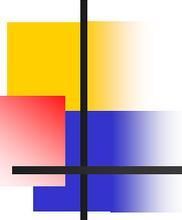


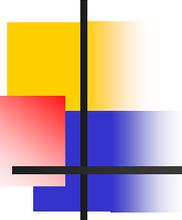
Chinese-style Automobile Manufacturing: in contrast with Japanese-style Automobile Manufacturing

Tomoo Marukawa (University of
Tokyo)



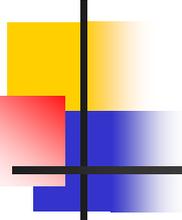
Contrasting the sourcing strategies: Japanese-style

- A Japanese automaker usually has two or three suppliers for each category of parts items. (multiple suppliers)
- For a specific item for a single model, Japanese assemblers select only one from the two or three suppliers. (single sourcing for a single item)



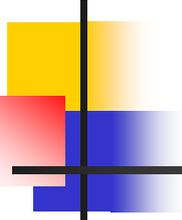
Contrasting the sourcing strategies: Japanese-style

- Potential suppliers compete in terms of development competition or bidding to get an order for a new model.
- Once the assembler decides the supplier for the model, the supply relationship will last as long as production of the model continues. (usually for four years) (Fujimoto, 1999)
(Long-term relations)



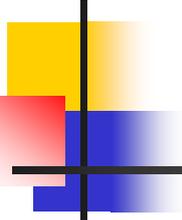
Contrasting the sourcing strategies: Chinese-style

- Beiqi Futian usually buys a single parts item from two suppliers. (double sourcing)
- In the beginning of the production of a new model, Beiqi Futian may not be able to find two suppliers. Even in that case, however, the company will source from a second supplier when the new model enters into mass production.



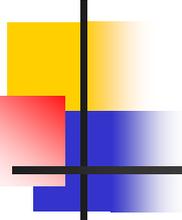
Contrasting the sourcing strategies: Chinese-style

- The contract between the assembler and suppliers last for one year. The price and volume of purchase from each supplier will be decided every year by competitive bidding. Beiqi Futian may even stop buying or change the share during the year. (short-term relations)



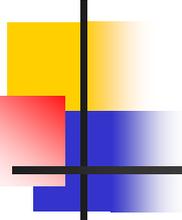
Contrasting the sourcing strategies: Japanese-style

- The cost of developing a new component (e.g., the cost of making dies) will be born by the assembler. The supplier recovers the cost in installments: by adding parts of the cost to the price of the component during 24 months.
- When the purchase fell short of the initial plan, the assembler will compensate for the remaining cost of development to the supplier (Asanuma 1997) (risk sharing)



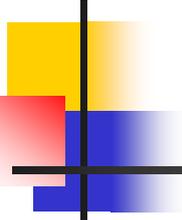
Contrasting the sourcing strategies: Chinese-style

- The supplier can recover the development cost by adding it to the price of the component.
- But the assembler will not take care of the cost even when it stops purchasing one-sidedly. (high risk for the suppliers)
- When Beiqi Futian buys from a foreign supplier, however, it may take care of the cost by buying the dies or guaranteeing a certain amount of purchase.



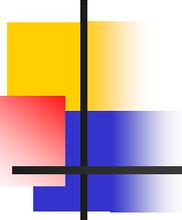
Contrasting the sourcing strategies: Chinese-style

- An extreme case is Chinese motorcycle industry.
- A motorcycle assembler usually buys a specific parts item from more than three suppliers. The share of purchase from each supplier is changed every month or two months.



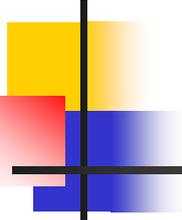
Contrasting the sourcing strategies: Euro-Sino-style

- European-Chinese joint ventures' strategy stands in the middle of the two extremes.
- Dongfeng Citroen buys a specific item from more than two suppliers. It classifies the suppliers into three groups, A, B, and C, and buys 60 to 70 per cent from A, 30 to 40 per cent from B, and keep C as a reserve. Shanghai VW adopts a similar strategy.
- A is usually the supplier of the same enterprise group, such as Dongfeng Group or SAIC Group, and B is the supplier outside of the Group.



