

AUTOMOBILES

- Economies of Scale
 - Assembly Plants
 - Why multi-plants?
 - Vertical Integration of Major Components
 - Transaction Cost Theory Again
 - Opportunism & Bilateral Monopoly
 - The Contrast with Japan
 - Economics of Model Changes
 - Economics of Dealer Networks
 - Vertically disintegrated
 - Scale economies
 - Service Availability
 - Friction with the Manufacturer
 - Exclusive Dealing
 - Dealer Pricing
 - Parts (branded versus generic)
 - The advent of multi-outlet dealerships (e.g., AutoNation, 278 dealerships, 355 franchises, 17 states)
- Pricing
 - Price Leadership
 - GM as leader
 - Formula Pricing
 - GM's target return to capital
 - Limit Pricing (imports & the sub-compacts)
 - Price Discrimination (high price to inelastic demand)
 - Big Cars & Small Cars
 - "Options"
 - Replacement ("crash") parts
 - Tying again
 - "Metering" the intensity of use
 - "Will-fits"

- Late 1970s Through the 1980s
 - Inflation
 - Trade Policy
 - “Voluntary Quotas” imposed on Japanese (the economics of VERs, once again)
 - Re-structuring
 - Direct Foreign Investment
- Technology and Regulation
 - Fuel Efficiency: Regulatory Options
 - Monopsony buying (taxes)
 - Minimum mileage
- Canada
 - Automotive sector accounts for 12% GDP, and nearly a quarter of merchandise trade (substantial surplus).
 - 1965 Canada-U.S. Automotive Products Agreement (Auto Pact)

Economics of Multi-Plant Operation:

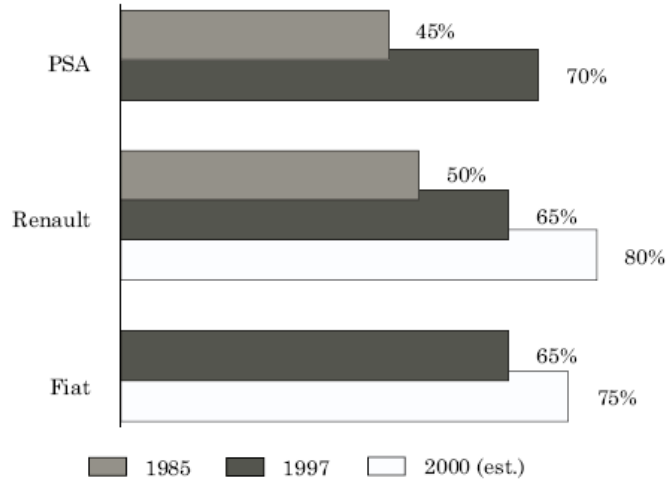
- Enterprise level scale economies (mg't., R&D, financing, marketing, etc.)
- Economies of physical distribution

Plant Operations, Canada (2003)

Company/Plant Name	Location	Products
Canadian Automotive Mfg. Inc. (CAMI)	Ingersoll, ON	Equinox; a GM-Suzuki joint venture
DaimlerChrysler	Brampton, ON	Chrysler 300, Dodge Magnum
DaimlerChrysler	Windsor, ON	Dodge Caravan, Chrysler Town & Country, Pacifica
Ford	Oakville, ON	Ford Freestar and Mercury Monterey
Ford	St. Thomas, ON	Ford Crown Victoria, Mercury Grand Marquis
Honda	Alliston, ON	Acura EL, Civic
Honda	Alliston, ON	Acura MDX, Pilot
General Motors	Oshawa, ON	Chevrolet Monte Carlo, Impala
General Motors	Oshawa, ON	Buick LaCrosse (Allure in Canada), Pontiac Grand Prix
General Motors	Oshawa, ON	GMC Sierra, Chevrolet Silverado pickups
Toyota	Cambridge, ON	Corolla, Matrix
Toyota	Cambridge, ON	Lexus RX-330
Toyota .	Woodstock, ON	Announced June 2005

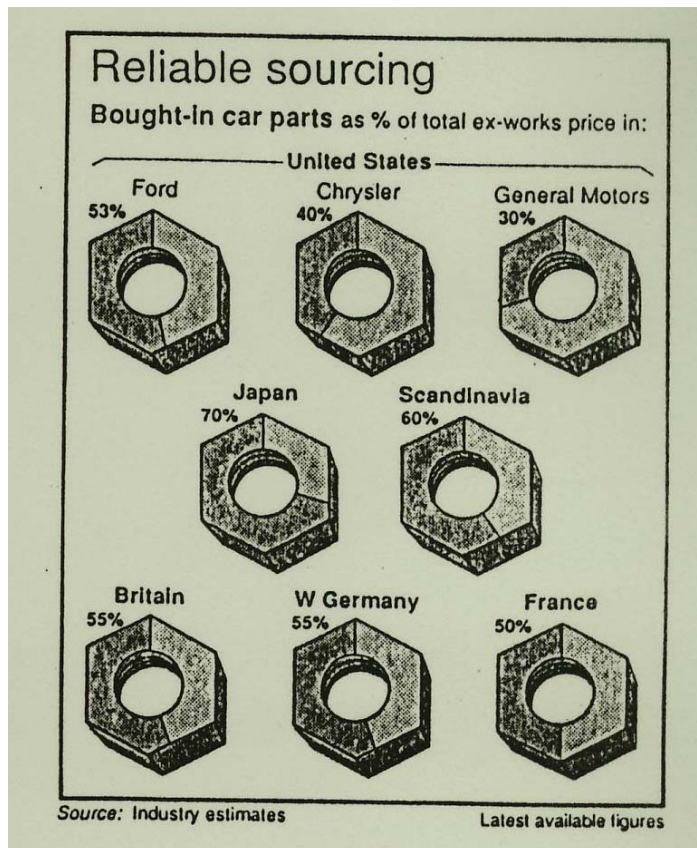
Economics of Vertical Integration and Disintegration (transactions costs again)

