

International Expansion at Lear Corporation^{*}

Upon going public in 1994, Lear Corporation had embarked on an aggressive growth campaign that transformed the once North American focused automobile seat supplier into a worldwide provider of seating and interior systems. Sales outside of United States and Canada had grown from \$1.5 billion in 1995 to \$5.5 billion in 2000. Despite the apparent success of this strategy, several questions remained. Should the company continue with its aggressive growth strategy, and if so, in which regions of the world should it focus? Had Lear chosen the appropriate entry strategies for its past international expansions and what strategies should it consider for future international growth?

Background

Lear Corporation was founded in 1917 as the American Metal Products Company. It served the emerging automotive industry as a supplier of metal stampings for seat components and eventually produced the first outsourced passenger car seats in North America. By 2000, Lear positioned itself as a global Tier I supplier and the world's largest independent supplier of fully integrated automotive interior systems for cars and light trucks.

In automotive interiors, Lear claimed a 33% share of the \$23.3 billion North American market, a 16% share of the \$17.9 billion European market, and a 19% share of the \$60.0 billion worldwide market. Lear's customer base included almost every car or light truck manufacturer in the U.S. and Europe. Its most significant customers were GM (32% of sales), Ford (28%), DaimlerChrysler (13%) and Fiat (5%).¹

Lear's main product lines included seat systems (60% of sales) and interior trim products and components (25%) (see Appendix 1). An electrical distribution systems and

^{*} This case was prepared by Hyewon (Erin) Kim and Professor Xavier Martin for the purpose of classroom discussion, based on an earlier case by Beth Calhoun, Kelley McCarthy, Alan Wellman, and Professor J. Myles Shaver. © Xavier Martin, 2004.

electronics business, boosted by the acquisition in 1999 of United Technologies' automotive division, accounted for 15% of sales.

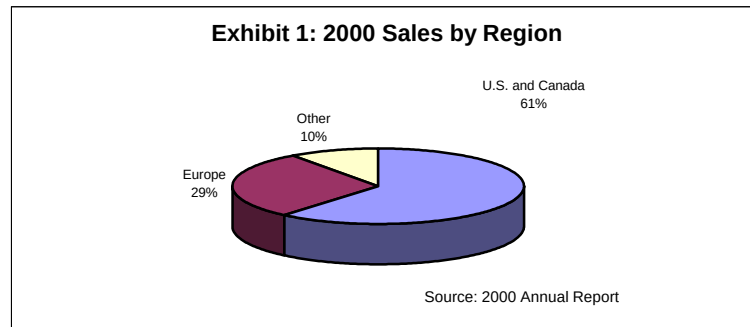
Lear manufactured these products with over 121,000 employees in 335 facilities in 33 countries (see Appendix 2).² Of the 335 facilities, 229 were production/manufacturing sites including assembly and JIT sites. The company maintained 42 technical/administrative support sites, many of which conducted customer-specific testing and design engineering. There were also 5 technology centers dedicated to R&D and advanced engineering. The remaining facilities were primarily marketing/distribution centers and warehouses. In 2000, Lear invested \$322 million in capital expenditures.

Lear had made a steady investment in product technology and design capability. During the 1990s, it placed emphasis on safety (*e.g.*, integrated restraint seat technology, integrated air bags, and integrated restraint seating for children) and comfort (*e.g.*, advanced static and dynamic lumbar systems). For instance, Lear, in conjunction with Volvo and Autoliv, developed the world's first Side-Impact Seat that exceeded the government-mandated side-impact safety standards. More recent R&D efforts also focused on integrated electronics, quality and durability standards, and environmental performance.³ The company sought to develop brands to highlight the resulting proprietary products, including ProTec for interior safety, SonoTec for interior acoustics, and EnviroTec for environmentally friendly products.⁴

In terms of manufacturing, Lear had maintained relatively low fixed costs by limiting vertical integration. Ongoing investments in computer-aided design, engineering and manufacturing resulted in several patented processes that streamlined manufacturing. The company made extensive use of just-in-time (JIT), enabling Lear to deliver products, especially seats, in the precise color and time sequence required on as little as 90 minutes notice. This made it possible to minimize inventories and fixed costs for both Lear and its customers. Lear sought to develop further competitive advantage by combining JIT with its systems integration capability to deliver total interior systems to automotive manufacturers.⁵

Organizationally, customer-focused and product groups were each responsible for their financial results and reported directly to top management. These included DaimlerChrysler, Ford, General Motors/Fiat, and PSA/Renault divisions as well as Seating System, Interior System, and Electronic and Electrical divisions.⁶ In September 2001, Lear named an executive vice president responsible for North and South America and another for Europe,

Asia and Africa. The company reported sales separately for the United States and Canada,



Europe, and the rest of the world (see Exhibit 1).

Exhibit 2 presents selected financial and operational information for Lear for the years 1996-2000. 2000 represented Lear's nineteenth consecutive year of record sales.