Contrasting the sourcing strategies: Euro-Sino-style

- European assemblers usually pay for the cost of parts development, including the cost of making dies, right after the supplier has finished parts development.
- Some Euro-Sino car assemblers adopt this custom.

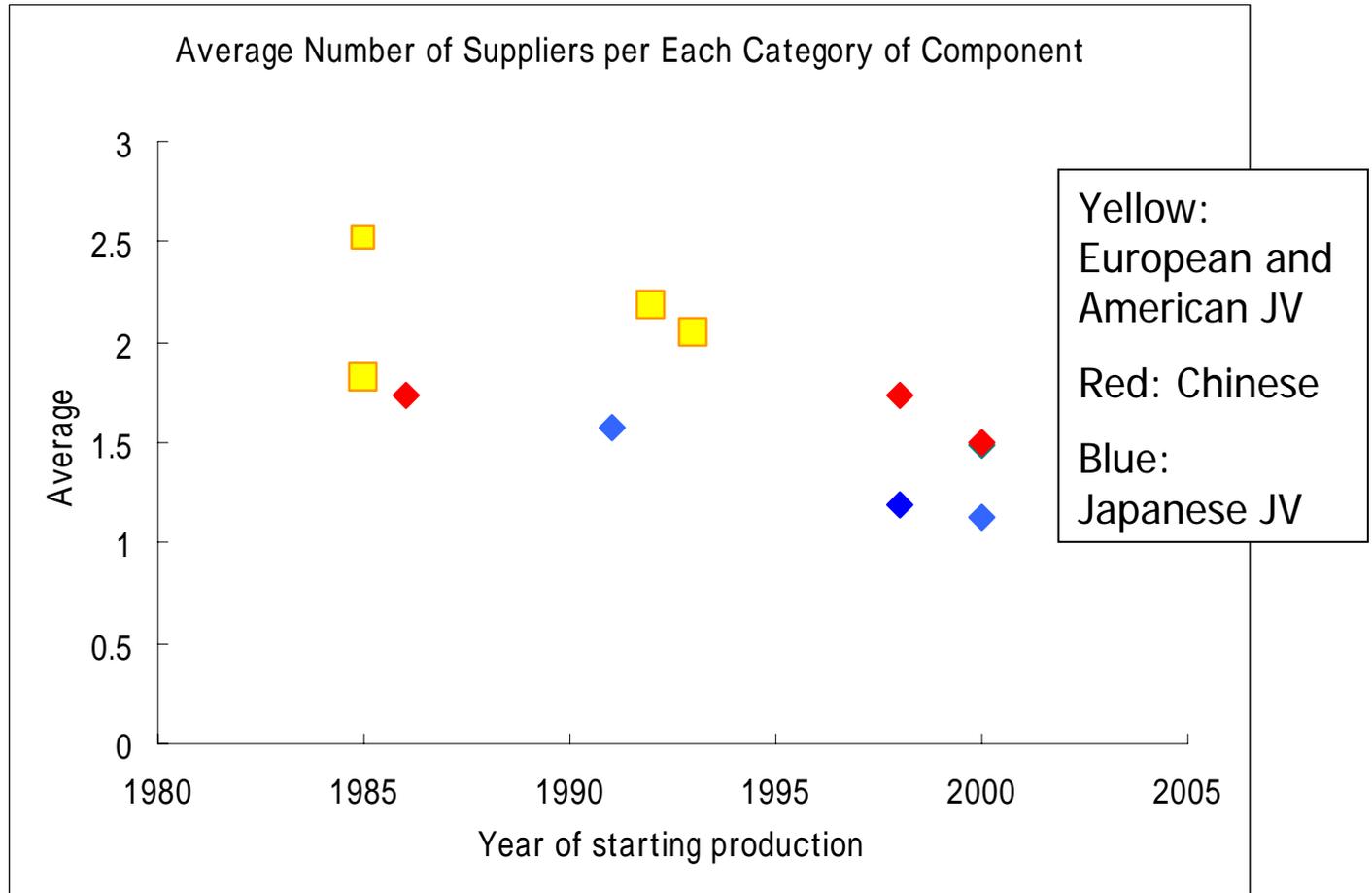


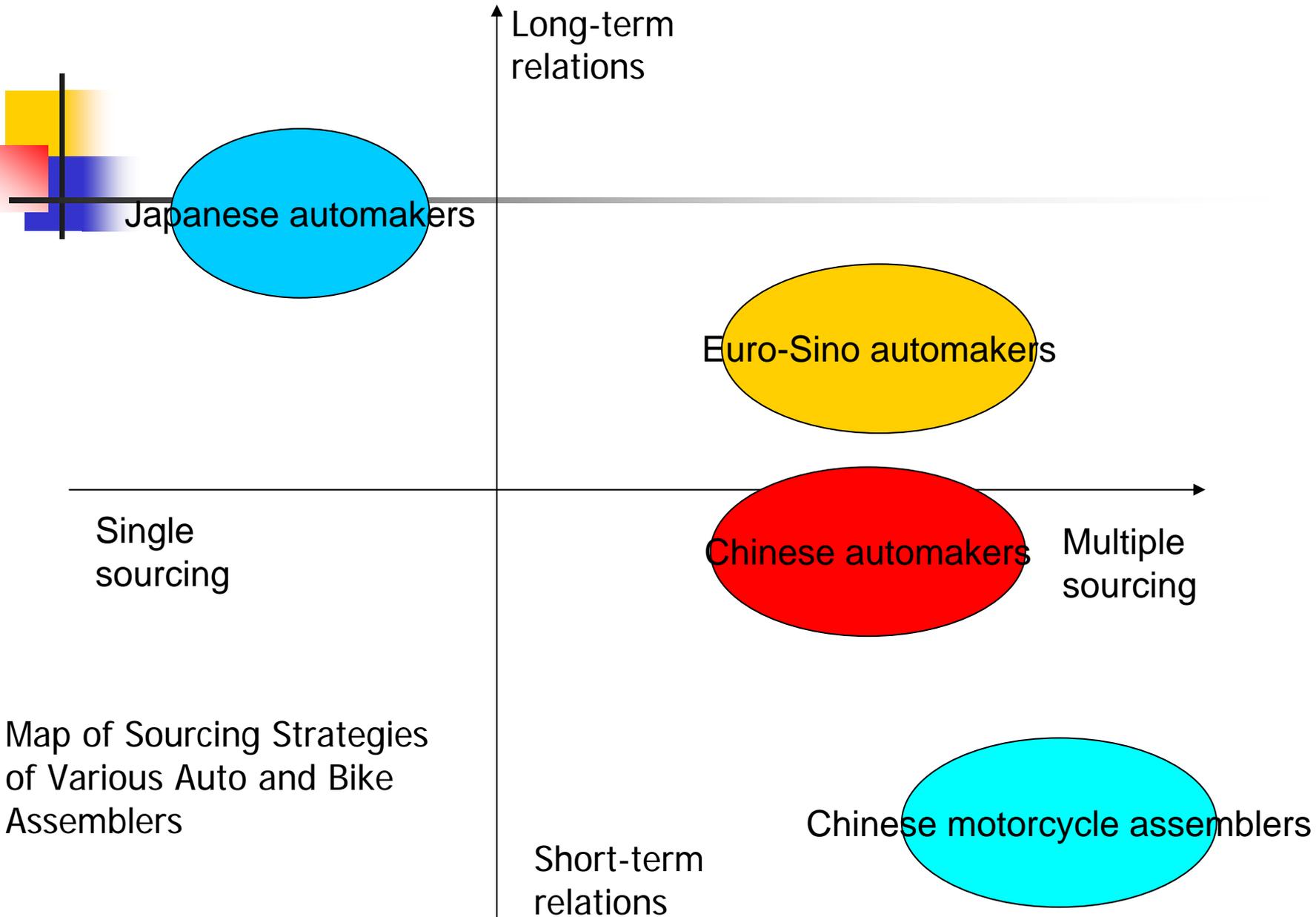
Contrasting the sourcing strategies: Euro-Sino-style

