

# Emerging Market Strategy in Compact Vehicles: The Case of Japanese automakers

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## 1. Research Questions

This paper aims at clarifying which segment is the biggest sales volume zone in automobile market of developing countries. At the same time, this research also focuses on the international comparative study on compact vehicles segments in developing countries. And then the marketing strategies of Japanese automobile manufacturers in developing countries would be considered. These are research questions of this paper.

Explaining the concerns of this paper, that is related to the downmarket in the developing countries. Namely as the income levels in developing countries are low, automobile manufacturers have to develop compact and low price vehicles to match for such low income level. Japanese automobile manufacturers, however, have been delaying to develop these compact and low price vehicles, while Korean and Chinese automobile manufacturers already enter into such segments aggressively. Therefore how can Japanese manufacturers make a breakthrough for these situations? What kind of marketing strategy should they take? These questions are the interest of this paper. In order to make a breakthrough, at first this paper has to analyze the actual conditions of compact vehicle segments in developing countries.

In previous researches there is not paper where they make international comparison of segment composition of automobile market among developing countries and then find out the volume segment of automobile market in each countries. Including other industries, however, there are a lot of studies in which they consider the appropriate marketing strategy for developing countries. And many studies have discussed about competitive relationship among Chinese, Korean, and Japanese manufacturers.

Introducing typical studies, Prahalad (2005) can be cited firstly. They indicate a new vision on business strategies in developing countries. He characterized the 3 or 4 billion of people with less than \$ 1,500 income as “Base of the Pyramid [hereinafter BOP]” and then proposed a concrete business strategies by which they can change over the poor people into the actual customers.

While Prahalad(2005) didn't mention about automobile market, mentioning about BOP market for automobile, the number of automobile vehicles in use in developing countries is roughly 200 million out of 950 millions worldwide in 2010. In order to purchase a consumer durable goods such as automobile, people need to obtain same level of annual income with a price of an automobile. So automobile manufacturers have to develop and produce a vehicle with a price of \$ 1,500 to the people with less than \$ 1,500 income in BOP market. Then are there any vehicles which match such a low price in the world?

Automobile manufacturers in developing countries have already developed and sold such vehicles as “Ultra Low Cost Vehicle[ULCV]” with price of less than \$ 4,000 and “Low Cost Vehicle[LCV] with price of \$ 4,000-8,000 (no consensus on definition of ULCV and LCV). For example Tata Motors in India began to sell Nano at \$ 2,000 in 2009. Moreover Chinese automobile manufacturer, Chery Motors also has been selling QQ at \$ 4,000. Dacia in Romania which is a subsidiary of Renault in France are selling Logan at \$ 7,000.

Japanese makers, however, have not yet entered into such segments as ULCV and LCV at present. Nissan March/Micra (1200 cc, \$ 9,000) and Toyota Etios (1200 cc, 1500 cc, \$ 8,000), which are developed recently, are located in one more upper segment, B segment. Japanese makers have a long way to go to catch up.

According to Christensen (1997), Japanese makers could be criticized, because they might fall into “The Innovator's Dilemma.” That is to say, though Japanese makers are eagerly tackling “Continuous Innovation” such as continuous improvement activities, however they ignore such “Disruptive Innovation” as ULCV and LCV where makers aggressively develop highly innovative vehicles in completely new domain. Japanese makers are only concentrated on developing new functions and improving quality in conventional area. And they have not been able to develop such a completely new segment as ULCV and LCV.

Analyzing electronics industry from similar viewpoint, Shintaku/Amano (2009) criticize that Japanese electronics makers also have not been able to simplify the functions of products and to create “adapted quality” depending on each developing countries.

According to “Blue Ocean Strategy” by W.C.Kim,etc.(2005), ULCV and LCV segments might be “Blue Ocean,” where they can expand sales and get big profit without competitor. And in terms of Blue Ocean strategy, we should reconsider the fact that compact car market in US was Blue Ocean in 1960s. European and Japanese auto makers exported compact cars into US market and expand their sales there. However Big3 didn't develop compact car, because of the reasons which are stated in Table1. Then after oil crises, Big3 lost their competitiveness at all in the compact car market. This is an important lessons for Japanese makers who are now delaying to enter ULCV and LCV market.

Based on above-mentioned interests and research questions, following three issues will be examined in this paper.

1. Which segment is the biggest sales volume zone in developing countries such as China?
2. The fact that Japanese makers put importance to middle and high price range in developing countries.
3. Why and how Japanese makers can put importance to middle and high price range? Moreover, from long terms viewpoints, how long will they keep its strategy?

Following methods of analysis would be used.

1. As it is difficult to obtain the systematically-collected statistics on price segments, firstly this paper sets up the segmentation basis according to the body size (length·width·height) and the engine displacement and then makes comparisons of segments structure in each

countries, for example, which segment is biggest. Moreover we make historical comparison of segments structure in same country.

2. Though there is positive relation between price and body size segment, it is not direct proportion. Therefore body size segment structure might be a little different from price segment.
3. This paper focuses on new vehicles of automobile category and doesn't analyze used vehicles. And we mention briefly about non-automobile category vehicles such as Tuktuk in Thailand.

## **2. International Comparison of Sales Ratios by Segment**

### **a. International comparison of sales ratio by segment**

Table2 indicate segmentation criteria in each country. As each country introduces different classifications, segmentation criteria might be different in each country.

Typical segmentation is Europe/USA criterion at Table2. This criterion is used mainly worldwide. In this criterion, classification is based on the length of a vehicle. In this paper, we make 5 segments, A(less than 3.75m), B (more 3.75m /less than 4.2m), C (more 4.2m /less than 4.4m), D (more 4.4m /less than 4.8), and E (more 4.8m). In India, classification of size resembles with Europe/USA, but is slightly different.

In China and Japan, they use the segmentations based on engine displacements. Therefore this paper uses the engine displacement as its segmentation criteria instead of Europe/USA criterion. So segmentation criteria are sometimes different by country.

### **b. Global average**

Looking at Figure1, the biggest segment in Global average is C segment 36%. B segment 25% and D segment 21% follow it. Segments composition in Global average is "balanced" structure.

However taking a look at historical change, the important point is that A segment has been increasing most in Table3. A segment was 10% in 2000. Later it was 12% in 2008 and 13% in 2009. Comparing 10% in 2000 with 13% in 2009, A segment increased 30%. It is the biggest growth ratio. B segment also increased 25%. On the other hand E segment decreased 40% and D segment decreased 30%. Overall trend in Global average is that the smaller vehicle segment is, the more increased, and that the larger vehicle segment, the more decreased. Therefore the segment composition has been moving toward smaller vehicles as overall trend. However as explained later, the trends in China, India and Russia are different direction. A segment in China and India has been reducing drastically.

