Motorcycle Industry in Vietnam, Thailand and Indonesia

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Japan-Vietnam Economist Club

Kohei Mishima

Ph.D.candidate

Graduate School of Economics and Management, Tohoku University

Purpose

There are three purpose in this presentation.

1 What are the features of motorcycle **market** in Vietnam, Thailand and Indonesia ?

2 What are the features of **Japanese motorcycle makers** in Vietnam, Thailand and Indonesia ?

3 What are the **future** of motorcycle industry in Vietnam, Thailand and Indonesia ?

Outline

Ⅰ Introduction

Overview of motorcycle industry

Ⅱ Body

1 Market trend in Vietnam, Thailand and Indonesia

2 The features of Japanese motorcycle makers in Vietnam, Thailand and Indonesia

3 Cases

4 Analysis by Business Architecture Theory

Ⅲ Conclusion

Summary and conclusions

Overview of motorcycle industry

There are mainly four features about motorcycle industry.

1 Rapid expansion at market depends on low price model.

2 Main markets and producers are developing countries.

→ China 50 : India 20 : ASEAN 20 : Rest 10

3 Japanese makers and Chinese makers contend with competition.

→ (Makers by production volume) Japanese:Chinese=1:1

(Production district)

Japanese:Local⇔Chinese:Domestic&Export

4 Market(Demand) and Makers(Supply) have a close connection.

The factor behind rapid increase of production and sales

Rapid expansion at market depends on low price models.

(Factors of Supply side)

Chinese motorcycles are sold from half to one third price of Japanese one

→The trend of price-reduction by Japanese motorcycle makers for market expansion

(Factors of Demand side)

Most of potential demand of motorcycle generate from low income group (below 500$ monthly household income).

←Close link with Market (Demand) and Maker (Supply)

1 Market trend in Vietnam, Thailand and Indonesia

ASEAN countries markets are stronghold for Japanese motorcycle makers

→ Since 2000 Chinese motorcycles have flowed in ASEAN markets because of Chinese market’s stagnation.

→The tightening competition

(surface) Sales price competition

(deep) Competition between different business architecture

→These market are in the process of opening.

Ⅱ-1 ①History

	Vietnam	Thailand	Indonesia
1960			
		1964 Yamaha	
	1964 Vietnam war	1965 Honda	
		1967 Suzuki	
1970		**1971 Local content restriction (more than 50%)** Ban on constructing new asemble plant	**1971 Honda**
	1975		1974 Yamaha Suzuki
		1977 Local content restriction (more than 70%) abosolution of ban of 1971	**1977 Local content restriction by prenalty**
		1978 Ban on importing CBU	
1980			
	1986 Doi Moi		
1990			
			1993 Local content restriction by insentive
	1996 Suzuki	**1996 Import Liberalization of CBU**	
	1997 Honda **Ban on importing CBU**	**1997 Abosolution of local content restriction**	
	1999 Yamaha		**1999 Import liberalization of CBU**
2000			
	2003 Import Liberalization of CBU		

Source) Author's research and Yokoyama [2003]

Ⅱ-1 ②Market features

	Vietnam	Thailand	Indonesia
Population	79.7 million	63.3 million	201.2 million
GDP per capita (2002)	427 $	1,988 $	803 $
Domestic use (2002)	10.2 million	16.5 million	18 million
Market size (sales unit per year)	1.51million(2002)	1.74milion(2003)	3.08milion(2003)
Ratio of people to Motorcycle (2000)	12.0	4.5	15.5
Sales share of Japanese makers	33% (2002)	96% (2003)	90% (2003)
Sales share of Chinese motorcycle	67% (2002)	3% (2003)	8% (2003)
Retail price of Japanese makers' cheapest model	730$	684$	1120$
Installment sale	×	○	○
Secondhand market	×	○	○

Source) Author's research, Honda[2003]

Ⅱ- 2 The features of Japanese motorcycle makers in Vietnam, Thailand and Indonesia

Outline of section Ⅱ-2

- Ⅱ-1→Discussion on stages of competition
- Ⅱ-2→Discussion on players of competition

→At section Ⅱ-2, consideration of the features of Japanese motorcycle makers in Vietnam, Thailand and Indonesia from the point of their business process.

*Business process = A series of process from R&D, procurement, production to sales, user support.

→Reference specifically to R&D, procurement and production

Ⅱ- 2 ①Production system

- Production scale of Japanese makers' factory in Vietnam, Thailand and Indonesia is larger than that of in Japan but cycle time is almost in the same level.
- Japanese makers in Vietnam, Thailand and Indonesia make fewer models than in Japan.