- Euro-Sino carmakers have different strategies for different models: for the old models--such as Santana, which has been produced in China for 20 years--, double sourcing. For the new models, single sourcing.
- In the case of old models the suppliers didn't have to develop new parts. For the new models suppliers must develop new parts.

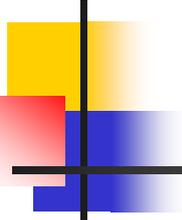
Statistics of Purchasing Strategies of Car Makers in China

Note: This figure is calculated from an list of 478 parts suppliers, which is an incomplete one.





Map of Sourcing Strategies of Various Auto and Bike Assemblers

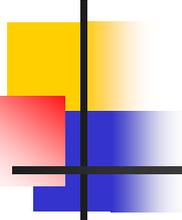


Why the difference?

- **Japanese-style:** Early involvement of the suppliers to the development of parts: the suppliers must invest in making dies and specialized equipments, and a lot of man power in order to develop new parts before they can have the returns.
- Without the assembler's guarantee to buy exclusively from the supplier, the supplier will not enter into such a deal.

See the results...



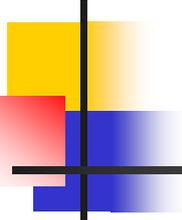


Why the difference?

- **Chinese-style:** Suppliers' initial investment for developing a new parts is not so large. Even when one assembler stops buying a specific parts, suppliers can find other assemblers who will buy the same parts. Thus they can economize on development costs.
- That is because assemblers produce vehicles on the basis of some previous model. Especially, in the cases of light wagons (*mianbaoche*), small trucks and motorcycles, many assemblers produce similar vehicles.

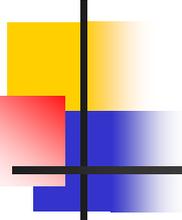
Why the difference?: Chinese-style car development

- Chinese automakers develop their new automobiles by gathering existing components, though they may add some modifications to them.
- FAW developed *Hongqi Mingshi* mounting Chrysler's engine (CA488), VW's transmission, and Audi's body with some modifications.
- The new *Hongqi Shijixing* mounts Nissan's engine.
- Qirui imports engines from TRITEC, a joint venture of BMW and DC in Brazil. Qirui gathered automobile parts from 30-40 suppliers of Shanghai VW.



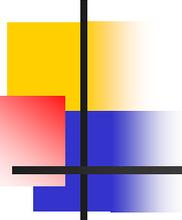
Why the difference?: Chinese-style car development

- In the case of Beiqi Futian's truck, the customer can choose engines, whether made by Yunnan or by Chaoyang.
- Also, Geely offers the choice of Geely's engines or Tianjin Toyota's engine, just like choosing a CPU of a computer.
- This kind of thing is unimaginable, at least at the moment, in Japanese automobile industry.