### **c. USA**

D segment accounts for 43% of total car sales and is biggest segment as shown in Figure1. Including E segment 25% with D segment, large and luxury segment are 68%. Most vehicles of E segment can be sold only in USA. That means Galapagos phenomenon. It is clear this Galapagos

phenomenon has made USA weak in export competitiveness

#### **d. Japan**

As seen in the Figure1, Segment composition is a typical pyramid structure. These pyramid structure is rare case among developed countries. In Japan A segment 35% in 2009 is the biggest. Ratio of A segment has been increasing, 20.2% in 1980, 23.1% in 1990, 31.3% in 2000, and 36.8% in 2008. Its reasons are that mini vehicles (A segment) fit exactly for many conditions for utilization of vehicles in Japan. Moreover mini vehicles are granted many kinds of tax benefits etc. Therefore running cost of mini vehicle is much lower than other segments.

The point emphasized here is that though the income level is relatively high in Japan, the ratios of D and E segments are small. And the ratios of compact vehicles, especially A segment are high. This means that segment composition in each country is not affected only by income level.

Adding one point, mini vehicles produced in Japan do not have export competitiveness at all, because of too small engine (660cc) and too narrow width (1480mm) from the viewpoints of vehicle standards in developed countries.

#### **e. China**

B segment 58% is the biggest in the Figure1. Subsequently C segment 19% is second largest segment. Surprisingly A segment is just 12%, one fifth of B segment and one third of A segment in Japan.

Taking a look at historical change in Table4, only B segment has been increasing. Other A, C, D and E segments decreased. A segment was 26% in 2004 and then decreased to 10% in 2008. It recovered a little to 12% owing to the tax reduction and incentive policies by Chinese government in 2009. But that is less than half of 26% of 2004. B segment increased from 33% in 2004 to 58% in 2009. It is around twice. On the other hand C segment become four fifth. D segment and E segment become two thirds and one thirds respectively.

#### **f. India**

B segment 70% is overwhelmingly the biggest in the Figure 1. And this figure 70% is bigger than that in China. A segment is 4%. And this figure 4% is one third of 12% in China. These figures are noteworthy.

Taking a look at historical change in Table5, A segment was 26% in 2002, and then decreased to 4% in 2009. It is one sixes of 2002. NANO of Tata Motors attempted to enter into such a drastically shrinking A segment. This entering would be regarded as highly risky decision. Even if total demand in India would become 3 million vehicles, its 4% is just 120 thousand vehicles. Its volume is limited. President Tata Motors had planed that they developed NANO and would produce 100 thousands in 2008, 300 thousands in 2009, 500 thousand in 2010 and one million of NANO in 2015, hoping that many motorcycle users will buy NANO. However production number remained 100 thousands in 2010, because of many kinds of troubles such as the delay of factory construction and the difficulties of the components procurement.

#### **g. Russia**

C segment 58% is the biggest here as showed in Figure1. Russia is called "C segment

country.” Though income level and automobile density is same as Global average, A segment 2% in Russia is very small. It is only one-sixths of Global average 13%. And B segment 19% is also smaller than global average 25%. C segment is conspicuously big here. Because road conditions are bad and travel distance is long. Moreover winter weather conditions are severe. So “robust” is keyword for vehicle selection (ex. SUV). Therefore they are apt to avoid compact vehicles in terms of safety. Generally speaking, Russian people are eager to like bigger size body vehicles, same as USA, Korea and China.

Russian economy grew rapidly and income level increased during first half of 2000s because of steep rise of crude oil price. As a result of that, imported foreign vehicles sales (average price of \$ 17,500) increased to seven times in 2009 compared with that in 2002 as shown in Table6. On the other hand Russian domestic manufactures’ vehicles ( \$ 7,500) decreased to one-third. Because, though Russian manufactures’ vehicles prices are very cheap ranging from \$ 6,000 (LCV), but these vehicles are awfully inferior in quality.

Here summarizing shortly our analysis so far, sales volume zone is different from one country to another. Focal segments are different by countries. So there are some countries where C segments are the biggest even among developing countries. And it is inaccurate to say generally that A and B segment are large in the developing countries because of low income. It is also wrong to understand that Pyramid structure exist generally. Segments structure has been changing even in same country.

Next this paper considers what kind of segments Japanese automobile manufacturers have been bringing their strategic vehicles into, why and how they could keep their strategies so far, and how they should change them hereafter.

### **3. Japanese Auto Makers put major emphasis to D/E segments in China and Russia**

#### **(1) Major Segments of Strategic vehicles**

##### **a. Japan**

This paper analyzes these issues by using case study of Toyota Motor. Figure2 is a product model line-up of Toyota Motor and unit sales of each model in Japan. Each engine displacement is indicated at the right side of model name and then model names are arranged in descending order of engine displacement. Bar graphs indicate unit sales of each model. What is understandable at a glance in Figure2 is the fact that Toyota Motor has developed and sold their models evenly among every segment. Toyota keeps sales volume in every segment.

##### **b. Russia**

Figure3 shows unit sales of each model of Toyota Motor in Russia. But the number of products introduced into D and E segments is much more than C segment which is the biggest volume segment as showed before. In terms of unit sales of each vehicle, though Corolla in C segment is the biggest product, the second biggest are Camry and RAV4 in D segment. Comparing

with the segment total composition (A 2%, B 19%, C 58%, D 17%, E 3%) in Russia, B and C segments are relatively small and D and E segments are big in the segment composition of Toyota.

According to this product strategy, Toyota began to assemble Camry which belong to D and E segments. In this strategy Toyota retain C segment at first and then put major importance to D and E segment. Nonetheless in order to increase the sales volume from now, they need to introduce additional new products of C segment which is the biggest segment in Russia.

### **c. China**

Considering the unit sales of Toyota vehicles assembled locally in China in Figure4 (CBU imported from Japan to China are excluded, because volume is too small.), Toyota introduced only Yaris and Vios in B segment which is the biggest segment in China. Toyota introduces Corolla in C segment to retain volume and at the same time enriches its products in D and E segment as showed in Figure4. Comparing with the segment total composition (A 12%, B 58%, C 19%, D 11%, E 0.2%) in China, its percentage of B segments is extremely small and that of D and E segments are prominently large in the segment composition of Toyota. This means Toyota has been taking a strategy putting importance to middle and high grade vehicle.

