

Global trends in the automotive industry

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Global demand

- If China economy grows at 8% p.a. then by 2031 per capita income = US in 2006
- But emerging markets face many problems:
 - Infrastructure
 - Urban forms
 - Road networks and social infrastructure
 - Economic fragility
 - See reaction to credit crisis in the US
 - Trade tensions China: US
 - Safety

Overview

- Providing context for the day:
 - Global demand: stagnation and growth
 - International trade versus FDI
 - The leading vehicle manufacturers: structure and strategy
 - The supply chain: creating competence portfolios

Global demand

- Can the automotive industry afford its own future?
 - Need to add circa 25 million units capacity by 2020:
 - 100 new plants at European average size
 - About US\$2.5 billion per plant
 - Plus associated investment in supply chain
 - Plus closure costs in established locations

Global demand

- What is the ultimate level of demand?
 - How many vehicles can the planet sustain?
 - Population growth and economic growth versus resource constraints:
 - Current car only fleet = 700 million; 70 million per annum
 - Population = 6 billion
 - Max potential = 0.75 cars / person
 - 2080 population of 10 billion = 7.50 billion cars or ten times current level
 - Likely 2060 figure of 2.5 to 3.5 billion cars; 300 million per annum?

Global demand

- Market stagnation has not yet really happened except in Japan:
 - Volume and unit value growth
 - Some convergence between major regional markets (NA; EU; Japan) in terms of segments, etc.
 - Growth in 'niche' segments
 - Market bifurcation
 - The value market; the prestige market

Global demand

- Market fragmentation a likely future:

	Brands	Models	Bodies	Variants
1994	54	205	300	1303
2000	57	262	357	1931
2007	63	356	415	3219

Trade or FDI?

- Long-term changes driven by manufacturing costs:
 - The drift Eastwards in Europe
 - The emergence of China, India etc as export locations
 - The erosion of Detroit as a manufacturing location
 - Likely pressure on Japan in the future

Global demand

- Fragmentation likely to increase in the future driven by:
 - Customer choice
 - Government regulation
 - Technical possibilities
 - Manufacturing competence
- Resulting in more complex and volatile markets

Trade or FDI?

- BUT:**
 - Still value in localised production even for high volume assembly
 - Still major investments in established locations
 - Still a lot of high unit value plants in established locations
 - And the 'world car' remains elusive...

Trade or FDI?

- Market convergence increases scope for trade:
 - Thailand: pick up trucks
 - US: SUVs (BMW; Mercedes)
 - Japan: Kei cars
- WTO regime also removes small scale assembly operations

Trade or FDI?

- The Renault Logan example...
 - By 2009 Renault plans an extra 800,000 units sold compared with 2005, Logan is vital
 - Supposed to be €5,000 car
 - H1 production in 2007 just 183,000 from 1 mother plant and 9 daughter plants
 - New plants coming on stream in Russia and India
 - Have to double output at least by 2009

Vehicle manufacturers

- Three consistently successful business models in evidence:
 - The high volume, global coverage, high consistency, quality execution approach of Toyota
 - The specialist, prestige medium volume approach of BMW
 - The ultra-specialist e.g. Morgan

The supply chain

- High levels of turbulence that are likely to get worse rather than better:
 - Business failures especially in the US
 - The end of the Keiretsu
 - The end of the German Mittelstand?
 - Volatile sourcing strategies from the vehicle manufacturers
 - Business problems passed down the chain

Vehicle manufacturers

- Less consistently successful strategies include:
 - Multi-brand constellations (Ford; VW Group; GM versus Renault-Nissan)
 - Medium size 'volume' manufacturing (PSA; Fiat versus Honda)
 - Platforms (VW again)
 - New brand launches and brand extensions (Smart, Skoda, versus Lexus, Porsche)

The supply chain

- The search for a portfolio of competences and locations:
 - New technologies (and new entrants)
 - Cost pressures
 - New vehicle assembly locations
 - Demands for greater system integration capability, world-wide supply, etc.

Vehicle manufacturers

- Is the mainstream business model exhausted?
 - Can enhanced efficiency save the day?
 - What are the alternatives?
- Can new entrants emerge?
- Can the industry control the economic and environmental debates?

The supply chain

- Issues of vertical versus horizontal integration e.g. aluminium sector
- Partnerships, alliances and flexible organisations the likely way forward
- Extends all the way to the contract R&D sector...

Conclusions

- Economic forces plus technical changes will create a new global automotive industry
- This future will be uncertain and volatile
- There will be a premium on flexibility and responsiveness
- It will not just be about least cost
- The UK industry can prosper in these conditions