Exhibit 2: Lear Corporation - Selected Financial Information					
(Dollars in millions except eps)					
For the year ended Dec. 31:	2000	1999	1998	1997	1996
Income Statement Data					
Net sales	\$14,072.8	\$12,428.8	\$ 9,059.4	\$ 7,342.9	\$ 6,249.1
Gross profit	\$ 1,405.1	\$ 1,269.2	\$ 861.4	\$ 809.4	\$ 619.7
Selling, general and administrative expense	\$ 524.8	\$ 483.7	\$ 337.0	\$ 286.9	\$ 210.3
Operating Income	\$ 835.4	\$ 713.3	\$ 342.2	\$ 481.1	\$ 375.8
Interest expense	\$ 316.2	\$ 235.1	\$ 110.5	\$ 101.0	\$ 102.8
Net income	\$ 274.7	\$ 257.1	\$ 115.5	\$ 207.2	\$ 151.0
Balance Sheet Data					
Current assets	\$ 2,828.0	\$ 3,154.2	\$ 2,198.0	\$ 1,614.9	\$ 1,347.4
Total assets	\$ 8,375.5	\$ 8,717.6	\$ 5,677.3	\$ 4,459.1	\$ 3,816.8
Current liabilities	\$ 3,371.6	\$ 3,487.4	\$ 2,497.5	\$ 1,854.0	\$ 1,499.3
Long-term debt	\$ 2,852.1	\$ 3,324.8	\$ 1,463.4	\$ 1,063.1	\$ 1,054.8
Stockholders' equity	\$ 1,600.8	\$ 1,465.3	\$ 1,300.0	\$ 1,207.0	\$ 1,018.7
Other Data					
Capital expenditures	\$ 322.3	\$ 391.4	\$ 351.4	\$ 187.9	\$ 153.8
Research and development expenditures ¹	\$ 208.7	\$ 181.2	\$ 116.6	\$ 90.4	\$ 70.0
EBITDA	\$ 1,227.6	\$ 1,054.2	\$ 561.9	\$ 665.5	\$ 518.1
Diluted net income per share	\$ 4.20	\$ 3.76	\$ 3.06	\$ 3.04	\$ 2.38
Employees at year-end	121,636	121,102	65,316	51,025	43,902
Total number of facilities	335	330	206	179	148
¹ Amount not recoverable from customers					
Source: Annual Reports					

Auto Components Industry

OEM-Supplier Relationships

Original Equipment Manufacturers (OEMs), such as GM, Ford, Toyota, and Volkswagen, drove demand in the automobile components industry. Demand was cyclical in nature, varying with the growth of individual OEMs and the regions in which they operated.

Auto components suppliers were categorized into different tiers. Tier I status was the highest and indicated that the company sold directly to the OEM. Recently, automakers had been placing more component design responsibility on Tier I suppliers. This required suppliers to be involved from the design stage of production to the supply of a fully integrated product to the manufacturer. Tier I suppliers were responsible for maintaining the performance standards and cost objectives demanded by OEMs. Some OEMs, particularly in Europe, had traditionally required Tier I suppliers to use stipulated lower-tier sources. This forced Tier I firms to deal with a larger number of suppliers.

The auto parts industry had undergone steady consolidation since the late 1980s. A.T. Kearney had forecast that the number of Tier I parts suppliers would drop to 450 in 2005, down from 750 in 1995 and 1,100 a decade earlier. This trend was being driven by automakers that increasingly gave their suppliers responsibility for entire interior systems, not just individual component parts. For example, seating suppliers were now supplying entire seating and interior systems rather than just seats. Automakers such as Ford, GM and Volkswagen were experimenting with modular assembly systems whereby a handful of suppliers assembled complete subsystems next to the auto assembly line.

Seating and Interior Suppliers

Seating manufacturers, like Lear, supplied all facets of seating products to OEMs for car and light truck production. Increasingly, supply contracts covered the entire duration of a model's production run rather than a single production year. Suppliers were awarded the seat program for a particular vehicle in the early stages of the vehicle's design and became responsible for the design, engineering, manufacture, and testing of the seat system. The supplier also had to agree to specific performance standards and targets for productivity increases that would result in price reductions. Moreover, automakers required suppliers to utilize JIT inventory management that eliminated the need for the automaker to carry

inventory. As a result, the auto manufacturer had virtually no carrying costs for these products and did not tie up financial resources in inventory management.

Seat assembly was a very labor-intensive process. Although some functions had been automated, much of the assembly remained a cut-and-sew operation. Seats were constructed from many individual component parts such as the frame, cover, foam cushion, headrest, and armrests. Each component had to be quality inspected, and regular new fabric introductions and design changes mandated the use of manual operations.

In the car seat market, several factor inputs affected manufacturing. Because seat suppliers were constantly under pressure from automakers to reduce costs and production times, they pressured their own suppliers (Tier II suppliers) to do the same. Tier II suppliers provided Tier I suppliers with subsystems or individual component parts. In addition, they had to work very closely with Tier I firms to meet automaker production requirements and schedules. Tier I suppliers thus had to establish strong relationships with Tier II and materials vendors to maintain product flow and keep costs manageable. For example, if Foamex International, the dominant supplier of foam products to the U.S. auto industry with a 60% market share,⁷ had a disruption in production or a strike, many auto plants and suppliers would potentially be hobbled. The seat suppliers would be caught in the middle and would have to deal with the backlash dealt to them by the companies that they in turn supplied.