Here analyzing Toyota strategy in more detail by taking a look at average sales price per unit by auto maker in Chinese market in Figure5, Toyota's average sales price \$ 35,000 is the highest. Industrial average is around \$ 20,000 and Hyundai is the lowest, around \$ 15,000. From these prices, it can be regarded that Toyota takes a middle and high price positioning strategy.

However in China, B segment is the biggest volume segment. But Toyota does not have popular car in B segment. Toyota has Yaris in B segment, but Yaris does not sell well in China.

Figure6 indicates that there is a kind of border between Chinese domestic makers and foreign makers in terms of vehicle price distribution.

Generally speaking, in China Japanese makers enjoy the benefit of its middle and high grade vehicle strategies where they put importance to D and E segments. They have not yet lost their market share much. They have been increasing their sales volume because of sharp expansion of automobile total market. On the other hand, Japanese motorcycle makers were defeated awfully in the volume zone by Chinese motorcycle makers in 1990s in China. Comparing with motorcycle market, Japanese automobile makers still can take a middle and high grade vehicle strategy in Chinese automobile market.

## **(2)Retail Policy suited for Middle and High Grade Vehicle Strategy**

Japanese makers are taking a retail policy suited for middle and high grade vehicles strategy. Table7 is the yearly sales number per outlet by country in Toyota Motor. Toyota develops relatively large size dealerships with strict 3S principle (sales of new vehicles, sales of parts, and service shop) in foreign countries comparing with in Japan. Namely the yearly sales number per outlet in Japan is 300 vehicles with selling 1.5 millions of vehicles at 5,000 outlets. On the other hand, for example, in developing countries such as China, India and Russia, the yearly sales numbers per outlet are around 1,000~2,000 vehicles. Because Toyota has avoided too many outlet and

developed the select and small number dealerships with site area of 5000 m<sup>2</sup>, showroom of 1000 m<sup>2</sup>, and service factory of 3000 m<sup>2</sup> averagely. Of course Toyota would not accept dual outlet and would demand strictly an exclusive outlet to its dealer. It put more stress on customer relationships management through refined after-sales services. That is to say, Toyota has tried to introduce an outlet policy and customer relationship programs which are fitted with middle and high grade vehicle strategy in developing countries.

### **(3) Point for Discussion**

There is a discussion point about whether or not Japanese auto makers should enter the bottom segments in first right now?

Chinese and Korean makers take a strategy where they catch entry users in first at bottom segment and then upgrade segments gradually along with income increase of users. Even if Japanese makers wait users at upper segment, Chinese and Korean makers already enclosed the customers on ahead. Chinese and Korean makers now take exactly same strategy which Japanese makers took in USA market in 1960s and 1970s. So some researchers insist that Japanese auto makers should enter the bottom segments, less than \$ 1,000 vehicle market in first.

However it isn't necessarily right that "Koreans can win certainly if they enter into the low price segment in first." Because Korean makers do not succeed in transition from B segment to C and D segment in Russia and China.

In Russia Hyundai Accent and Elantra of B segment have sold well from 2005 to 2008 as showed in Table8, Its sales number became 2.0 times in 2008 comparing with 2004. (the data in 2009 and 2010 are excluded, because of unordinary data as a result of Lehman Shock.) However unit sale of Sonata of D segment in 2008 remains same with 2005 and Genesis of E segment did not sell at all. Similarly in China, Hyundai Accent of B segment becomes 1.5 times and Elantra becomes 2.5 times in 2009 comparing with in 2005. However Sonata became to one-thirds.

Therefore Hyundai still have to attain the transition from B segment to middle class C segment in the years to come. On the other hand, Japanese auto makers have to maintain their competitiveness in C and D segments as a top priority issue, and then increase the number of B segment models which have both price competitiveness and quality advantage to Korean vehicles. Entering into LCV is next issue for Japanese auto makers in the future.

## **4. Analysis of Developing Countries in terms of Product Lifecycle**

### **(1) Which phase in Product Lifecycle?**

In terms of considering what strategy Japanese auto makers should take, important point is which phase in product lifecycle each automobile market is. In other words, how are the emerging market saturated?

They have to take different strategies depending on the phase of product life cycle, Introduction phase, Growing phase, Maturing phase and Fading phase.

Comparing with other products, in automobile products, prices are considerably high. And it takes much longer time to popularize over every income level nationwide. Therefore the periods of Introduction phase and Growing phase are extraordinarily long, for example, several decades, sometimes more than hundred years. During these periods, auto makers from developed countries have been able to keep a middle and high grade vehicle strategy in developing countries.

Figure7 aims at making an international comparison study in terms of lifecycle of automobile product. Horizontal axis means national income per capita and vertical axis means the number of automobile vehicles in use per 1000 persons in each country. These numbers of automobile vehicles in use per 1000 persons are the numerical index which indicate directly the popularization of automobile in each country and also indicate indirectly the saturation degree, namely the phase of lifecycle of automobile. Automakers' strategies in each developing country depend on this phase of lifecycle. Especially it is critical point for auto makers whether or not middle and high grade segments are saturated.

As explained above, Introduction and Growing phases are extraordinarily long. For example in Japan, it can be estimated that Introduction phase was from 1900 to 1960 and Growing phase was from 1960 to 1990. These two phases needed 90 years until reaching Maturing phase. On the other hand in China, the number of automobile vehicles in use per 1000 persons is 60 vehicles at present. It means China is still at Introduction phase now. Here let us consider how long it will take for China to reach a density level of 200 vehicles per 1000 persons which is same level with Russia in Figure7. If the population in China will increase to 1.5 billions in the future, the number of automobile vehicles in use should be 300 million to reach above density level. Since the number of automobile vehicles in use in 2011 is 75 million, the number of automobile vehicles in use should increase by 225 million in the future. Even if the number of automobile vehicles in use increase 22.5 million vehicles annually (for example annual new vehicle sales is 300 million and deregistration is 75 million), it will take 10 years for China to reach the density level where 1000 persons have 200 vehicles. During these 10 years, Chinese auto market will not become saturated. Auto makers can take strategies depending on these conditions.

## **(2) Factors for which it is difficult to make the automobile market matured**

Here let us consider the factors for which it is difficult to make the automobile market matured in general. First factor is that auto makers are continuously requested to develop new technologies. Since automobile cause many traffic accidents and casualties, auto makers at any time have to advance the safety technology which can prevent accidents and casualties from taking place. Moreover since automobile cause air pollution and greenhouse warming, each government has been tightening the regulations on exhaust gas emissions and fuel economies. As a result of that, auto makers make efforts continuously to develop much higher new technologies to comply with such regulations. Different from some industries where technologies had been already matured, in auto industry, around a few trillions US dollar have been invested in product development annually. As results of above reasons, it is difficult to make auto industry matured.

