firms have a much greater concern for quality upgrading and have greater learning opportunities than non-exporting ones. However, the investigation evidenced that modernizing the firm is a condition for sustained export activity.

The transformation that has taken place in the core of the manufacturing business was one of the most interesting results of the research. At least for the most innovative consumer-goods manufacturing firms, this core has shifted from being centered mainly on production matters to a point that combines manufacturing of goods with distributing these goods, and often other domestic and imported goods as well. This is the point of the production/distribution segment where manufacturing firms have greater chances of simultaneously increasing their profits and defending their market share. Whatever strategy allows firms to be successful in this pivotal point plays a key role in the determining the vantage points of Latin-American manufacturing firms in the years to come.

The changes that are taking place in the countries of the region have had significant consequences for Latin-american manufacturing companies and have brought about substantial changes in firm behavior. Knowing more about these changes is a prerequisite to understand future trends, as well as to suggest policy recommendations aimed at improving the competitiveness of the firms in the region.

Innovative firms have adopted a flexible behavior and are upgrading their production and marketing capabilities. They have introduced significant changes in vertical integration, input procurement, technological innovations, incentive pay systems and management techniques, training, subcontracting, as well as in distribution and retailing.

However, even modernizing entrepreneurs frequently felt that they needed to do more efforts to upgrade their firms. The cost of doing so and, more importantly, the difficulties in getting appropriate information of what is the best practice in a given industry, were a constraint to the introduction of greater transformations in a shorter period of time.

Of course, these constraints were even greater for non-modernizing firms who knew they had to change the way they operate, but were uncertain about what needed to be done and how. While some firms in the region will remain passive and will continue operating as they did under import-substitution as long as they can, there are many firms who would like to upgrade, but lack the appropriate information to do so.

This suggests that there is a role for government support for programs providing firms with information on best practices, particularly in matters relating to changes in lay-out, quality improvement, incentive pay systems, training and so forth. A key area that yields many positive externalities is providing firms with information on export markets.

An effective way of helping compensate imperfect information is the setting-up of industry-specific technological centers to promote the upgrading of firms' supply capability. These centers should cover the areas in which innovations are crucial, such as the ones described above. Governments should sponsor these centers, but they should be created jointly with the private sector, particularly with entrepreneurial associations. These centers could also foster associations by which firms could get organized to obtain better conditions in input procurement, technical assistance and distribution, than they would otherwise get individually. A good example of these centers is the one created in Colombia, by the *Asociación Colombiana de Industrias Plásticas* (ACOPLÁSTICOS), or the *Centro de Productividad Industrial* (CEPRI), recently created in Chile by the private sector, with government support.

Finally, there are several important criteria that must be taken into account when considering policies:

a) The most important role for policy is that of creating a stable economic environment in which firms can plan long-term investments. As it was mentioned earlier, uncertainty promotes non-productive behavior; b) Policies should be designed for effective implementation and be submitted to regular evaluations. If not, they are ineffective and they create distrust in the private sector with respect to the government; c) Policies should explicitly seek to promote firm upgrading and not be a disguise for a return to protectionism; d) To be effective, policies should be designed and implemented in close coordination with the private sector.

The new economic framework that is prevalent in most Latin-American countries today, as well as the increase of world-wide globalization, provide a challenge and an opportunity for most manufacturing firms in the region. Many firms have already completely transformed their behavior. Others will not change, irrespective of the policy environment they are in. But there is a third group, made up of the vast majority of manufacturing firms, that is willing to change and is already introducing some changes. This is the group that economic policy should target if the goal is for the region to have the capacity to grow at reasonably high growth rates.

## ANNEX: GARMENT FIRMS: SALES AND EMPLOYMENT

COUNTRY	FIRM	SALES (000 dollars)	EMPLOYMENT
CHILE	A <sub>c</sub>	6000	300
CHILE	B <sub>c</sub>	17000	280
CHILE	C <sub>c</sub>	36000	1100
CHILE	D <sub>c</sub>	7000	415
CHILE	E <sub>c</sub>	12000	108
CHILE	F <sub>c</sub>	12000	550
CHILE	G <sub>c</sub>	7000	180
CHILE	H <sub>c</sub>	18000	360
CHILE	I <sub>c</sub>	11000	280
CHILE	J <sub>c</sub>	6000	180
CHILE	K <sub>c</sub>	14000	600
CHILE	L <sub>c</sub>	24000	600
MEXICO	A <sub>m</sub>	23000	1200
MEXICO	B <sub>m</sub>	30000	750
MEXICO	C <sub>m</sub>	14000	150
MEXICO	D <sub>m</sub>	13000	270
MEXICO	E <sub>m</sub>	4000	65
MEXICO	F <sub>m</sub>	2000	90
MEXICO	G <sub>m</sub>	8000	250
MEXICO	H <sub>m</sub>	2500	160
MEXICO	I <sub>m</sub>	1000	1000
MEXICO	J <sub>m</sub>	13300	1100
MEXICO	K <sub>m</sub>	15000	750
MEXICO	L <sub>m</sub>	13000	400
MEXICO	M <sub>m</sub>	40000	1200
MEXICO	N <sub>m</sub>	7000	105
MEXICO	O <sub>m</sub>	50000	924
VENEZUELA	A <sub>v</sub>	6860	85
VENEZUELA	B <sub>v</sub>	1600	108
VENEZUELA	C <sub>v</sub>	14600	500
VENEZUELA	D <sub>v</sub>	1760	97
VENEZUELA	E <sub>v</sub>	3700	240
VENEZUELA	F <sub>v</sub>	10000	70
VENEZUELA	G <sub>v</sub>	1700	80
VENEZUELA	H <sub>v</sub>	6800	400
VENEZUELA	I <sub>v</sub>	6800	818
VENEZUELA	J <sub>v</sub>	7900	100
VENEZUELA	K <sub>v</sub>	2200	600

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