Besides seats, other components of a car interior included flooring and acoustic insulation systems (e.g., dash insulators), door panels, instrument panels, and headliners. Lear aspired to be one of the designated suppliers called upon to design, assemble and deliver these subsystems in an increasingly integrated manner.

Lear's Competitors

Competition among interior suppliers was fierce. Although the industry still had some small suppliers, a few firms dominated by market share. Lear's main competitor in the North American seating market was Johnson Controls. Like Lear, Johnson Controls had been actively acquiring other manufacturers. In 1997 Johnson Controls acquired Prince Auto, a manufacturer of floor consoles, ceiling consoles, door panels, and arm rests. In 1998 it acquired the Becker Group, another manufacturer of car interiors with strength in Europe. In September 2000 it acquired Ikeda Bussan, a Japanese supplier of automotive seating.

Another rival, Magna International, acquired Douglas & Lomason in 1996. Moreover, the entry of foreign automobile assemblers in North America, from Japan and Germany, had drawn several foreign suppliers into Lear's home market.⁸ In Europe, Lear's primary seating competitors were Johnson Controls and Faurecia. The market for other interior components was more fragmented. Leading rivals included Johnson Controls, Faurecia, Magna, and specialists like Delphi, Visteon, Collins & Aikman, Radici, and Eaton.⁹

Global Automotive Industry

Appendix 3 provides data on vehicle production for several countries and regions of the world through 2000. In 2000, global auto assemblers faced shrinking margins even though they sold more cars and light trucks than ever. Competition was fierce as global expansion gave rise to overcapacity and economic growth slowed down in many key markets. Further challenges for automakers arose from rising oil prices, higher labor costs, and (for U.S. producers) the strong dollar. An aggregate downturn was expected for the industry in 2001 due to economic slowdown and increased unemployment.

By 2001, acquisitions and alliances had given rise to 6 supergroups: GM with Fiat, Saab, Fuji Heavy Industries, Isuzu, Suzuki and Daewoo; Ford with Volvo, Jaguar, Land Rover, and Mazda; Toyota with Daihatsu; DaimlerChrysler with Mitsubishi and Hyundai; Volkswagen with SEAT, Skoda and Audi; and Renault-Nissan with Samsung Motors.¹⁰ These groups increasingly sought to share platforms and selected components, while retaining the marketing individuality of each brand. A few other firms, including Honda, BMW, PSA-Citroen and Russia's Avtovaz, remained independent.

In the long run, the U.S., Canada and Western Europe were considered mature markets with modest growth potential. This had motivated vehicle manufacturers to broaden their reach. In particular, they had focused attention on South America and Asia, where vehicle production was forecast to continue increasing in the medium to long term.

South America

Several factors had encouraged automaker investment in South America during the 1990s. The early 1990's were a period of general economic strength in the region as witnessed by increased per capita GDP - particularly in Brazil and Argentina. Additionally, economic integration among South American markets, in the form of Mercosur, the Andean

Pact and the G-3 accord, reduced the cost of production in the region by lowering import tariffs and allowing components built in member countries to be considered local content. Also, South American nations encouraged foreign automobile industry production in order to attract investment and jobs. Cooperative agreements between governments, firms, and labor had resulted in lower vehicle prices and increased demand.¹¹

The macro-economic environment was very uncertain by the early 2000s. Argentina was facing a severe economic crisis brought about by fiscal and currency difficulties. Nevertheless, several manufacturers, including GM, Ford, Volkswagen, Fiat, Peugeot and Renault, had recently upgraded existing facilities in the region. The immediate profitability outlook for these investments was quite weak, depending on export opportunities.¹² Still, some were very optimistic in the medium term; for example, a forecast by the Economist Intelligence Unit had South American automotive sales growing by 1.7 million units, or nearly 90%, between 1999 and 2004.¹³

In addition, Brazil had attracted several investments in new modular assembly plants where selected suppliers were invited to assemble complete subsystems in facilities adjacent to the auto assembly line. These investments by GM (Blue Macaw), Ford (Amazon), DaimlerChrysler (Dakota) and Volkswagen were considered important as experiments that may reshape the organization of assembly plants elsewhere in future.

Asia and Oceania

In Asia, the strongest market growth was expected to be in the developing markets of Southeast Asia, China, and India. Driven by this favorable market outlook, many auto producers had planned manufacturing investments in the region. For example, Thailand, the largest auto market in Southeast Asia, was second only to the U.S. as a market for light pickup trucks in the mid-1990s. After Toyota built its second factory and Chrysler its first one there in 1995, Ford and Mazda decided to enter together. General Motors and BMW followed by 2000. In China, Volkswagen was the leading foreign automaker. GM had partnered with the leading local automaker, Shanghai Automotive Industry, in a \$1 billion auto plant and agreed to set up 25 component making ventures in that country.