Second factor is that expansion of automobile market has been continuing globally since its birth as showed in Figure8. Auto industry as a whole is now in Growing phase and will remain at same phase at least for decades. Figure8 indicates global production number from 1900 to 2015, including forecast. Taking a look at this, global production number has been expanding as long term trend. It took 19 years from 40 million to 50 million. But it took 7 years from 50 million to 60 million and just 4 years from 60 million to 70 million. Expansion of production reached a peak, 71 million in 2007. After Lehman shock, it decreased to 71 million in 2008 and 61 million in 2009. However it increased again to 70 million in 2010. And then they forecast it will increase gradually to 90~100 million in 2015-2020. Owing to this expansion of production, automobile markets would not become matured and saturated as a whole. In addition, as seen in Figure9, these almost all of expansion will be generated in the developing countries.

#### 4. Summary

The analyses of this paper can be summarized here.

1. Sales ratios of A segment have been decreasing in China and India. In Russia sales ratio of A segment has been negligible.
2. As might be expected, sales volume segment is different from one country to another. So there are some countries where C segments are the biggest even among developing countries. And it cannot necessarily right that A and B segment are large because of low income. It is wrong to understand that Pyramid structure exist generally.
3. At present the biggest sales volume segments in developing countries are B or C segments where price ranges are \$ 6,000~20,000, and engine displacement is 1000cc~2000cc.
3. However segments structure has been changing historically even in same country.
4. Discussing about some points which previous researches mentioned, firstly the newly found fact is that A segment has been decreasing in developing countries. This means that LCV and ULCV have not yet made appearance conspicuously. On the other hand B segment has been increasing. This also suggests that medium-term transition from A segment to B segment has been continuing. This indicates that neither “Disruptive Innovation” nor “Blue Ocean” emerged in automobile markets in these countries.
5. As results of above, Japanese makers have been able to continue to take a middle and high grade vehicle strategy with allocating strategic vehicles mainly in C segment. And they have introduced marketing strategy fitted with above product strategy. Therefore Japanese makers should keep and increase their market share in these segments and then increase the number of B segment models which have both price competitiveness and quality advantage to Korean vehicles. Its entering into LCV or ULCV market where there might be battle in “Red Ocean” is next issue for Japanese auto makers in the future.
6. Automobile markets in developing countries are still in Introduction or Growing phase and have not yet been saturated nor matured in terms of product lifecycle. Globally automobile production has been expanding since its birth and technologies have been advanced steadily

comparing with other industries. It will take around 10 years to reach Maturing phase because of characteristics of automobile products. Until then, auto makers can take an appropriate marketing strategy according to such conditions.

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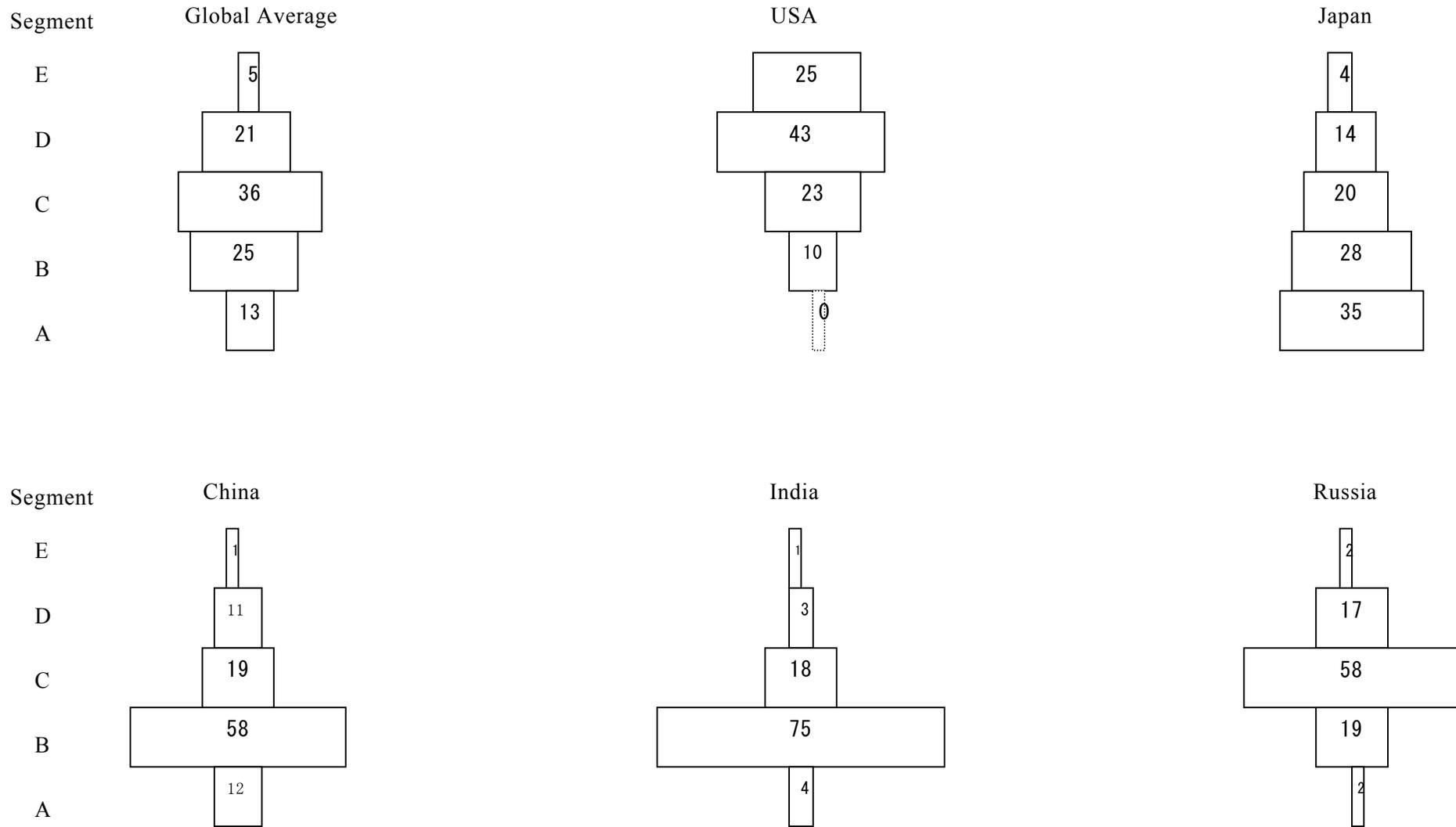
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Figure1 International Comparison of Component Ratio of Segments



Source: Japanese Automobile Manufacturer Association, *World Automobile Statics 2009*, FOURIN, *China Research Report 2010* .

