

In-bond industry in the global restructuring of production

1. In-bond industry is part of large-scale capitalist strategy to reduce production costs, improve competitiveness, and raise profits by means of a mechanism to obtain higher surplus value. In other words, a company may either absorb cost differentials in the form of excess profits or apply them to the market price of its products to improve its competitive position.
2. The in-bond industry is the result of a contradictory process that aims to both integrate and juxtapose strongly contrasting labor markets, offsetting the limited mobility of the labor force (as an instrument of depreciation and a means to make business more flexible) by the ready mobility of capital.
3. Variations in international industry, particularly differences in production costs, have sustained the in-bond industry whose success depends on taking advantage of the lowest production costs available anywhere in the world. At the same time, however, there has been a tendency toward integration, since regional desires for basic self-sufficiency to guarantee economic security tend to reduce such advantages.
4. Two parallel strategies have been developed as a result of international competition:
 - a) The first involves the geographical integration of dissimilar regions to guarantee more efficient intraregional production for in-bond industries and the areas surrounding them.
 - b) The second involves a confrontation between inter-regional markets, obviously dominated by the more powerful developed nations.

Developments in Production

All Mexican in-bond industry production indices over the past decade show it to be extremely vigorous. However, although the figures are promising, the in-bond industry is

The first part of this study offers four general theses on the status of the in-bond industry in global capitalist valorization. The second part presents a detailed analysis of some of the in-bond industry's principal indicators to provide a basis for observations on prospects for the industry in the near future.

The in-bond industry faces the challenge of globalization

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directly linked to trends in the U.S. economy and as such, although it serves to counteract reductions in the rate of capital income-yield, its potential is necessarily limited by profit expectations.

Since the industry is subject to these external factors, being a link in off-shore production processes, variations in its rates of production are not related to overall trends in the Mexican economy. Although overall growth rates for the Mexican economy have fallen periodically in the recent past, rates in the in-bond industry have tended to rise.¹

There has been a noteworthy increase in production over the past decade. The number of firms rose 373%, (see graph 1) and economic activity on the Mexican border may be said to revolve around the in-bond industry. Although not formally part of it, numerous enterprises providing supplies, transport, housing or entertainment for its workers depend on the in-bond industry for their livelihood and are part of what might be called "the border scene".

These are not industrial or productive activities, many belong to the service sector and are of short duration.

Their viability often depends on relations with in-bond industry management and they are often established as cottage industries to offset their vulnerability. The instability of the in-bond industry is reflected on a larger scale in the regional economic structure (see table 1).

¹ GDP in the manufacturing industry dropped -2.3% in the first five years of the decade.

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Table 1
Growth Rates

	1979-1990		1984-1990	
	Global	Annual	Global	Annual
Establishments	372.96	37.30	299.70	59.94
Employment	420.60	42.06	234.57	46.91
Workers	394.71	39.47	228.51	45.70
Man hours	399.74	39.97	236.52	47.30
Input	572.38	57.24	241.18	42.24
Value added	459.87	45.99	253.45	50.69
Compensation	399.82	39.98	248.10	49.62

Source: Compiled by the author. Based on INEGI in-bond industry export statistics.

Much has been said about the in-bond industry's possible multiplier effect on Mexico's economy. However, this does not seem likely in the economy as a whole. In terms of employment (see graph 2), it may affect collateral areas of the service sector, besides what it absorbs itself, but a basic and so-far insurmountable flaw has prevented its integration with the rest of Mexican industry.

It is well-known that Mexican industry provides the in-bond industry with barely 2% of its input and that though in absolute terms this represents sales that grow with the expansion of the sector, economic integration into the rest of Mexican industry is practically non-existent. The in-bond industry operates as a structurally impenetrable enclave within the Mexican economy, which, though it may look like a door from surrounding instability into development, is of very limited access indeed.

Production Capacity

One way to measure industrial activity and therefore, indirectly, productive capacity, is to measure the volume of

components or inputs processed by an industry. The volume of components (98% of which are imported) used by the in-bond industry in Mexico, increased 572% in ten years, from an average of \$2.97 million dollars per factory in 1979 to \$4.96 million in 1989.