The currency and economic crisis of 1997-1998 led to a sharp contraction in demand in several Southeast Asian countries, especially Thailand. As a result, automotive sales plummeted by 70% in the region. Nevertheless, most economies rebounded quickly and were

growing again by 1999. China, with an unconvertible currency and large domestic market, was largely unaffected by the 1997-1998 crisis. However China's pending entry into the World Trade Organization promised to raise challenges for its domestic auto industry. Standard & Poor's had forecast that vehicle demand in Asia (excluding Japan and South Korea) would show compound annual growth of nearly 10% from 1999 to 2009.¹⁴

Countries on the periphery of the region had a longer history of automaking and different outlooks. Japan was the second largest producer in the world, albeit a mature market. South Korea had built capacity rapidly during the 1990s, but the outlook for its domestic industry was highly uncertain as Hyundai, Daewoo, Kia, Ssangyong and Samsung either sold their automaking assets or sought foreign partners. In Australia, an aggressive "import substitution" policy through the 1970s had protected long-established local manufacturers including Ford and GM (Holden) and their suppliers. Liberalization had since prompted entry by Toyota, Mitsubishi and (for a while) Nissan. The industry faced limited local demand and high transportation costs, prompting Nissan to exit in 1992 but also encouraging some product innovation.

Lear's Expansion Strategy

Lear had engaged in a mix of internal growth, acquisitions and joint ventures since the mid-1990s. During this period, the firm had substantially expanded its product line. Its international presence had also grown considerably, from 18 countries (with 107 facilities) in 1995 to 32 foreign countries (with 335 facilities) in 2000.

North America

Lear's expansion strategy in North America included internal growth, acquisitions, and joint ventures. Lear entered into two joint ventures with NHK Spring Company, Ltd. of Japan in 1987: General Seating of America and General Seating of Canada. In both joint ventures, Lear held a 35% stake. General Seating of America supplied SIA, a joint venture between Subaru and Isuzu that manufactured cars in Indiana. General Seating of Canada supplied CAMI, a manufacturing joint venture between Suzuki and GM in Ontario. In 1999, NHK and Lear established a joint R&D operation based in Michigan.¹⁵

In 1993, Lear purchased NAB, Ford's North American seat cover and seat systems business. This increased Lear's presence in the domestic market as well as in Mexico (where

NAB had a large seat cover operation) and Europe. Lear's product line expansion was facilitated by several subsequent acquisitions. In 1995, Lear spent \$626 million to acquire Automotive Industries Holding Inc. (AI), a leading North American manufacturer of auto parts and interior systems. AI's product offerings included complete door panel assemblies, seatbacks and inserts, armrests, consoles and headliners. The company also manufactured various other products such as windshield washer reservoirs, fuel tank shields, and radiator coolant overflow reservoirs. In 1996, Lear acquired Masland Corporation, a Pennsylvania manufacturer of automotive carpets and large supplier to Ford. This \$385 million acquisition gave Lear a 40% share of the North American automotive floor and acoustic system market.

In August 1997, Lear acquired the Seat Sub-Systems Unit of ITT Automotive, a supplier of power seat adjusters and power recliners. In September 1997, Lear acquired the seating business of Delphi Automotive systems, a division of General Motors Corporation, for \$250 million. Lear added electronics and electrical distribution systems capabilities through the acquisition of United Technologies Automotive (UTA) in May 1999. Lear paid \$2.3 billion for UTA, a large instrument panel producer. In July 1999, Lear held talks to acquire all or part of Ford's Visteon parts unit, but no deal resulted.

In September 1999, Lear acquired Donnelly Corporation's 50% share in a joint venture initially set in September 1997 to design and manufacture overhead systems and consoles. In May 2000, Lear formed a joint venture with Motorola, Inc. to design integrated interior systems for Ford. In November 2000, Lear formed an equally-owned joint venture with Japan's Takashimaya Nippatsu Kogyo. The venture, Total Interior Systems-America, was to supply seat systems for the Sienna minivan to be produced at a new Toyota plant in Indiana. This was Lear's first seat contract with Toyota for production in North America.

Europe

In Europe, Lear's growth had been largely through acquisition. In December 1994 Lear spent \$156 million to acquire Gilardini S.p.A., a subsidiary of Fiat, and SEPI S.p.A., a primary supplier of automotive seat systems to Fiat. SEPI produced automotive seat systems for 85% of Fiat's Italian vehicle production (including Fiat, Lancia, Alfa Romeo, and Ferrari). Gilardini also provided Lear with operations in Poland, Brazil and Argentina where Fiat built cars. Moreover, Gilardini had joint venture interests in Turkey and Spain.

By acquiring U.S.-based AI, Lear also obtained additional European business. Shortly after the Lear agreement, AI acquired Plastifol GmbH & Co. KG, a German automotive interior trim manufacturer. Plastifol provided Lear with five new customers and allowed Lear to become the first integrated, full service interior trim supplier to Ford Europe.¹⁶ The Masland acquisition also included a joint venture with Sommer-Allibert in Britain.