Figure2 Sales of Toyota by Model (Japan 2008)

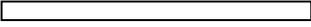
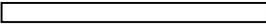
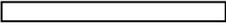
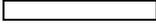
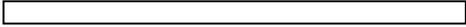
Model	Engine (ℓ)	Sales	Segment
CENTURY	5.0	270	
LAND CRUISER	4.0 4.6 4.7	16,958	
CROWN	2.0 2.5 3.0 3.5 4.6	74,910	
ALPHARD	3.5	45,471	E
VELLFIRE	3.5	38,622	
MARK X	2.4 2.5 3.5	49,604	
ESTIMA	2.4 3.5	56,471	
BLADE	2.4 3.5	10,096	
VANGUARD	2.4 3.5	20,232	D
HARRIER	2.4 3.3	27,406	
CAMRY	2.4 3.0	4,864	
RAV4	2.4	11,211	
COMFORT	2.0	8,373	
VOXY	2.0	71,685	
NOAH	2.0	55,967	
AVENSIS	1.8 2.0	3,745	
PREMIO	1.8 2.0	31,375	C
WISH	1.8 2.0	39,298	
Isis	1.8 2.0	26,538	
ALLION	1.5 1.8 2.0	29,214	
AURIS	1.8	22,901	
PRIUS	1.8	73,117	
ist	1.5 1.8	13,006	
COROLLA	1.5 1.8	144,056	
SIENTA	1.5	34,818	
RAUM	1.5	14,117	
SUCCEED	1.5	20,370	
Rush	1.5	12,440	
pB	1.3 1.5	32,415	B
Probox	1.3 1.5	40,522	
Porte	1.3 1.5	32,965	
Ractis	1.3 1.5	51,700	
PASSO	1.0 1.3 1.5	72,772	
Vitz	1.0 1.3 1.5	123,332	
BELTA	1.0 1.3	20,232	
iQ	1.0 1.3	4,021	

Source: トヨタ自動車『トヨタの概況 2009』 and <http://toyota.jp/>

Note: We introduce a year of 2008 instead of 2009, because sales ratio of each model changed drastically due to the subsidy and tax reduction in 2009.

Figure3 Sales of Toyota by Model (Russia 2007)

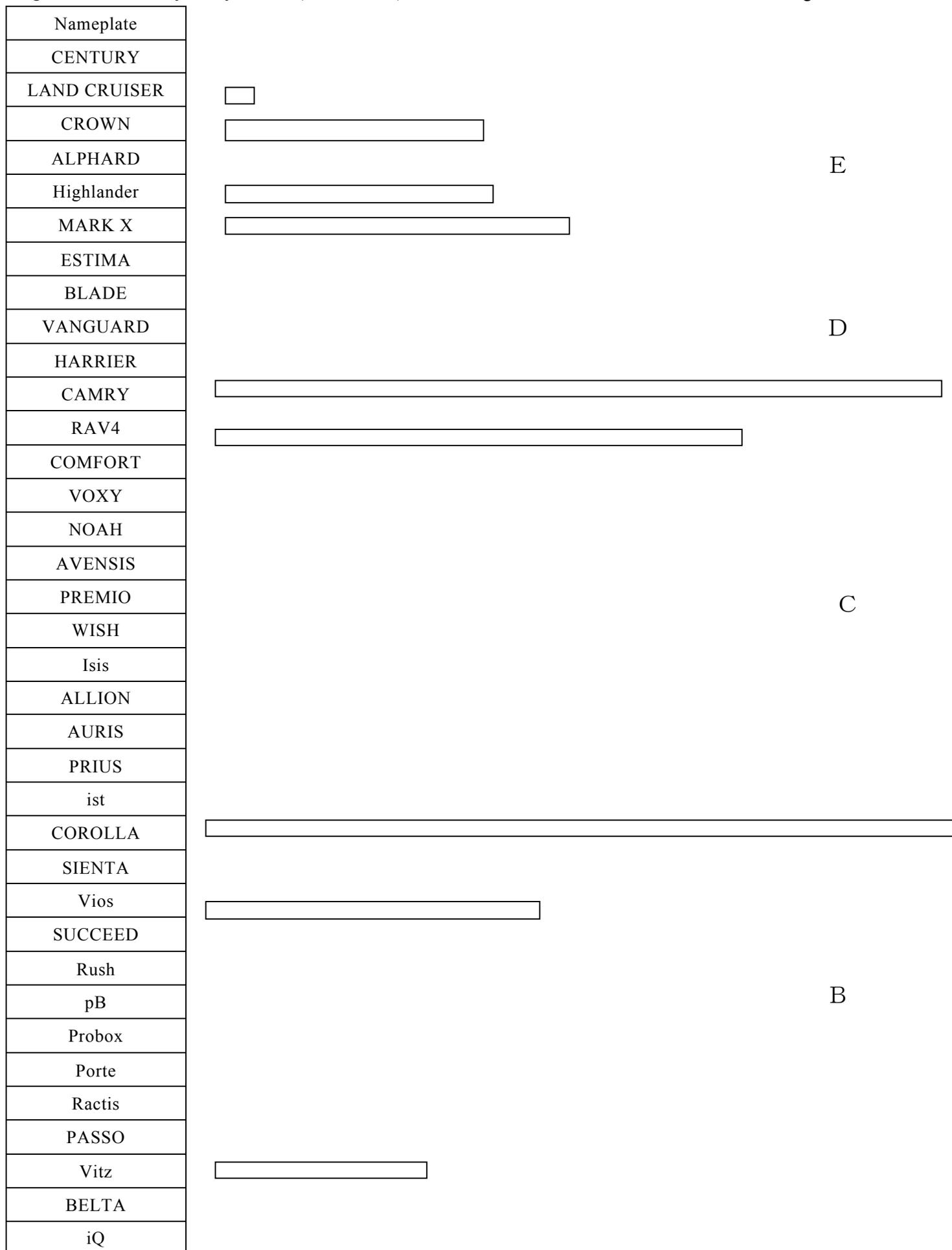
Segment

Nameplate		Segment
CENTURY		
LAND CRUISER		
CROWN		
ALPHARD		E
VELLFIRE		
MARK X		
ESTIMA		
BLADE		
VANGUARD		D
HARRIER		
CAMRY		
RAV4		
COMFORT		
VOXY		
NOAH		
AVENSIS		
PREMIO		C
WISH		
Isis		
ALLION		
AURIS		
PRIUS		
ist		
COROLLA		
SIENTA		
RAUM		
SUCCEED		
Rush		
pB		B
Probox		
Porte		
Ractis		
PASSO		
Vitz		
BELTA		
iQ		

Source: Statics offered by Toyota Russia Motor.