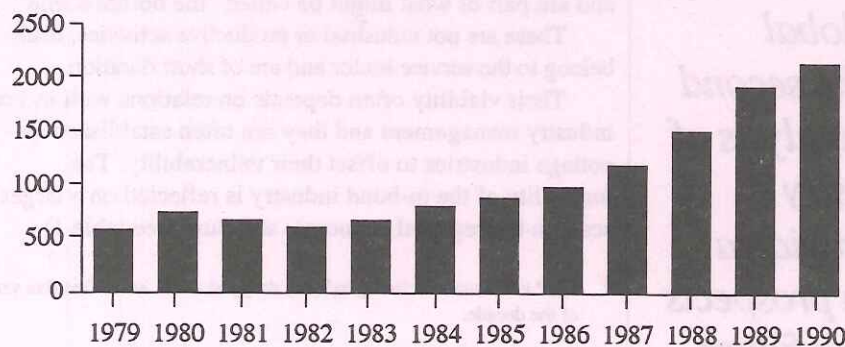
This increase in the volume of components processed and therefore in overall production is the result of an increase in the number of plants, coincident with an increase in productive capacity. The latter has been achieved by a combination of improved technology, organizational changes in production methods and greater pressure on the worker. If the volume of components processed per plant rose 167%, the number of components processed increased 151% per worker and 576% per hour. In other words, a 395% increase in the number of plants led to a 576% increase in the volume of manufacturing.

The average worker, therefore, produced 50% more in 1989 than he did ten years earlier. Since the working day has not been significantly lengthened (only 3.1% between 1980 and 1990), greater concentration and pressure during every working hour accounts for the increase in the volume of products assembled.

Value added

Under capitalism, every productive process involves added value. However, such value is extremely difficult to measure, in view of the fact that it is usually information that is held confidential by the manufacturer and is distorted and subject to complexities inherent in an industry that operates in more than one country. The following is therefore based on available figures and the

Graph 1
NUMBER OF ESTABLISHMENTS



understanding that it is only a modest approach to the measurement of value added² in the in-bond industry.

Wages are a key measurement of value added since they are an expression of the value of labor. Internationalization causes the value of labor to vary even when the task and the manufactured items are the same³.

Nevertheless, value-added statistics for the in-bond industry show an increase of 460% over the decade 1979-1989. The principal category of wages, salaries and benefits fell from 58% in 1979 to 50% in 1989. Wages fell farthest, from 33% to 22% between 1979 and 1988, despite the inclusion of production technicians, who earn higher salaries than assembly line workers, and whose numbers rose from 8.6% to 12% of the employed labor force in the same period.

The profitability of in-bond industry operations is based on increases in all production indicators, including employment, and decreases in salaries in real terms. The only index that fell in the ten years mentioned was salaries, which dropped 33% (see table 2). Although a drop in wages increases overall production profit margins, it causes a corresponding distortion in value-added figures for in-bond industry operations. One way of calculating the effect of this distortion might be to compare the cost of salaries for the same work in the United States. If only manufacturing salaries were considered, without taking benefits into account, the annual wage difference would be \$20,000 per worker in 1987⁴, a total annual difference of \$5,172.49 million dollars.

Structure by branch of the in-bond industry

This industry's structure by branches is evident in the scope or intensity of their operations, measurable in the first instance by the number of people employed, and in the second, by the number of components assembled or the value of production (see graph 3).

The assembly of electrical or electronic components has traditionally been the most outstanding branch of the in-bond industry. The number of workers it employed in 1989, (divided by official statistics into two parts) represented 39.8% of all workers, and the number of plants totalled 26.6%. It created 40.3% of the in-bond industry's total value added and 44.2% of the value of its entire production.



Not all in-bond industries are high-tech.

Angeles Torrejón/Imagenlatina.

The second largest branch is transport equipment and automotive parts, which having significantly increased its in-bond activities now has the highest indices of concentration and capitalization, demonstrated by its volume of assembly of components and by the value of production per worker and per plant.

This growth, which changed the hierarchy of the various branches of the in-bond industry, occurred mainly during the ten years from 1979 to 1989. It was the result of one of the basic policies of restructuring the automotive industry worldwide, which added to increased investment gave it more solid prospects than any other branch of the industry.

