Formulation of Differentiation Strategies for Sustainable Competitiveness

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Contents

Executive summary

One of our business policies is that we continuously provide unique service, which competitors cannot imitate. I chose this policy ten years ago far before I commenced to learn management theories. Of course I did not know that the chosen policy was called as a differentiation strategy at that time. Very fortunately our revenue has shown uninterrupted growth for the past ten years, and the business turned out to be profitable. I was, however, under some uneasiness, as I could not theoretically explain why it grew and became profitable, how it would be lasting and for how long? Empirical evidences indicate that the hire business required extraordinary patience to become profitable. In my case it took seven years to reach the breakeven point. During those difficult times the management issue was clear on the contrary. More revenue was definitely needed to cover the cost. The highest priority was given to the enthusiastic sales. The real management issue emerged after the business commenced to generate profit, because our division started to attract the company's attention. I had to feed increasing numbers of division members, and to contribute the major share of the company's profit each year. My responsibility swelled. The managerial issue I really encountered was the absence of logic, or theory for success. I have to logically explain to our people why our business is unique, how we differentiate our service from competitors. What I need becomes *logic* rather than *guts*. In the midst of such concern the magazine advertisement in the train jumped into my eyes. It featured the MBA courses. Till then I was biased that it was a useless title for the younger generation who pursued advantageous conditions at the time of their applications to employment. The three letters in the advertisement, however, at this special occasion was emitting different brilliance to me. I was asking questions to myself. Why do you hesitate to challenge MBA? Isn't it the one you really need now? It was not long before I came to the conclusion. Taking ULMC MBA course became my millennium challenge. I was a forty two year old division manager with eight subordinates in the division of a logistics service firm.

My objective of the project is very simple. It is to negate my anxiety about our future, and ultimately formulate the action programs based on the theoretical strategies. Our *'unique'* policy is unchanged. What is aimed to change is to support that policy by theories. In the introductory chapter I explain the background of the business, i.e. how I embarked on the new business. The second chapter surveys the industry. The competitors' products features, revenues, profits, market shares, how and when they entered the markets, etc. are analyzed in details. In the third chapter the industry is dissected into the strategic groups. The

framework I used is Michael E. Porter's strategic map introduced in 'Competitive Strategy (1980)'. The two dimensions, the products structure and the sales approach, divide our oppositions into six groups, which have remarkable differences in profitability. The framework of Porter's mobility barrier analyzes the differences. In the fourth chapter individual firm's performance is spotlighted. The task is very simple, which is to choose above-average performers and to discover which generic competitive strategies high-performers choose. The fifth chapter focuses our differentiation strategy. I explain reason why we could be more profitable than others while retaining higher sales prices. In the later Porter's strategy book, 'Competitive Advantage (1985)' differentiation is defined that it is either to lower the buyer's costs or to raise its performance. I thoroughly assessed our twenty-one competitors in this regard from the 42 dimensions in comparison with ours. The results were quantified and visually represented. Positive correlation between the each firm's points and profitability was discovered. The chart even predicts the future firms' vicissitudes. The purpose of the sixth chapter is to strengthen the Porter's differentiation theory, and further to evolve it. First I forward counterarguments to major critiques against the positioning school. Second I challenge the trade-offs between differentiation and cost. Third I introduce the methodology how to reduce cost while retaining differentiation. In the seventh chapter, as a conclusion, I condensed the all analysis and discussions into the simple formula, which is symbolization of the evolved differentiation theory. The eighth chapter is the project goal. I apply this formula to design our future concrete strategies. The last chapter reflects the latest Porter's differentiation theory, which is compared with my conclusion. I tried to use visual aids as much as possible to explain and support my logic. Forty pages of tables, charts and illustrations are most important and integral parts of my dissertation. I do hope they have a stronger appeal than descriptive discussions and help readers understand my logic.