Figure4 Sales of Toyota by Model (China 2009)

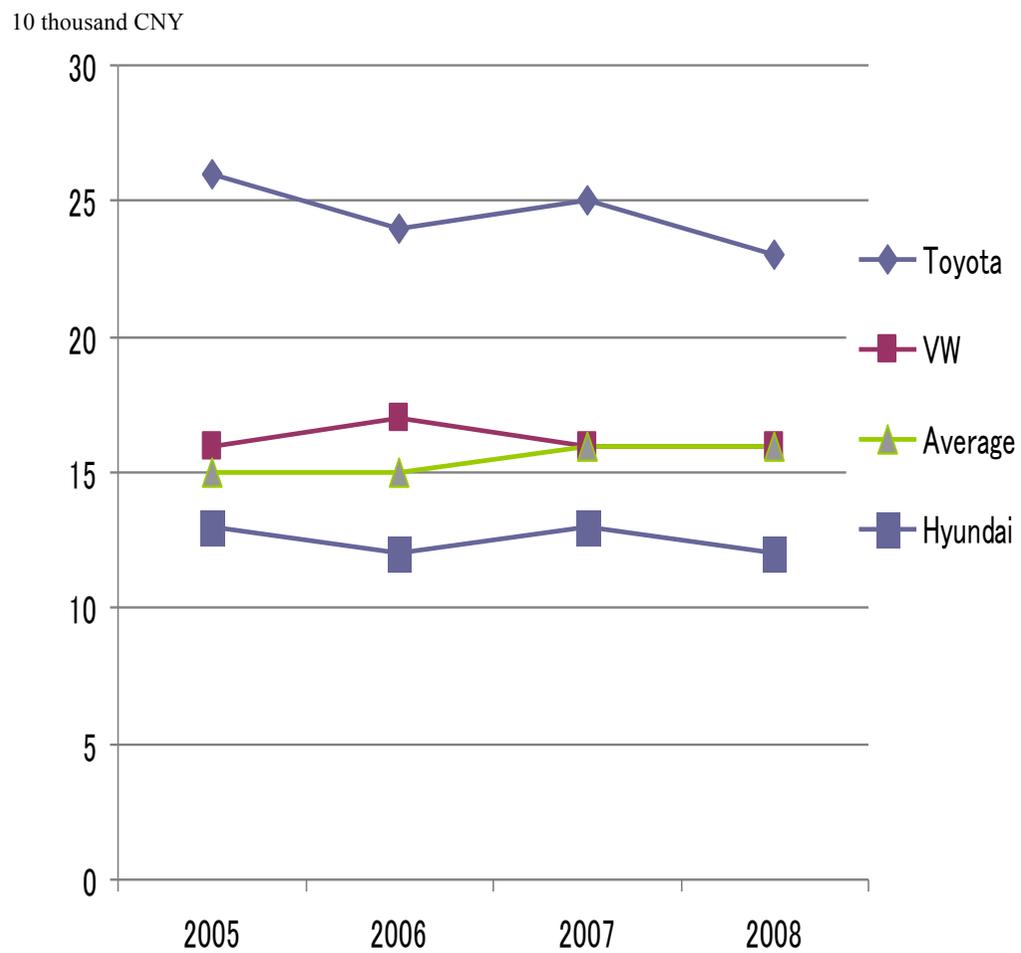
Segment



Source: Based on 『FOURIN 中国自動車月報』 2010年2月号(第167号).

Note: Indicates only models produced in China excepting CBU importes from Japan. The number of CBU are negilible.

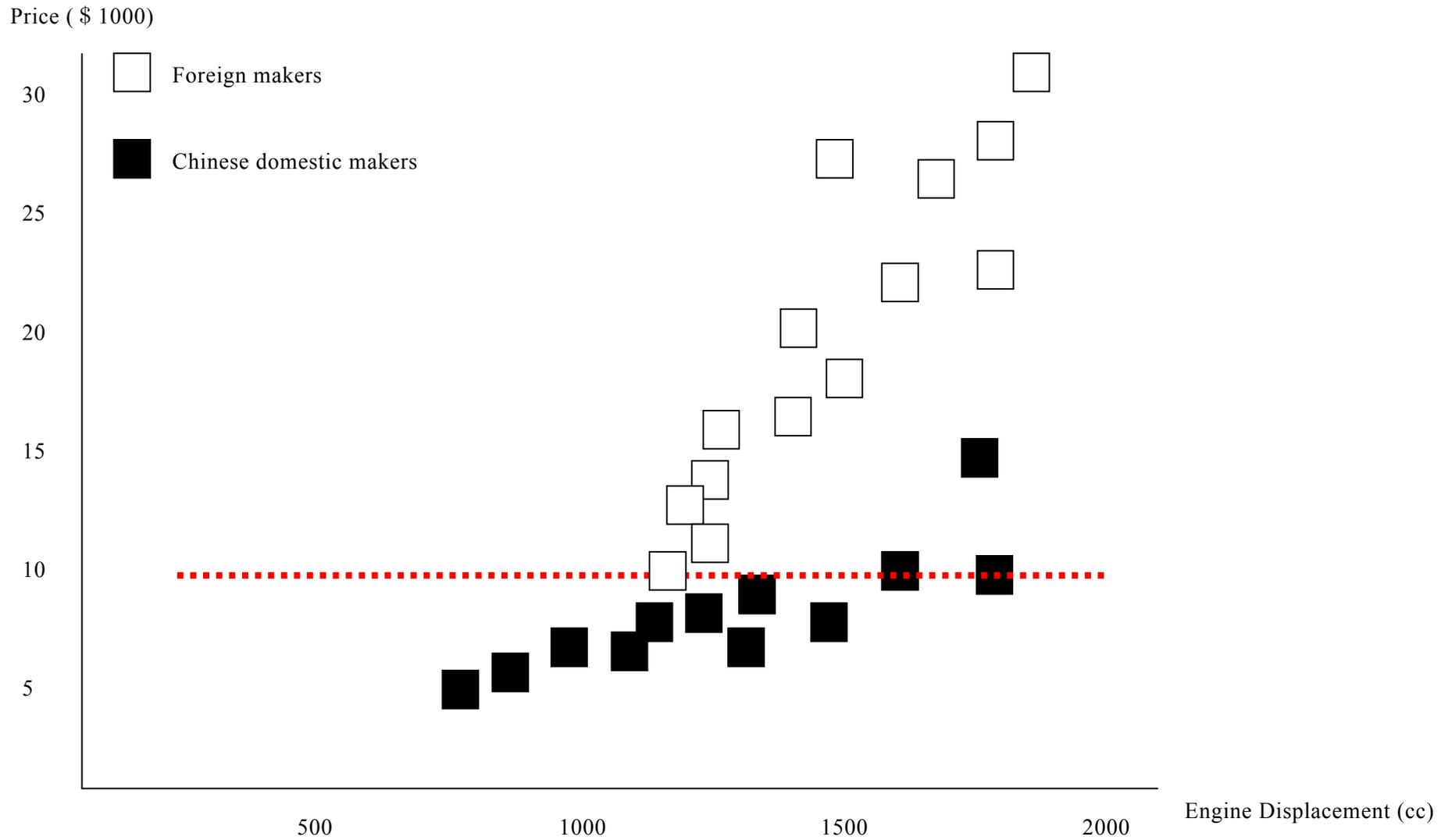
Figure5 Unit Price of Automobile in China