In December 1996, Lear acquired Borealis Industrier A. B., a Western European supplier of instrument panels and door panels, for \$85 million. This strengthened Lear's relationship with Volvo and Saab. In June 1997, Lear acquired England's Dunlop Cox Ltd. This provided Lear with the ability to design and manufacture manual and electronically powered automotive seat adjusters. In July 1997 Lear acquired Keiper Car Seating GmbH for \$252.5 million. Keiper supplied seats to Mercedes, Audi, Volkswagen and Ferrari and employed 2,000 at plants mainly in Germany and Italy. In May 1998 Lear acquired, in separate transactions totaling \$115.3 million, Gruppo Pianfei S.r.L, Strapazzini Resine S.r.L and the A.W. Chapman Ltd. and A.W. Chapman Belgium NV subsidiaries of the Rodd Group Ltd. Each was a supplier of automotive interiors to the European market.

In late 1998, Lear announced a plan to consolidate its European operations. The plan initially called for 15 plants to be closed, with production moved to other European locations. The company later revised its plans so that 6 plants and 2 administrative offices were to be closed. A restructuring charge of \$78.9 million was taken, partly to cover severance of about 1,700 salaried and hourly employees. Three of the plants subsequently received a reprieve that Lear attributed to demand conditions.

South America

In October 1995, Lear announced two joint ventures in South America. Teknoseating in Argentina was to produce seating for VW and a joint venture with Trambusti in Brazil was to produce seating for Fiat. The Argentinean and Brazilian joint ventures were 51% and 65% owned by Lear, respectively. Lear had the option to acquire the remaining stakes in each of these ventures. In addition, Lear had a 31% interest in Probel, S.A., a Brazilian automotive seat and furniture manufacturer.

In 2000 Lear was selected as a seat and interior supplier for the modular plants set up by GM (Blue Macaw) and Chrysler (Dakota) in southern Brazil. It established new, wholly-owned facilities to service these programs.

Asia and Oceania

Lear took a 49% stake in Pacific Trim Corp. Ltd. in 1994. Pacific Trim was a Thai manufacturer of automotive seat systems and seat covers. In 1995, the company increased its presence in the region by investing in start-up operations in Indonesia and Australia. In 1996, the company established a joint venture with NHK Spring Co., Ltd. to supply seat systems in Thailand to a joint venture between Ford and Mazda making pickup trucks.

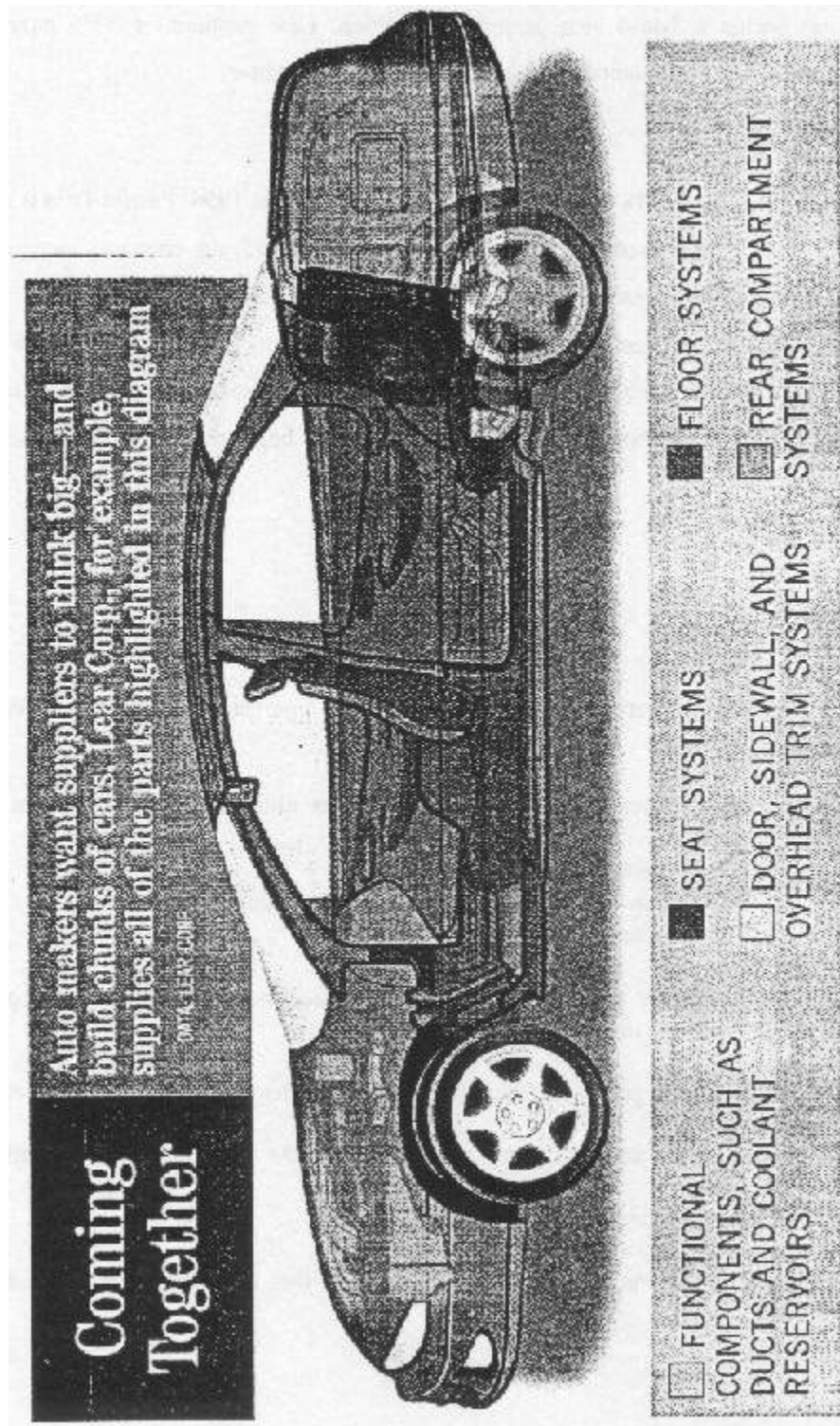
In 1997, Lear established a regional headquarter in Singapore. In 1998, it announced a joint venture with Hanil to produce full interior systems for Hyundai's manufacturing plant in India. In 2000, Mahindra & Mahindra selected Lear as supplier for a new plant to be built in Maharashtra, India. M&M announced that they would not set up equity partnerships with vendors, as had been customary in India.

