

Personal Cars and China

- **Joint study between the Chinese Academy of Engineering and the US National Research Council (panel had 8 US experts and 8 Chinese experts)**
- **Asked to address issues and opportunities relating to the future of personal cars in China – in the context of present trends and Chinese government policy**
- **Aimed to use experience of - and past “lessons learned” by - OECD countries to reduce similar problems as the motorisation of China progresses rapidly**

Motor Vehicles in China

- In 2001 – China had 18 million vehicles of which 5 million were cars (few privately owned)
- Major cities have large taxi fleets; organisations provide “company cars” to senior people
- More Chinese are reaching income levels allowing purchase of a family car :
- Study projections show future Chinese car fleet at:
 - 6% GDP Growth —————> 19 million cars by 2020
 - 10% —————> 43
- Priority to reduce air pollution in major cities

China's Tenth Five Year Plan (2001-2005)

- **Provision of a “China car” that will be widely available to Chinese families***
 - This suggests a four-passenger sedan with some baggage space costing about RMB 60,000 – 80,000 (\$7,200 – \$9,600 US). Below this price range, basic requirements for emissions control, safety and performance cannot realistically be met.
- **Rapid modernisation and growth of a domestic auto industry that will become a “pillar” of the Chinese economy**
 - Present industry is fragmented with many small companies and their products have been protected by tariffs and other trade barriers that are being phased out after China's accession to the WTO. Several foreign companies are producing world class cars in China, but are very careful to guard proprietary information. Tenth plan gives suggested goals.

* and that also will meet new emissions standards (Euro II by 2004-5 and then-current Euro standards by 2010)

Other Factors

- **Fuel supply: China has limited petroleum reserves – growth in auto fleet will require imports. China will need to refurbish old oil refineries to make cleaner fuel to meet new emissions standards – new refineries will be needed. (Import crude or refined products??)**
- **Decentralisation of densely populated cities that do not have room for cars. Major development of new satellite cities that are connected by throughways and public transport and designed around cars (parking, petrol stations, etc.) Shift from smaller local businesses to larger businesses located in “suburbs.”**



Old-style residential alley in Shanghai



Shopping area in Shanghai – note pedestrian overpasses and bikeway



New residential/commercial construction in Shanghai and bike park



New elevated highway in Shanghai leading to satellite cities. Note signs prohibiting trucks, bikes, motorcycles



Metro station in new satellite city of Pudong across from Shanghai

Some Report Findings and Recommendations

- **Chinese gov't should employ vehicle performance standards on emissions, fuel economy, durability, and safety (this will minimise problems and help to weed out manufacturers who produce substandard products)**
- **Chinese auto industry should restructure joint venture partnerships to allow more technology/know-how transfer (the best hope for capacity building for a future domestic industry)**
- **Invest in R&D and leverage internationally to enhance domestic capabilities for innovative, competitive designs**
- **Pursue integrated urban planning – land use, motor traffic flow, and access to good public transportation**
- **Develop gov't labs and Chinese university capabilities to train future generations of technical personnel at all levels**