Source: FOURIN, *China Research Report*, May 2008

Note: Only 4 foreign makers are picked up.

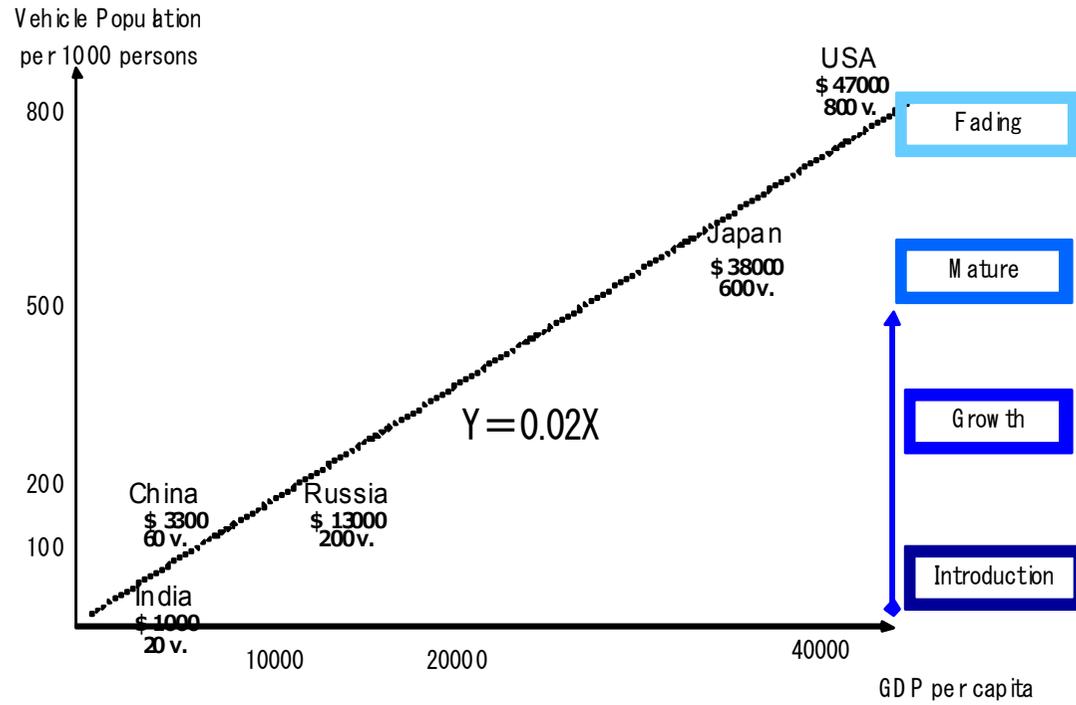
Figure6 Model Prices of Chinese Domestic and Foreign Makers



Source: Son Hishyu (2009) 孫飛舟「中国自動車販売におけるグローバル競争と民族系の発展」上山邦雄編著『巨大化する中国自動車産業』日刊自動車新聞社,2009,所収.

Note: Some adjustments are added.

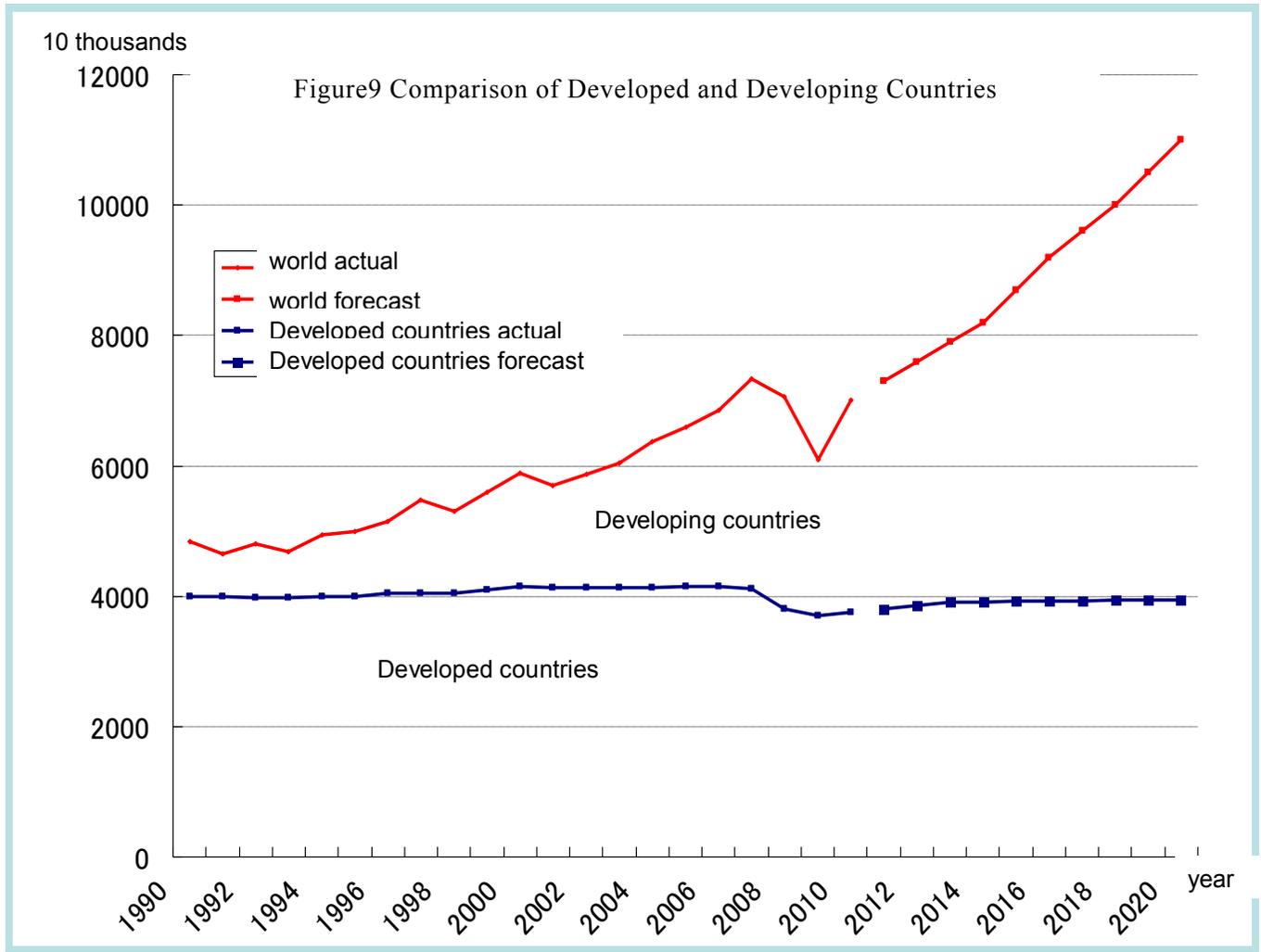
Figure7 International Comparison in terms of Product Life Cycle