September 1996 saw Lear announce its first expansion into China. Lear entered into a 50-50 joint venture with Jiangling Motors to form Jiangling-Lear Interior Systems Co. Ltd. Jiangling made light trucks for Isuzu and Ford. Lear increased its presence in China through joint ventures in 1998 with automaker Chang'an Automobile and with Shanghai GM suppliers Shanghai Car Carpet and Shanghai Vehicle Awning. The acquisition of UTA in 1999 gave Lear have an ownership interest in a joint venture with DCAC in Wuhan, China that produced wire harnesses.¹⁷

In Japan, Lear had three small design centers. The first two were established in 1999. The third was a joint venture established with NHK in 2000.

Questions:

1. Does Lear "have what it takes" to be a successful international competitor? Why or why not?
2. Why did Lear utilize so many different entry modes?
 - Why acquisitions in Europe?
 - Why joint ventures in South America, China, and Canada?
 - Why greenfield entries in Australia and Brazil?
3. Did Lear have the right strategy for Japan? For China? Why?
4. What geographic regions are most and least desirable for further expansion? Why?
5. Should Lear continue with an aggressive international expansion strategy? Should it reorganize and thoroughly consolidate its recent investments first?



source: "Get big - or get out," *Business Week*, September, 2, 1996, pg. 60.

Appendix 2: Lear Corporation's Worldwide Locations



Argentina
Buenos Aires
Cordoba



Australia
Adelaide
Brooklyn



Austria
Küflach



Belgium
Genk



Brazil
Betim
Cacapava
Curitiba
Juis de Fora
Sao Paulo



Canada
Ajax
Kitchener
Maple
Mississauga
Oakville
St. Thomas
Whitby
Windsor
Woodstock



China
Beijing
Nanchang
Shanghai
Tianjin
Wanchai
Wuhan
Xiaogan



Czech Republic
Prestice



England (U.K.)
Alfredon
Bicester
Colne
Coventry
Dunton
Middlemarch
Nottingham
Nuneaton
Shepperton
Tamworth
Tipton
Washington



France
Garches (Paris)
Guipry
Lagny-le-Sac
Meaux
Offranville
Savoie



Germany
Besigheim
Bolingen
Bremen
Cologne
Ebersberg
Eisenach
Gustavsburg
Ingolstadt
Kronach
Munich
Plattling
Quakenbrück
Rietberg
Sulzbach
Wackersdorf
Wolfsburg



Honduras
Cholma

			
Hungary	India	Indonesia	Italy
Godollo	Chennai	Jakarta	Asti
Gyongyos	Delhi		Caivano
Gyor	Gujarat		Cassino
Mor	Mumbai		Grugliasco
	Nashik		Melfi
			Orbassano
			Pozzilli
			Pozzo d'Adda
			Termini Imerese

			
Japan	Mexico	Philippines	Poland
Hiroshima	Chihuahua	Cebu	Gliwice
Nagoya	Cuautitlan		Mielec
Tokyo	Fuentes		Myslowice
	Hermosillo		Tychy
	Juarez		Warsaw
	Matamoros		
	Monterray		
	Naucalpan		
	Puebla		
	Ramos Arzipe		
	Rio Bravo		
	Saltillo		
	Silao		
	Tlahuac		
	Toluca		

			
Portugal	Russia	Singapore	Slovakia
Pova	Nizhny Novgorod	Singapore	Bratislava
Palmela			
Valongo			