Percent of Car Value Outsourced (PSA is Peugeot)



Source: The Economist Intelligence Unit.

Outsourcing (circa 1990)

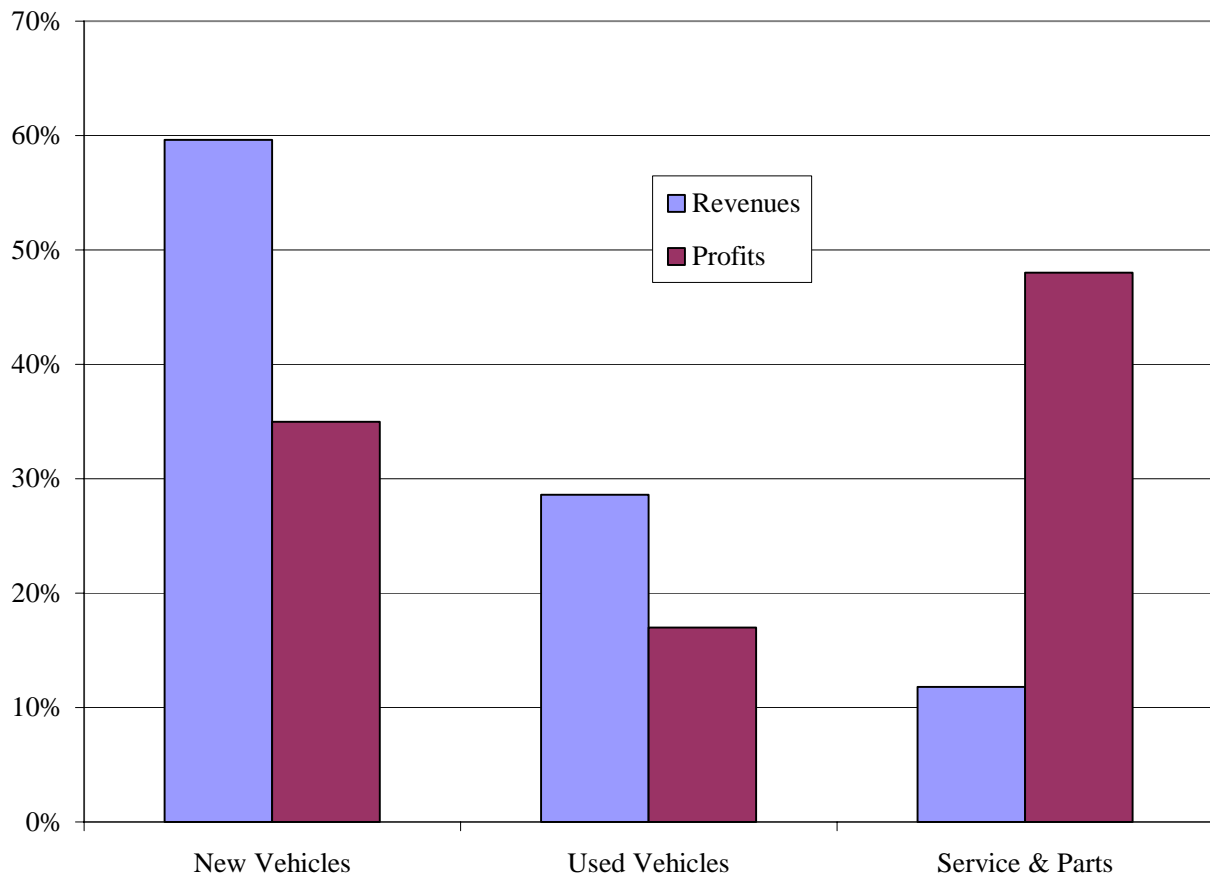


Economics of Dealer Networks

The manufacturer wants a dense network of dealerships (network effects/externalities). Overwhelmingly automobile manufacturers rely on franchises (not company owned distribution). Exclusive territories and exclusive dealing are common. Why?