Table 2
Wage Levels
(U.S. dollars)

Year	Hourly Rate	Monthly	Annual
1979	0.96	185.10	2221.18
1980	1.12	210.76	2529.16
1981	1.32	251.16	3013.94
1982	0.99	188.11	2257.28
1983	0.70	134.19	1610.33
1984	0.82	153.38	1840.53
1985	0.83	154.00	1847.99
1986	0.62	113.46	1361.47
1987	0.64	119.91	1438.91
1988	0.74	140.11	1681.28

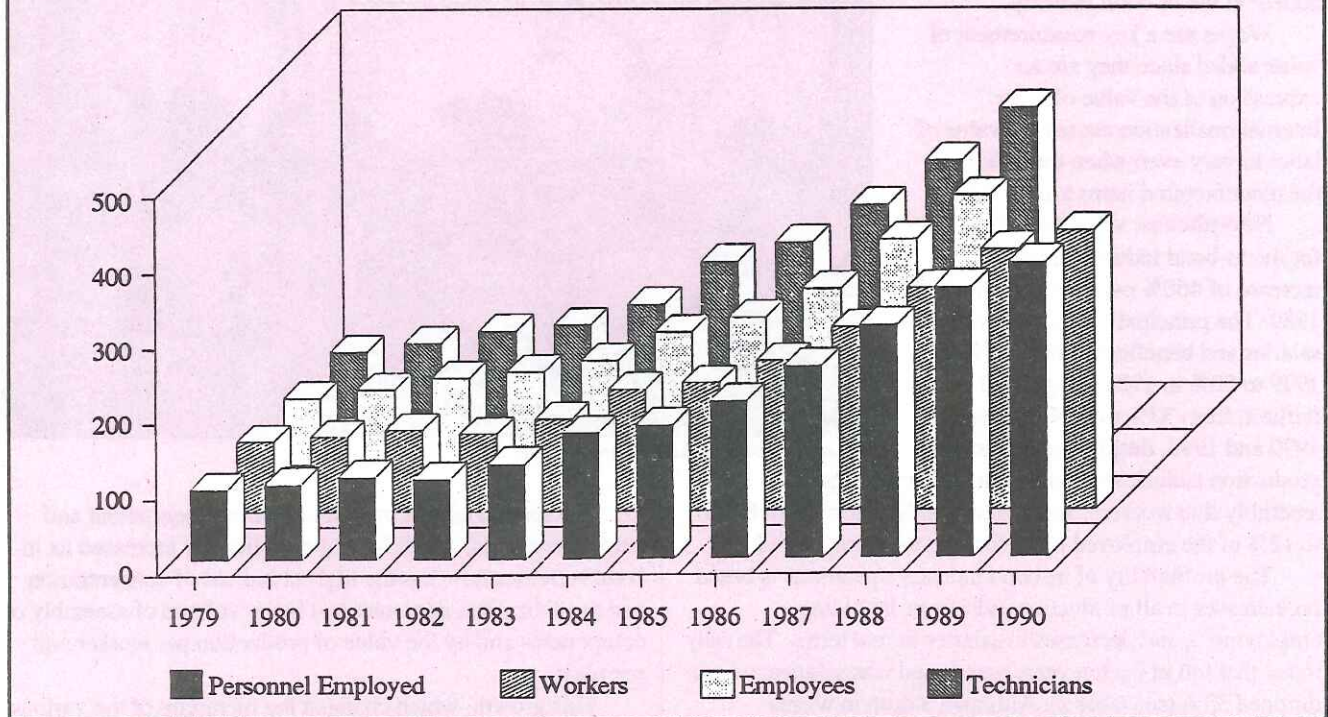
Source: Compiled by the author from INEGI in-bond industry export statistics.

² i.e. the creation of added value not the statistical category.

³ This is one of the theoretical challenges posed by the internationalization of capital, and will not be dealt with here. Nonetheless, its importance should not be overlooked.

⁴ Figures for 88-89 were unavailable at the time of writing.

Graph 2
CHANGES IN EMPLOYMENT WAGE CATEGORIES



Taken together, these two sectors account for 60.5% of all employment, 72.7% of production value and 64.3% of foreign currency earnings for the in-bond industry as a whole (see table 3).

