

## **Shifting Gears: Ford Motor Company in Mexico (B) The Announcement**

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Ford Motor Company announced on January 10, 1984 that it would invest \$500 million in an auto plant in Hermosillo, Mexico -- 150 miles from the Texas border. The plant would build cars designed by the Toyo Kogyo Company of Japan, and would sell those cars in the US market. The plant would employ about 3000 workers when it reached its capacity of 100,000 cars per year in 1986. It was believed to be the largest single investment in the Mexican motor industry.

Mr. O. B. Marx III, Ford's new managing director in Mexico, said the car would draw on Ford's "worldwide resources" and that the Japanese content would be "significant", particularly in the field of components. This approach mirrored its policy in the Pacific region. In Australia and Taiwan, for example, Ford sold the Toyo Kogyo GLC and 626 models as the Ford Laser and Telstar.

Its Mexican plant is to be wholly owned and managed by the US company.

As an incentive for this investment the government has agreed to extend the period within which the balanced-trade obligations of Ford should be met. With this extension, Ford could comply with the requirements from its export earnings of \$260 million a year after 1986. The Mexican government also has waived the domestic content requirements for the plant so long as it exports the great majority of its output.

Meanwhile, Ford is taking advantage of the provision in the 1983 Decree which allows manufacturers in 1984 and 1985 to set off up to 20 percent of their foreign exchange commitments against exports of non-automotive products. Ford is exporting lead oxide, zinc and honey.

### **The Plant**

Hermosillo was a great success in terms of productivity and quality. Mexican workers embraced "lean production" with the same speed as American workers at the Japanese-inspired production facilities in North America and at Ford's own US and Canadian plants. However, the plant failed to meet its cost targets, because it was assembling its cars entirely from parts shipped from Japan. As the yen strengthened, using Hermosillo as a way around the US-instigated quota on Japanese auto imports suddenly made no sense.

### **Ford's Decision**

The board of directors would like an evaluation of this strategy as of 1989. Should Ford continue the Hermosillo operations as they presently stand, or should the strategy be modified? You will be expected to defend your recommendation.

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Sources: Womack, et al. (1991), Auerbach and Cody (1992), Berry et al. (1992).

Table 1

How Three Continents Make Cars

	Average (in 1989) for auto plants in:		
	Japan	US	Europe
<b>Performance:</b>			
Productivity (hours per car)	16.8	25.1	36.2
Quality (defects per 100 cars)	60.0	82.0	97.0
<b>Layout:</b>			
Factory space (per sq. ft. per car per year)	5.7	7.8	7.8
Size of repair area (as percent of assembly space)	4.1	12.9	14.4
Stocks (for eight sample parts)	0.2	2.9	2.0
<b>Employees:</b>			
Workforce in teams (percent)	69.3	17.3	0.6
Suggestions (per employee per year)	61.6	0.4	0.4
Number of job classifications	12.0	67.0	15.0
Training of new workers (hours on average)	380.0	46.0	173.0
<b>Percent of process automated:</b>			
Welding	86.0	76.0	77.0
Painting	55.0	34.0	38.0
Assembly	2.0	1.0	3.0
Source: Economist, 17 October 1992			

Table 2

## Mexican Economic Performance 1984-90

	1984	1985	1986	1987	1988	1989	1990
Growth in real gross domestic product	3.6	2.6	-3.8	1.7	1.3	3.3	4.4
in per capita terms	1.5	0.6	-5.5	-0.1	-0.5	1.5	2.6
Consumer price inflation (annual average)	65.4	57.7	86.2	131.8	114.2	20.0	26.7
Real Investment growth	9.0	12.2	-10.4	6.8	10.9	9.5	13.6
Real Consumption growth	3.3	3.6	-2.3	-0.2	1.8	6.3	5.7
Real wage growth	-7.1	-2.8	-5.9	-1.9	-1.3	9.0	2.9
Average nominal lending interest rate	48.6	60.2	86.7	96.0	69.2	45.0	34.8
Exchange rate (thousand pesos/dollar)	0.17	0.26	0.61	1.38	2.27	2.46	2.81
Exchange rate (yen/dollar)	237.5	238.5	168.5	144.6	128.2	138.0	144.8

Lustig (1992), International Financial Statistics