- Exclusive territories & exclusive dealing- definitions
- Efficiency explanations
 - Diseconomies of internalization
 - Economies of local distributor (local knowledge, etc.)
 - Assurance of supply or demand - coordination economies
 - Asset specificity and the holdup problem
 - Free-riding
- Competition concerns
 - Can foreclose outlets to potential entrants
 - Can reduce intra-brand competition
- Friction with the Manufacturer
 - Dealer pricing
 - Parts (branded versus will-fits)
 - Multi-brand outlets
 - The advent of multi-outlet dealerships (e.g., AutoNation, 278 dealerships, 355 franchises, 17 states)
 - Grey marketing (e.g., Canadian distributors sell to US customers)

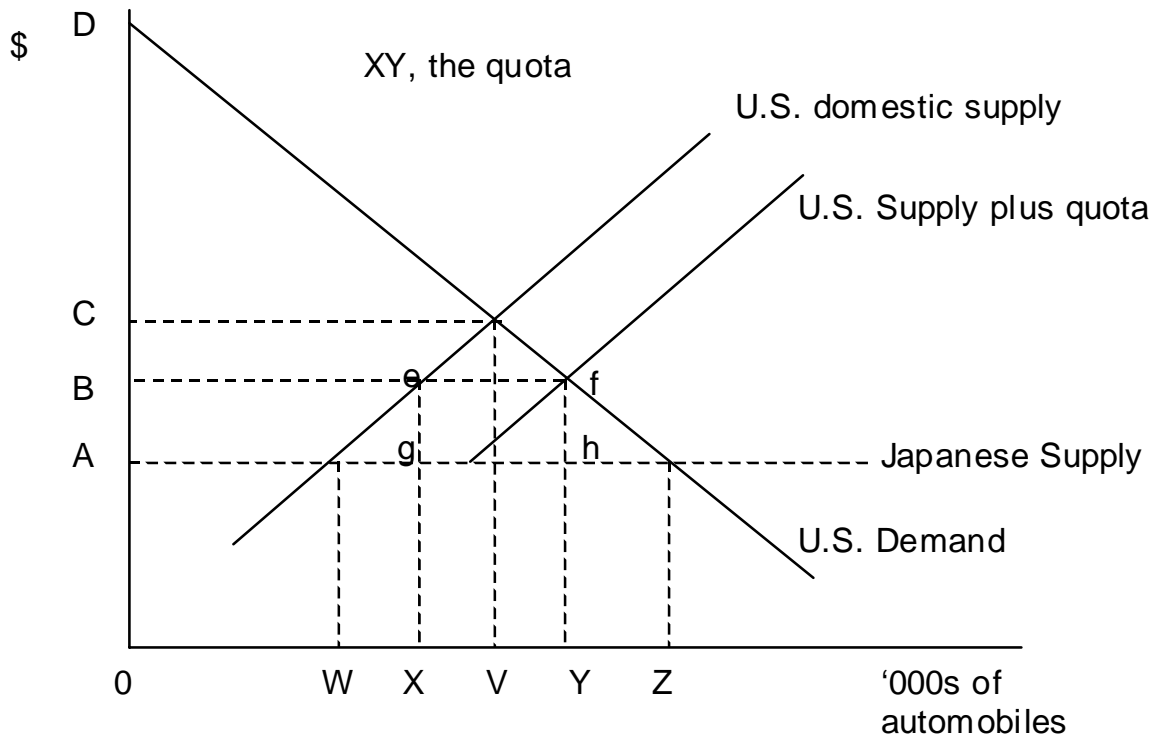
Average Dealership, Share of Revenue and Profit by Activity (U.S., 2003)



Number of Light Vehicle Dealerships: Canada (2003)

General Motors	561	Subaru	97
DaimlerChrysler	501	Suzuki	81
Ford	489	Saturn/Saab/Isuzu	64
Honda/Acura	259	BMW	52
Toyota/Lexus	256	Mercedes-Benz	52
Volkswagen/Audi	175	Mitsubishi	46
Nissan/Infiniti	172	Volvo	43
Mazda	157	Jaguar	26
Hyundai	156	Land Rover	23
Kia	146	Porsche	11
TOTAL			3,367

Trade Policy: Voluntary Export Restraints (VERs) once again



Japanese response:

- Produce and export high-end vehicles (the quota was on volume, not value) (remember, the profit margin on expensive cars greater than on economy vehicles)
- Export light pick-up trucks (the quota was on passenger cars, not trucks)
- Japanese had to divide up the rents (gef_h)

Canadian Automotive (parts and vehicles) Industry

- 12% of Manufacturing GDP, 2% of Total GDP (2004)
- 23% of Exports and 22% of Imports (2003)

2003 - Total Canadian Trade in Automotive Products (millions \$)

Canadian Exports

Total Motor Vehicle	57,148
Total Automotive Parts	25,530

Total Exports	82,678
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Canadian Imports

Total Motor Vehicle	34,881
Total Automotive Parts	43,156

Total Imports	78,037
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Trade Balances

Total Motor Vehicle	22,267
Total Automotive Parts	-17,626

Total Trade Balances	4,641
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- 97% of Exports are to the U.S.
- 78% of Imports are from the U.S.