South Africa
Brits
East London
Port Elizabeth



South Korea
Seoul



Spain
Avila
Epila
Logrono
Madrid Cervera
Pamplona
Roquetes
Valls
Vigo



Sweden
Arendal
Fargelanda
Gnosjo
Ljungby
Tanumshede
Tidaholm
Torslanda



Thailand
Khorat
Rayong



Tunisia
Borjcedria



Turkey
Bursa



United States	United States (cont.)	United States (cont.)	United States (cont.)
Allen Park, Michigan	Edinburgh, Indiana	Lordstown, Ohio	Roscommon, Michigan
Alma, Michigan	El Paso, Texas	Louisville, Kentucky	St. Louis, Missouri
Arlington, Texas	Elsie, Michigan	Madisonville, Kentucky	Sheboygan, Wisconsin
Atlanta, Georgia	Fenton, Michigan	Manteca, California	Sheridan, Ohio
Auburn Hills, Michigan	Frankfort, Indiana	Marlette, Michigan	Sidney, Ohio
Bay Valley, Michigan	Fremont, Ohio	Marshall, Michigan	Southfield, Michigan
Berne, Indiana	Grand Rapids, Michigan	Melvindale, Michigan	Strasburg, Virginia
Bourbon, Indiana	Greencastle, Indiana	Mendon, Michigan	Tampa, Florida
Bowling Green, Ohio	Hammond, Indiana	Midland, Texas	Traverse City, Michigan
Bridgeton, Missouri	Holland, Michigan	Morristown, Tennessee	Taylor, Michigan
Brownsville, Texas	Huntington, Indiana	New Castle, Delaware	Troy, Michigan
Byron Center, Michigan	Huron, Ohio	Newark, Delaware	Walker, Michigan
Carlisle, Pennsylvania	Iowa City, Iowa	Peru, Indiana	Warren, Michigan
Columbus, Mississippi	Janesville, Wisconsin	Perrysburg, Ohio	Wauseon, Ohio
Covington, Virginia	Kansas City, Missouri	Plymouth, Michigan	Wentzville, Missouri
Dayton, Tennessee	Lebanon, Ohio	Pontiac, Michigan	Winchester, Virginia
Dearborn, Michigan	Lebanon, Virginia	Port Huron, Michigan	Zanesville, Ohio
Detroit, Michigan	Lewiston, Pennsylvania	Rochester Hills, Michigan	
Duncan, South Carolina	Livonia, Michigan	Romulus, Michigan	



Venezuela
Valencia

Appendix 3: World Motor Vehicle Production for Selected Countries and Regions

Region Country	2000			1998			1996		
	Passenger Cars	Commercial Vehicles ^a	Total	Passenger Cars	Commercial Vehicles ^a	Total	Passenger Cars	Commercial Vehicles ^a	Total
North America	8,223,205	9,432,034	17,655,239	7,629,586	8,002,002	15,631,588	8,160,221	7,255,151	15,415,372
U.S.A.	5,542,217	7,228,497	12,770,714	5554390	6451689	12,006,079	6,083,227	5,715,678	11,798,905
Canada	1,550,500	1,411,136	2,961,636	1122287	1050375	2,172,662	1,279,312	1,117,731	2,397,043
Mexico	1,130,488	792,401	1,922,889	952909	499938	1,452,847	797,682	421,742	1,219,424
Western Europe	14,685,952	2,189,349	16,875,301	14,339,452	2,103,585	16,443,037	13,882,363	1,617,258	15,499,621
France	2,883,419	468,510	3,351,929	2,603,021	351,139	2,954,160	3,147,622	442,965	3,590,587
Germany	4,802,983	394,702	5,197,685	5,348,115	378,673	5,726,788	4,539,583	303,326	4,842,909
Italy	1,422,284	316,031	1,738,315	1,402,382	290,355	1,692,737	1,317,995	227,370	1,545,365
Spain	2,445,421	587,453	3,032,874	2,216,571	609,492	2,826,063	2,213,102	199,207	2,412,309
United Kingdom	1,628,548	188,511	1,817,059	1,748,277	232,793	1,981,070	1,686,134	238,263	1,924,397
Other ¹	1,503,297	234,142	1,737,439	1,021,086	241,133	1,262,219	977,927	206,127	1,184,054
Eastern & Central Europe	1,926,719	287,716	2,214,435	1,793,417	266,796	2,060,213	1,473,627	235,578	1,709,205
Czech Republic	428,223	27,258	455,481	493,417	43,196	536,613	263,327	8,684	272,011
Poland	532,845	23,520	556,365	460,000	38,600	498,600	352,750	47,921	400,671
Russia/CIS	965,651	236,938	1,202,589	840,000	185,000	1,025,000	857,550	178,973	1,036,523
South America	1,586,844	423,881	2,010,725	1,597,531	433,517	2,031,048	1,736,339	389,411	2,125,750
Argentina	238,921	100,711	339,632	353,068	104,851	457,919	269,439	43,711	313,150
Brazil	1,347,923	323,170	1,671,093	1,244,463	328,666	1,573,129	1,466,900	345,700	1,812,600
Asia-Oceania	12,968,090	4,104,710	17,072,800	11,341,549	3,725,979	15,067,528	11,653,384	4,590,852	16,244,236
Japan	8,363,485	1,781,362	10,144,847	8,055,763	1,994,029	10,049,792	7,863,763	2,482,023	10,345,786
South Korea	2,602,008	512,990	3,114,998	1,625,125	329,369	1,954,494	2,264,709	548,005	2,812,714
Other Asia:	1,678,948	1,785,737	3,464,685	1,310,661	1,368,881	2,679,542	1,222,297	1,541,401	2,763,698
China	620,000	1,388,500	2,008,500	507,103	1,120,726	1,627,829	381,510	1,074,670	1,456,180
India	513,948	282,237	796,185	384,139	129,280	513,419	395,844	365,648	761,492
Other ²	545,000	115,000	660,000	419,419	118,875	538,294	444,943	101,083	546,026
Indonesia ³	257,058	35,652	292,710	11,000	32,200	43,200	n.a.	n.a.	n.a.
Australia	323,649	24,621	348,270	350,000	33,700	383,700	302,615	19,423	322,038
Total	39,390,810	16,437,690	57,528,084	36,701,535	14,531,879	51,233,414	36,905,934	14,088,250	50,994,184