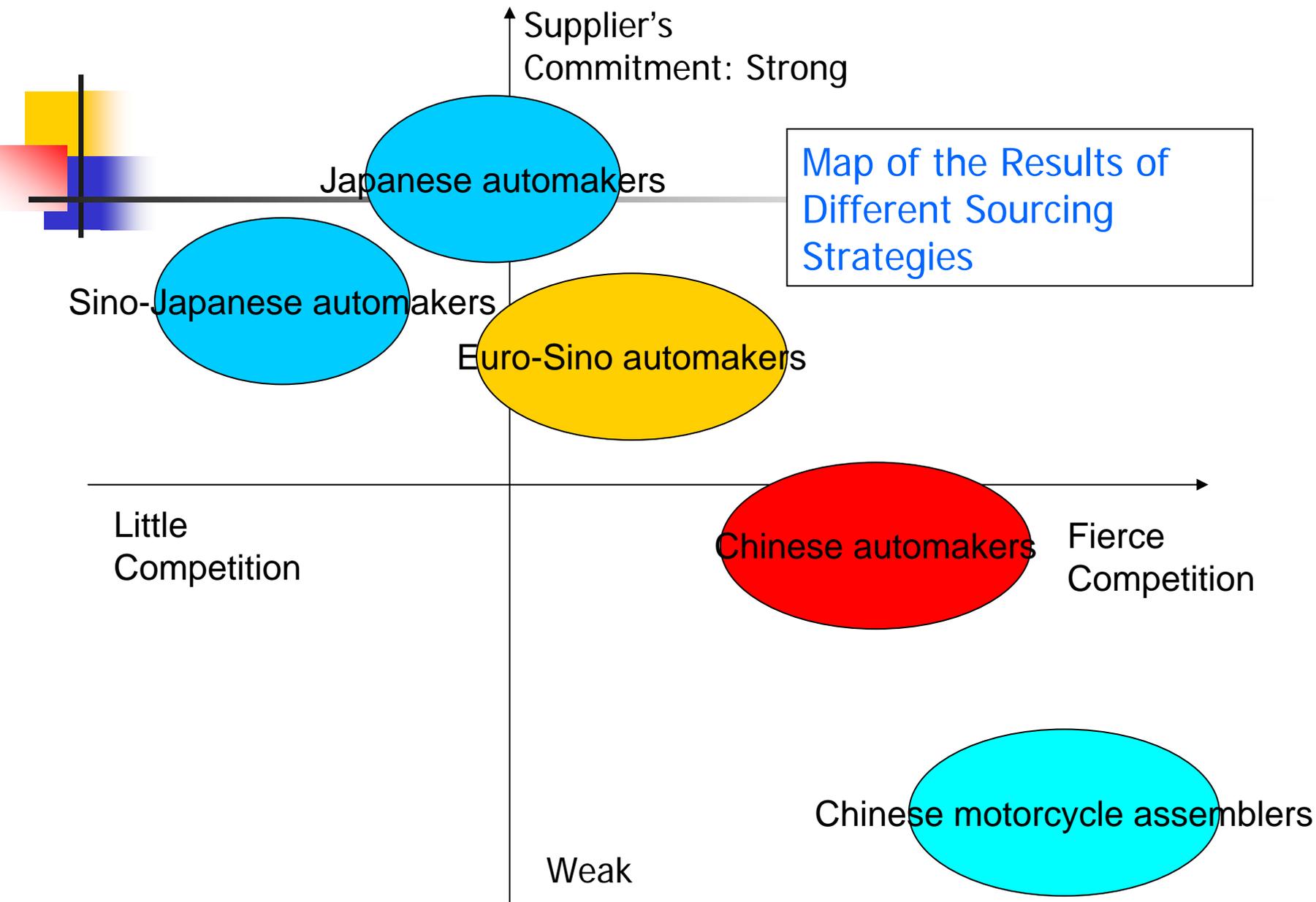
The Results: Japanese-style

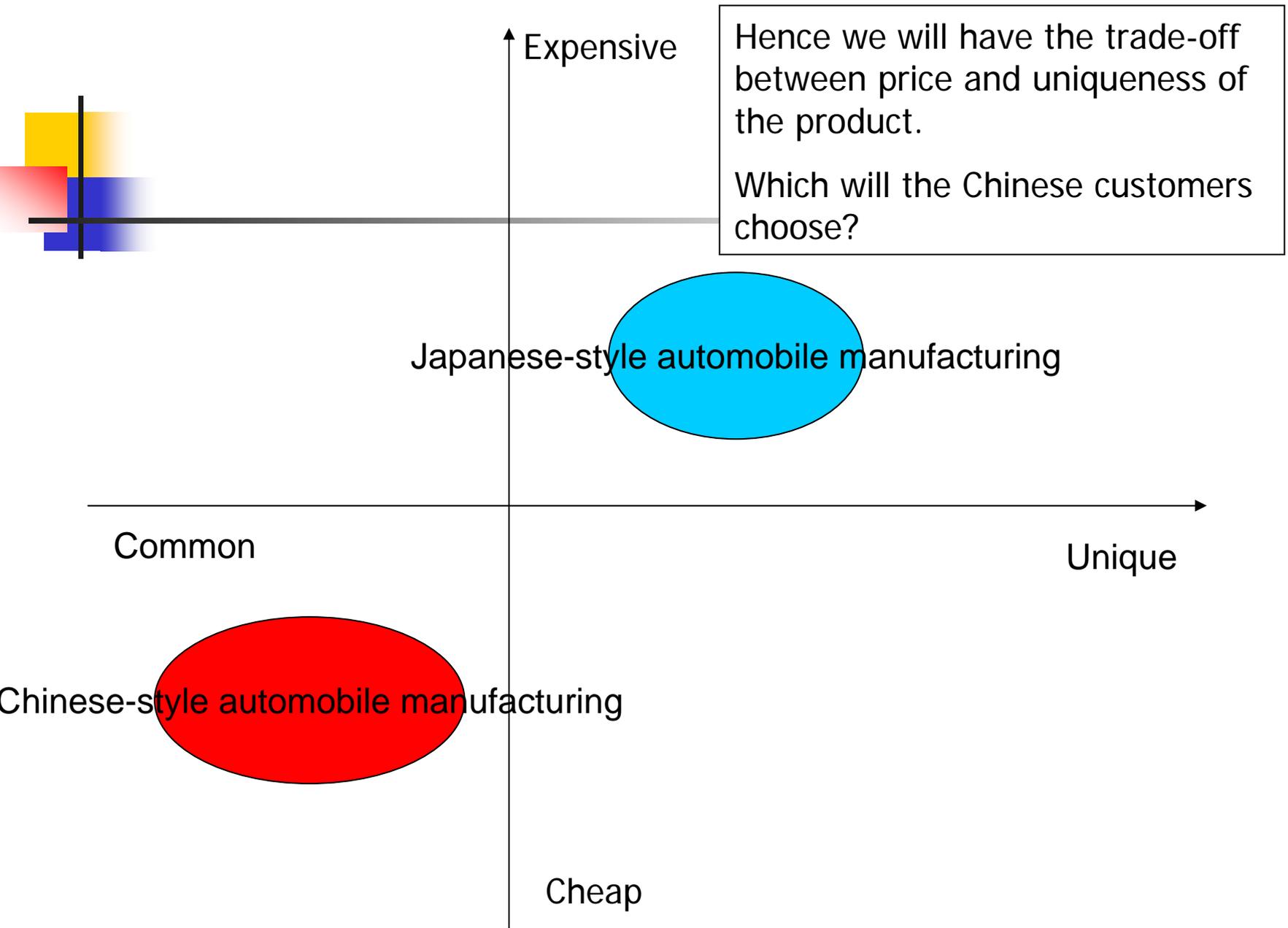
- By adopting a Japanese-style sourcing strategy, automakers can have great commitment from the suppliers to the development of new cars.
- But at the same time this strategy sacrifices the competition between suppliers, which may end up in high purchasing costs.



The Results: Chinese-style

- By adopting a Chinese-style sourcing strategy, automakers can force the suppliers to compete fiercely, and suppress the purchase price.
- But it will be difficult to expect the suppliers to make large investments in developing a new product.
- Hence, assemblers may only buy common parts. And therefore their cars will also be common.





