(CAR) MANUFACTURING RELATED SERVICES

APEC/ABAC public private dialogue on services, 17 May 2015

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Cars are cars all over the world?

Commodity?

Freightliner and Daimler Inspiration truck

Google self-driving cars

Local Motors Rally Fighter

WALL STREET JOURNAL article:

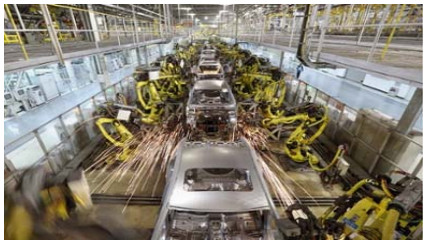
TECH

German Car Makers Preparing Formal Bid for Nokia's Here Map Service With China's Baidu

BMW, Audi, and Mercedes-Benz eager to acquire technology needed to run self-driving cars.....

...."The greatest threat to the automobile industry would be if Google developed an operating system for self-driving cars and made it available free to everyone,"

Super-efficient car plants can be found anywhere....



Great Wall Motors (GWM): 27 *ABB* robots work at 30 different workstations, collaboration happens between handling robots and welding robots. This robotic line performs more than 4,000 welding operations on the car body in an 86 second cycle time, including the transferring operations.

Mini production plant Oxford, UK

But creating a car that hits it off in the market is another matter

China

- The largest car producing country and the largest car market in the world;
- Cars are mainly produced in the country by global brands (in joint ventures with local firms) for the local market;

Nice car, but…

- The first Chinese car to make it to the US market is – Volvo

What are the success factors for car manufacturing?

- Design and engineering:
  - Customer tastes and expectations
  - Regulation
    - Safety (road, cyber)
    - Environment
  - Digitization
  - Embedded data sensors enable real-time monitoring of performance – feed into better products
  - "The core of automotive research and engineering migrates to software driven innovations hubs such as Silicon Valley, Tel Aviv or Bangalore" [McKinsey, 2014]
- Marketing is about customer experience:
  - Connect with customers (one by one using digital technology)
  - Offer services around the car and beyond

Hitting it off in the market:

- Selling the car that customer wants, when they want it and at a price and the (pre and after) service level they expect
- Key is the embodied as well as the bundled services
- The OECD STRI database and indices is a tool for policy makers and industry to analyse more deeply the role of services and services trade policy for the competitiveness of manufacturing

What is the STRI?

A regulatory database

» Information sourced from laws and regulations in place (currently covers more than 16000 laws and regulations)

» Verified and peer reviewed by governments, frequently updated

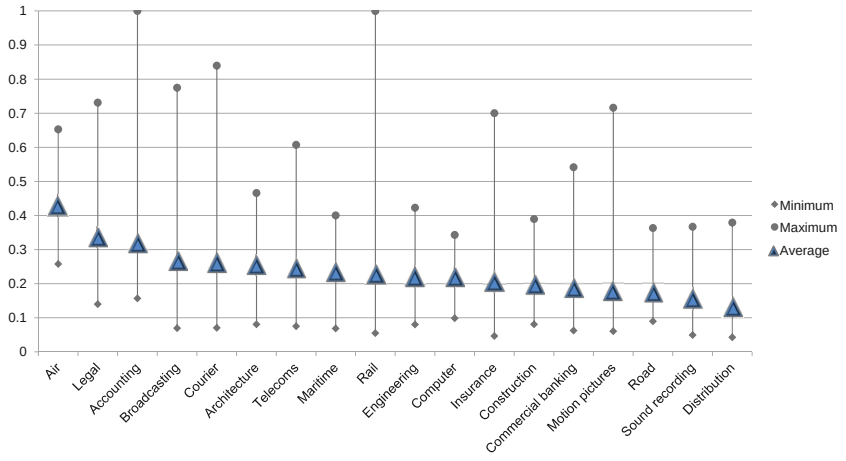
» Available online, highly interactive

Composite indices

» A snapshot of trade restrictiveness, 18 sectors across 40 countries

» STRIs take values between zero and one, one being the most restrictive

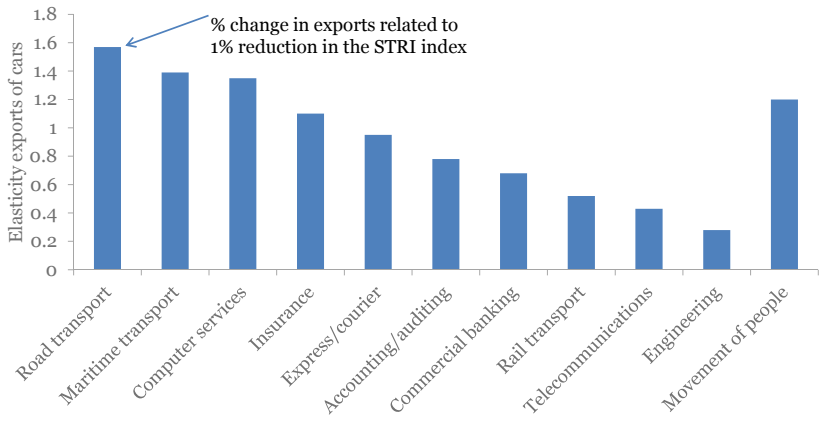
STRI (average, minimum and maximum scores by sector)



An example of analysis: relate selected services to car exports

- IT: data is at least as important as horse power for modern cars (≈ computers on wheels)
  - Computer services
  - Telecommunications
- Transport – particularly regional transport and logistics networks
- Finance: for demand as well as for investment
- Engineering and design

Services restrictions and exports of motor vehicles



Conclusions

- Manufacturing of motor vehicles has always been at the technology frontier;
- Competitiveness in car manufacturing relies on design, greening and connectivity in addition to cost
- Cars are increasingly computers on wheels – and computer services firms may take over strategic innovations in the sector
- Staying abreast with technology and customers relies on access to state of the art services – e.g. ITC, engineering, design, finance
- State of the art services is related to open and well-regulated services markets