Notes: ^a Light and heavy trucks; ¹ Austria, Belgium, Netherlands, Sweden; ² Malaysia, Taiwan; ³ Partial series, excluded from totals

Appendix 3 (cont.)

Region Country	1994			1992		
	Passenger Cars	Commercial Vehicles ^a	Total	Passenger Cars	Commercial Vehicles ^a	Total
North America	8,685,773	7,020,891	15,706,664	7,466,436	5,286,654	12,753,090
U.S.A.	6,613,970	5,648,767	12,262,737	5,663,284	4,038,218	9,701,502
Canada	1,215,830	1,105,981	2,321,811	1,024,739	943,758	1,968,497
Mexico	855,973	266,143	1,122,116	778,413	304,678	1,083,091
Western Europe	12,796,364	1,566,844	14,363,208	13,386,070	1,725,068	15,111,138
France	3,175,213	383,225	3,558,438	3,329,490	438,310	3,767,800
Germany	4,093,685	262,453	4,356,138	4,863,721	330,221	5,193,942
Italy	1,340,878	193,591	1,534,469	1,476,627	209,860	1,686,487
Spain	1,821,696	320,566	2,142,262	1,790,675	331,272	2,121,947
United Kingdom	1,466,823	227,815	1,694,638	1,291,880	248,453	1,540,333
Other ¹	898,069	179,194	1,077,263	633,677	166,952	800,629
Eastern & Central Europe	1,348,349	307,125	1,655,474	1,332,450	656,608	1,989,058
Czech Republic	152,402	27,691	180,093	202,450	26,608	229,058
Poland	326,150	25,076	351,226	200,000	30,000	230,000
Russia/CIS	869,797	254,358	1,124,155	930,000	600,000	1,530,000
South America	1,587,128	403,038	1,990,166	1,034,921	298,586	1,333,507
Argentina	338,355	70,422	408,777	220,498	41,445	261,943
Brazil	1,248,773	332,616	1,581,389	814,423	257,141	1,071,564
Asia-Oceania	10,868,159	4,715,035	15,583,194	11,683,636	4,730,324	16,413,960
Japan	7,801,317	2,752,802	10,554,119	9,378,694	3,120,590	12,499,284
South Korea	1,805,895	505,768	2,311,663	1,306,752	422,944	1,729,696
Other Asia:	932,038	1,447,306	2,379,344	718,640	1,181,932	1,900,572
China	250,000	1,100,000	1,350,000	180,000	900,000	1,080,000
India	249,280	237,583	486,863	153,867	170,518	324,385
Other ²	432,758	109,723	542,481	384,773	111,414	496,187
Indonesia ³	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Australia	328,909	9,159	338,068	279,550	4,858	284,408
Total	35,285,773	14,012,933	49,298,706	34,903,513	12,697,240	47,600,753

Notes: ^a Light and heavy trucks; ¹ Austria, Belgium, Netherlands, Sweden; ² Malaysia, Taiwan; ³ Partial series, excluded from totals

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- ¹ Lear Corporation 2000 Investor Factbook
² Lear Corporation 2000 Form 10K
³ Lear Corporation Form 10K 1994, 1998, 2000
⁴ Lear Corporation Annual Report 2000
⁵ Lear Corporation Annual Report 2000
⁶ Lear Corporation 2000 Annual Form 10K, 2001 2nd Quarter Form 10Q
⁷ Automotive News, “Front News”, November 4, 1996, page 1
⁸ The Economist, “Too Many Pieces”, May 7, 1998, page 42
⁹ Lear Corporation 2000 Form 10K
¹⁰ Fortune, “Bumpy Roads for Global Automakers”, December 18, 2000, page 18
¹¹ Latin American Auto Industry, Merrill Lynch, 1995, pages 9-20
¹² Financial Times, “Vehicle Makers Rethink Latin American Strategies”, July 6, 1999, page 20
¹³ Financial Times, “Shakeout in South American Car Industry”, September 22, 1999, page 6
¹⁴ Financial Times, “DaimlerChrysler Joins Convoy into Asian Promised Land”, March 23, 2000, page 20
¹⁵ Asia Pulse, October 21, 1999
¹⁶ Autoparts Report, July 19, 1995
¹⁷ Asia Pulse, October 21, 1999