(ASEAN):Big lot production system

(Japan):Small lot production system

→Production ability of ASEAN countries has not yet been at the same level as Japan.

→They are still in growth process.

Ⅱ- 2 ②Procurement system

- The Japanese makers' procurement sources are often Japanese parts makers
- For the cost down, some makers send their orders outsourcing for price bidding or to Chinese parts makers, and others adopt global procurement system.

⇔It is enough production scale for makers, especially Honda, in Vietnam, Thailand and Indonesia that the main system is not global procurement but local procurement.

Classified by the distribution of parts which are to maker or to buy and by the degree of suppliers' dependence on assembler's R&D facility

Parts module	Japanese	China			Vietnam		Thailand		Indonesia	
		Japan-China joint	Chinese upper	Chinese Lower	Honda Waveα	Yamaha	Honda WaveZ	Yamaha	Honda Karisma	Yamaha
Cylinder block	◎	◎	●	○	◎	◎	◎	◎	◎	●＊
Cylinder Head	◎	◎	◎●	○	◎	◎	◎	◎	◎	●＊
Piston	●	◎●	●○	○	-	△	-	●	◎	-
Piston Ring	●	●△	△○	○	△	△	-	●	-	-
Oil pomp	●	●△	○	○	△	●	-	●	-	-
Carburetor	●	●	○△	○	-	△	●	●	△	-
Fuel tank	●	◎●	●	●○	-	◎	-	◎	◎	●
Muffler	●	◎●	●	○	●	●	●	◎	-	●
Clutch	●	●	●△	○	●	△	●	●	●	◎●
Transmission	◎	●△	●○	○	●	△	●	◎	●	●
Suspension	●	●	○	○	●	●	-	●	●	●
Wheel Rim	●	●	○	○	●	●	●○	●	◎●	●
Tire	○	●○	○	○	●	●	●	●	●	●
Body	◎●	◎●	◎●	○	◎	◎	◎	◎	◎	◎
Power Generator	●	●○	○	○	-	◎	-	●	●	●
Lamp	●	●	●○	○	●○	●	●○	●	●	●＊
Meter	●	●	●○	○	●	●	●	◎	●	●＊

Note)◎make in own factory ●subcontract custom-made ●＊subcontract custom-made by totally-held subsidiary ○subcontract multi-purpose △Import

Source) About Japan, Vietnam, Thailand and Indonesia, according to author's research. About China, ref.Sugiyama・Otawara"Chuugokukigyounokyousouryokutoseihinnakitekucha""Akamon Management Review"(Vol.1 No.8,2002).About typify,ref. Matsuoka Kenji"chuugokuotob

Ⅱ - 2 ③ R&D system

- Transfer of R&D facility to Thailand is in high gear.

→ Motorcycles which are developed in Thailand are going to be produced and sold in Thailand as well.

- In Vietnam and Indonesia, R&D ability is limited in case of change of appearance, market research etc..

Ⅱ-3 Cases

Outline of section Ⅱ-3

How do makers which have features like Ⅱ-2 act in the markets like Ⅱ-1 ?

→At section Ⅱ-3, makers' concrete actions are shown.

①**Thai Honda MFG (Thailand)** : Most formidable competitor in Southeast Asian countries

②**PT Astra Honda Motor (Indonesia)** : Affect of the capital composition

③**Yamaha Motor** : Non-competitive price strategy

Survey of Japanese assemblers

in Vietnam, Thailand and Indonesia

	Vietnam			Thailand			Indonesia		
	Honda	**Yamaha**	**Suzuki**	**Honda**	**Yamaha**	**Suzuki**	**Honda**	**Yamaha**	**Suzuki**
establishment	1996	1998	1995	1965	1964	1968	1971	1974	1970
capital	31.2 million $	24.2 million$	11.7 million$	3.83 million$	1.04 million$	7.12 million$	2.15 million$	2.99 million$	45 million$
capital structure	Honda 42% Asian Honda Motor28% Veam 30%	Yamaha motor46% VINAFOR 30% Hong Leong Industries 24%	Suzuki 35% Nisshoiwai 35% Veam Vikyno factory 30%	Honda 60% Honda Proderty Development 23%	Yamaha motor 51% KPN Holding 15% other 34%	Suzuki 52.1% SPS etc.47.1%	Honda 50% PT Astra International 50%	Yamaha motor 85% Mitsuibussan 15%	Suzuki 90%
productive capacity per year（2003）	0.78 million	0.08 million	0.06 million	1.40 million	0.40 million	0.36 million	2 million	-	-
actual production（2002）	0.28million(2002.1-8)	0.04million（2002.1-8)	0.25million（2002.1-8)	1million	0.15million	0.19million	1.58 million	0.58 million	
Local content(%)	about 50%	about55%	-	98%	93.5%(ASEAN 97.6%)	-	ASEAN90%	60%(ASEAN90	-
transactional supplyer (Japanese supplyer)	31 (18)	28 (26)	-	150	120	-	30-40(10-15) total 300	-	-
Employees	2500	500	250	4000	1580	1000	6900	5493	
Domestic sales share	26%	4%	5%	78%	13%	-	56.5%	20.3%	20.9%