Nevertheless, the same decade also saw a considerable increase in the processing of chemical products. This branch's share of the industry's total profits is still very low but over the ten years for which statistics are available, it registered the greatest percentage increases in production value (4310%) and number of employees (3422.9%), which may well indicate that further increases are to be expected in the future.

One of the first branches of the in-bond industry to be developed was the textile industry and, though this still holds, its productive capacity and the value of its production are not as great as those of the branches mentioned above. It accounts for 9% of all in-bond industry workers, but its production value is only 4.7% of the industry's total.

It is unlikely that new technology will be introduced in this branch, since technological innovations have tended to focus on other areas. Nevertheless, materials processed per worker rose from 13% to 28% from 1979 to 1989, which is attributable to increased pressure on the worker.

From the point of view of profitability of investment and considering the specific characteristics of textile assembly, production has been raised by the simple expedient of increasing yield per worker. It is reasonable to suppose that,

precisely because of its particular technological features, this branch of the industry may increase its activities in Mexico in response to North American economic integration.

Two other branches which have shown stable, if less than spectacular, growth rates are wooden and metal furniture, and toys and sporting goods. No doubt, different factors are responsible for their growth rates, since furniture manufacture seems to be more related to supplying the U.S. market, while the growth of in-bond toy and sporting goods manufacture seems to respond to world-wide restructuring of the toy industry.

Prospects

This brief summary of trends in the in-bond export industry in Mexico provides a basis for observations regarding its future and the impact of the North American Free Trade Agreement on it.

In general, the partial shift of production toward relatively low-cost areas has been one of the main features of world-wide restructuring of capitalist valorization. Ample savings in capital outlay which this implied led to significant reductions in the cost of merchandise thus produced. This resulted in greater centralization and concentration of capital and the consequent expulsion from the market of less efficient enterprises unable to break down their operations so as to benefit from world-wide comparative advantage.

Table 3 Personnel Employed

Sector	Total		Per establishment		%	
	1980	1989	1980	1989	1980	1989
Electrical and electronic material and accessories	39627	110617	252.4	291.1	33.1	25.3
Transport equipment	7500	90525	141.5	603.5	6.3	20.7
Assembly of electrical machines, equipment, appliances, and accessories	29774	63200	451.1	585.2	24.9	14.5
Garment assembly	17570	39077	150.2	141.6	14.7	8.9
Wooden and metal furniture	3230	21384	54.7	90.2	2.7	4.9
Services	6047	18821	252.0	235.3	5.1	4.3
Toys and sporting goods	2803	12154	133.5	405.1	2.3	2.8
Shoes and leather goods	1787	8090	85.1	168.5	1.5	1.9
Non-electrical tools and equipment	1834	5696	114.6	167.5	1.5	1.3
Food	1393	4361	116.1	128.3	1.2	1.0
Chemical products	83	2841	20.8	39.5	0.1	0.7
Other	7898	60114	125.4	173.7	6.6	13.8

Source: Compiled by the author from INEGI in-bond industry export statistics.

On the other hand, the process released remnants of capital for scientific and technological research that provided general productive reorganization undertaken by the more advanced branches of the industry, but that later became generalized, with the limitations inherent in this type of process.

capital valorization. It has not only stabilized but promises to maintain current growth rates and prospects for expansion comparable to rates of production anywhere in the world, particularly in relation to U.S. capital, or to the capital of any country that wants to penetrate the US market under optimum competitive conditions **M**

In this sense, in-bond industry production has been a key factor in the process of restructuring and the struggle for competitiveness and, paradoxically, in the development of production.

It may be indirectly inferred from the information presented above, that the industry has benefited from a gradual influx of capital which has enabled it to combine its earlier technique of obtaining absolute surplus value, with later methods of obtaining relative surplus value. In other words, current production levels are no longer simply attributable to the pressure of work on the plant floor, but also to productive capacity achieved by technological improvement.

The in-bond industry, which was originally created as a provisional measure for lowering costs and redefining the relationship between classes, has now achieved special status within the general process of

Graph 3 IN-BOND INDUSTRY ESTABLISHMENTS