1

1

Source: Japan Automobile Manufacturers Association, *World Motor Vehicle Statistics 2011*.



Source: FORIN, *FOURIN's Monthly report on the Global Automotive Industry*, December 2010.

Table1 Attitude on Small / Low Cost Vehicle Entry

【1950s/60s】	【2010】
The reasons why Big3 did not enter small vehicle market, when Japanese and European makers entered US market.	The reasons why Japanese have not yet entered ULCV and LCV segments in developing countries.
1. Small vehicle market is niche and will not expand.	1. They can not forecast ULCV/LCV market in the future.
2. Profit per vehicle is low	2. Same as on the left.
3. They are lacking of capability of producing at low cost.	3. They have capability. However ULCV/LCV are not suitable with their company quality standard.
4. It will hurt a brand reputation.	4. Same as on the left.
	5. They can not achieve environment and safety standards at such low cost.

Table2 Segmentation in Each Area

	Global Average USA    Russia	Japan	China	India
E	4.8m <	3000 cc <	3000 cc <	4.7m <
D	4.6m~4.8m	2000 cc~3000 cc	2000 cc~3000 cc	4.5m~4.7m
C	4.4m~4.6m	1500 cc~2000 cc	1600 cc~2000 cc	4.0m~4.5m
B	3.75m~4.4m	1000 cc~1500 cc	1000 cc~1600 cc	3.4m~4.0m
A	$\geq$ 3.75m	$\geq$ 1000 cc	$\geq$ 1000 cc	$\geq$ 3.4m 以下

Table3 Sales Share by Segment in Global Average (%)

Segment	2000	2005	2009	Trend
E	8	7	5	Decrease 40%
D	28	24	21	Decrease 25%
C	34	34	36	Slight increase
B	20	23	25	Increase 25%
A	10	12	13	Increase 30%

Source: A.T.Kearney

Table4 Sales Share by segment in Chain (%)

Segment	2004	2005	2006	2007	2008	2009	Trend
E	0.6	0.6	0.3	0.5	0.5	0.2	Decrease 70%
D	15	16	14	15	13	11	Decrease 30%
C	25	17	21	26	25	20	Decrease 25%
B	34	43	48	48	52	58	Increase 70%
A	26	23	17	12	10	12	Decrease 55%

Source: FORIN, *FOURIN's Monthly report on the Global Automotive Industry*, each year.

Table5 Sales Share by Segment in India (%)

Segment	2003	2004	2005	2006	2007	2008	2009	Trend
E	1	1	1	1	1	1	1	No Change
D	2	3	3	4	4	3	3	Slight Increase
C	20	21	21	20	20	20	18	Slight decrease
B	51	59	65	68	70	72	75	Increase 50%
A	26	16	9	8	6	4	4	Decrease 80%

Source: Society of Indian Automobile Manufacturers.

Table6 Sales Share of Domestic and Foreign Vehicles in Russia (%)

	2002	2003	2004	2005	2006	2007	2008	2009	Trend
Domestic Vehicles	90	80	66	58	45	36	29	31	One third
Foreign Vehicles	10	20	34	42	55	64	71	69	7 times

Source: Toyota Motor Russia

Note: Foreign vehicles include Russian-made foreign brand vehicles.

Table7 Yearly Sales per Outlet in Toyota

(vehicle)

Country	Japan	Russia	China	India	USA
Annual Sales per outlet	300	2000	800	1000	1800

Source: Interview with Toyota Motor, Toyota Motor Russia, FAW Toyota Motor Sale, Toyota Kirloskar Motor and Toyota Motor Sales in USA.

Note: Roughly averaged number from 2007 to 2009.

Table8 Sales of Hyundai Models in Russia and China

	Model Segment	2005	2006	2007	2008	2009	Trend
Russia	Accent B	32,741	38,808	53,616	66,378		2 times
	Elantra C	11,704	7,867	9,745	20,285		2 times
	Sonata D	10,890	9,987	11,043	10,064		Same
	Genesis E	—	—	—	4		Negligible
	Hyundai total Share	87,457 5.6%	100,685 5.3%	147,843 5.8%	192,719 6.6%		2.2 times
China	Accent B	—	42,174	26,665	24,628	60,379	1.5 times
	Elantra C	176,589	169,716	120,333	203,735	411,054	2.5 times
	Sonata D	45,424	37,117	25,527	17,412	15,606	One third
	Genesis E	—	—	—	—	—	—
	Hyundai total Share	233,668 4.1%	290,011 4.0%	231,137 2.6%	294,506 3.2%	570,309 4.2%	2 times

Source: Hyundai Motor, 2008 Automobile Industry Hand Book and website: ([http://pr.hyundai.com/Ir/SaleInfo\\_SaleResultByCar.aspx?WT.ac=menu\\_24p](http://pr.hyundai.com/Ir/SaleInfo_SaleResultByCar.aspx?WT.ac=menu_24p))