Source) Author's research. About Suzuki, reference to Suzuki's web(http://www.suzuki.co.jp/) About Vietnam's domestic sales share is in reference to UFJ's research

Ⅱ-3 ①Thai Honda MFG (Thailand)

- Absolute price competition with Chinese motorcycle

→Product development, production and sales of Wave Z, low-end model.

(Background)

Market expansion

Supplier in tiers

Long history of operation

Introduction of price-biding system for selection of procurement source

Ⅱ-3 ②PT Astra Honda (Indonesia)

- Capital structure

→Astra International 50% Honda 50%

→(＋) enough sales outlet and after service network appropriate response to Chinese motorcycles

⇔In Vietnam,Chinese motorcycle sellers are local makers.

(－)Retail prices remain in higher than other Southeast Asian countries.

Ⅱ-3 ③ Yamaha Motor

- Avoidance from direct price competition with Chinese motorcycle and Honda

→ Exploring a third way

→ **Target customer**:younger people

Model:high value added model

Cost down strategy:

introduction of global procurement

Ⅱ-4 Analysis by Business Architecture Theory

Outline of section Ⅱ-4

What do the makers' features and the market trend mean ?

→At section Ⅱ-4, let's discuss the suggestion in the Business Architecture Theory.

①Survey of Business Architecture Theory

②Applying motorcycle made in Japan and China to product architecture

③ Applying motorcycle made in Vietnam,Thailand and Indonesia to product architecture

④ Outlook for the future of motorcycle industry in Vietnam, Thailand and Indonesia

Ⅱ-4 ①Survey of Business Architecture Theory

- **Architecture**

  = Basic design concept about connection (interface) between parts

- **Business Architecture**

  = Interdependency between several active factors in Business process

Ⅱ-4 ①Survey of Business Architecture Theory

A: Relation between function and parts

Module type:

Relation between function and parts is nearly one-to-one.The function of each part is self-contained.

Integral type:

Relation between function and parts is many-to-many (not one-to-one) and complexion.Mutually adjustment is always needed between parts.

Ⅱ-4 ①Survey of Business Architecture Theory

B: Generalization of interface (parts)

Open type:

Interface (parts) is generated beyond companies.

Close type:

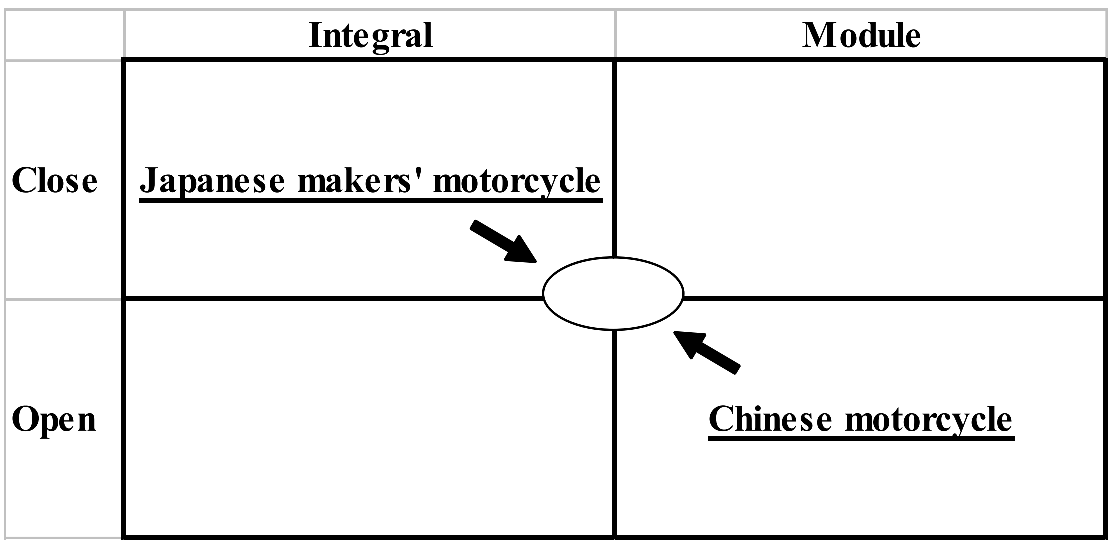
Interface (parts) is often closed within a company.