Hence we will have the trade-off between price and uniqueness of the product.
Which will the Chinese customers choose?

Japanese-style automobile manufacturing

Common

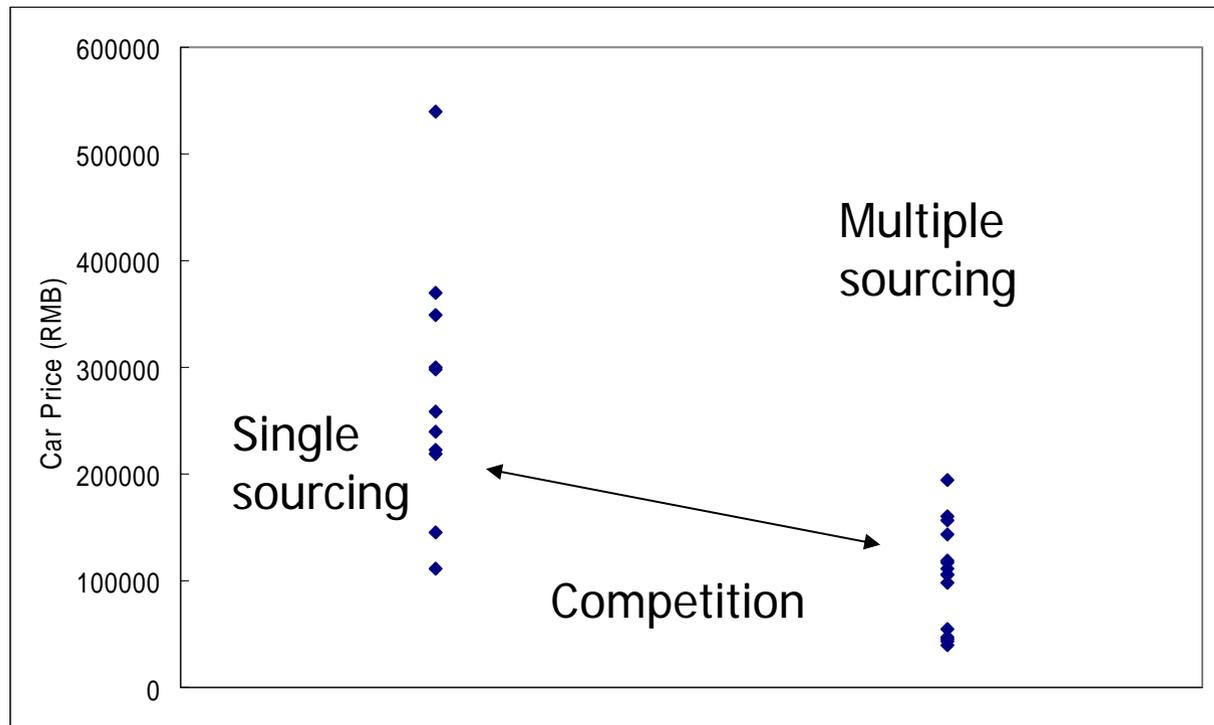
Unique

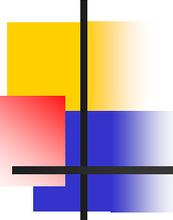
Chinese-style automobile manufacturing

Cheap

The automobile market will be divided into two segments: newly developed, high price, single sourcing cars, and common, low price, multiple sourcing automobiles. But since both types of automobiles have the same function, competition between the two is inevitable.

The sourcing strategies of each models of cars



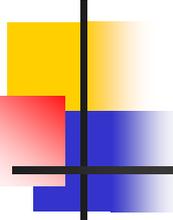


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Data Sources

- Author's interviews at more than 30 automobile and automobile components enterprises in China during January 2002, October 2002, and February 2003
- Data on supplier relations come from Zhongguo qichebao she, et al. ed. *Zhongguo qiche lingbujian gongyingshang shouce*, Jilin kexue jishu chubanshe, 2002, and the author's interviews.