Ⅱ-4②Applying motorcycle made in Japan and China to product architecture

- Japanese makers' motorcycle=Close-Integral type
- Chinese motorcycle=Open-Module type

→In China, there is a tendency to converge on the neighborhood of center.

→What kind of trend is there in Vietnam, Thailand and Indonesia ?



Ⅱ-4③ Applying motorcycle made in Vietnam,Thailand and Indonesia to product architecture

- Product architecture of Japanese makers' motorcycle is Close-Integral type like in Japan.
- Product architecture of Chinese motorcycle is Open-Module type like in China.

→ No change ?

Ⅱ-4③ Applying motorcycle made in Vietnam,Thailand and Indonesia to product architecture

- From product architecture point of view there is no change, but if competition pattern is considered, there are some changes.

  Open type Competition:Anyone can access to the market without regulation concerning nationality or entry qualification etc.

  Close type Competition:Only someone can access to the market because there are some regulation in advance.

Ⅱ-4③ Applying motorcycle made in Vietnam,Thailand and Indonesia to product architecture

(Until now)

Product market:Close type competition

←prohibit of CBU (Vietnam),High customs (Thailand)

Procurement situation:Make a point of Business affiliation (Keiretsu) in Japan, experience of business

(From now)

Product market:Open type competition

←Remove the ban of CBU (Vietnam), Reduction of customs (Thailand)

Procurement situation: Introduction of price-biding system for selection of procurement source, utilization of Chinese parts

Ⅱ-4③ Applying motorcycle made in Vietnam,Thailand and Indonesia to product architecture

		Axis of Product Architecture	
		Close	Open
Axis of Competition Pattern	Close	Southeast Asian countrise until now	
	Open	Southeast Asian countrise from now	China

Ⅱ-4③ Applying motorcycle made in Vietnam,Thailand and Indonesia to product architecture

Reasons behind the change of trend in Southeast Asian countries and China

		Southeast Asian Coutries	China
Asembler	Type	almost Japanese makers	Chinese makers are mainstream
	Quantity	4-5 companies	more than 300 companies
Supplier	Type	Japanese makers are mainstream	Chinese makers are mainstream
	Quantity	few (Vietnam, Indonesia) many (Thiland)	Quite a lot and thick layer
Basic Technology*		Very few	Quite a lot and thick layer
Raw materials		Very few	Quite a lot and thick layer

*Basic Technology=Casting,Forging,Plating,Heat treatment,Paint,Machining,Press,Plastics molding etc.

Source) About Southeast Asian contries are refer to Autor's reserch.About China, refer to Ohara[2001] and Seki[1993]

Ⅱ-4 ④ Outlook for the future of motorcycle industry in Vietnam, Thailand and Indonesia

- **Cases in Thailand, Vietnam and Indonesia indicate that Japanese makers will be able to maintain competition with advantage.**

Ⅱ-4 ④ Outlook for the future of motorcycle industry in Vietnam, Thailand and Indonesia

Issues in the near future

The deregulation of trade in today's economical wind

→The more tightening competition

(surface) Sales price competition

(deep) Competition between different business architectures

→Will Japanese makers be able to cut cost by Close-Integral architecture as it is ?

→Will the product architecture be switched to Chinese type like Japanese makers in China ?

Ⅲ Conclusion

1. Due to Chinese motorcycle' advance and the deregulation of trade, the competitions in Vietnam, Thailand and Indonesia become open type competition from close
2. Japanese makers' business architecture, like as past, have been placing a special emphasis on total quality, and Japanese motorcycle maker and supplier work together from R&D phase with taking account of whole balance of motorcycle.
3. Cases in these three years indicate that Japanese makers will be able to maintain competition with advantage.

- Thank you very much for your attention.
- If you anything remains uncertain,please ask me. Then, let’s move to the discussion.