Chapter 1 - Introduction

As a so-called intrapreneur I embarked on the containers hire business in 1992 in Sumitomo Corporation, one of the Japanese leading Sogoshosha. My carrier in Sumitomo started from the export business of earthmoving equipment to Africa in 1982. The fatal encounter with intermediate bulk containers (hereinafter called IBCs) was in 1990 when I was assigned to look after the forklift trucks distribution business in Australia. Unfamiliar more or less one cubic meter boxes, not good-looking by any standard, piled up in the same yard of the forklifts drew my attention. Why do those boxes make money? Who use them for what

purposes? My inquisitive mind was very much stimulated. Export business was excited when I was young, as I could travel many overseas countries. However after ten years I was aware that we were always in a passive position. Trading firm's function of earth moving equipment business is very much limited. The well established manufacturers such as Komatsu and Hitachi never give us authority to any 'P' of marketing i.e. they design products, set prices, promote by their ways and sell through their distribution channels. Trading firms are just parts of the last 'P' (place). What they expect from us are so-called risk taking or finance. Naturally our margin becomes very limited. What most frustrated me was the profit could never be raised regardless of our hard working and hardship. (I actually stayed in Maputo Mozambique to sell Komatsu earth-moving machineries for two years, when the country was still under internal warfare.) I wanted to do business, which we can determine our destiny, the business which our decisions change its fate.

I vividly remember my then anxiety for the coming future standing in front of the first 200 units of containers imported from Australia. As a matter of fact founding new business from the scratch without any subordinates in the totally inexperienced industry was unexpectedly arduous job. Seven years had quickly passed without generating any profits. 2001 was a turnaround year that the cumulative EBIT (earning before interest and tax) finally went into the black. I honestly admit if I knew it would need nine years to wipe off the deficits, I would not have had commenced such business.

Chapter 2 - The industry and competitors

This chapter explores the industry as a whole by the data obtained from the research. Firstly it gives an overview of the industry history. Secondly our competitors' profiles and their market shares are featured. Thirdly I will develop the interesting analytic discussion on the contrasted theory of the market growth between the western and the eastern. Now let me start from what we asked to our competitors.

2.1 Research questionnaire

The twenty-one companies were chosen. Selection was done based on the each company's *signals,* which we perceived through the media, the exhibitions and the fields. Thus other companies, which we hardly come across, or their signals do not reach us, are not included in the research list. (*1) The contents of the research questionnaire are as follows.

For July 2002 research

1. What are your products features and structures?
2. How many products did you sell for the past three years?
3. Who are your customers?
4. How many years have you been in the industry?
5. What are your differentiated sales points?
6. To which industry are you targeting now?
7. What are your revenue trends for the past ten years?

For October 2002 and June 2003 research

1. What are your revenue and profits for the last three years?
2. Who are your top twenty percent customers?
3. Are they frequently replaced with others?

(*1) The number of those unselected companies (or divisions) may be four or five. However their revenues are presumed less than five percent of the total revenues of the researched companies.

2.2 Industry evolution

The IBCs industry in Japan has thirty years history. It emerged in 1970's and grew in 1980's to 1990's. The industry attractiveness has been changed together with the **industry life cycle**. Let us briefly review the history by using ***Porter's five forces*** framework.

Emergence stage (1970's)

Kyoritsu Buturyu System (KBS) is the pioneer who firstly introduced the IBC concept into the Japanese chemical industry thirty years ago. (1000 liter IBCs emerged as the substitute of 200-liter drums.) Mitsubishi Yuka (later changed to HET) followed soon after KBS entered the market mainly to serve Mitsubishi chemical group companies in Kanto area (eastern part of Japan). KBS and other two followers, Container Kaihatsu and Nihon Container, mainly serve chemical companies in Kansai area (western part of Japan). The industry attractiveness at this emergence stage was guessed high, as the ***buyers' bargaining power*** was less due to limited alternatives, no ***substitutes*** were available.

Growth stage (1980's – 90's)

The rigid 1000 litter containers in the chemical industry (called *'Tank IBCs'* hereinafter) substituted many 200-litter steel drums. Nippon Steel (No.1 drum supplier) and Kawasaki Steel (No.2 drum supplier) entered into the IBCs industry to protect their customers against the substitutes. In the beginning of 1990s trading companies such as MacMillan Broadel (MMB), C-Itoh and Sumitomo Corporation introduced the new concept from overseas, which is disposable liner bags method (called *'Liner IBCs'* hereinafter). *Liner IBCs* have the superior sanitary advantages to tanks as no cleaning and pasteurization is required. An outer box is dismountable after disposal of a liner bag. Relocation and warehouse costs of dismantled IBCs are much less than those of rigid containers. While *Tank IBCs* had the firm share in the chemical industry, *Liner IBCs* started to grow in the food industry. It was the subtle coexistence between the two in the early 1990s. In the late 1990s Germans landed with the new technology enabling to produce very economical 1000 litter rigid polyethylene containers. The production speed of the innovative blowing method is far speedy than the local rotating method. Schutz and Mauser made their licensees enable to produce large plastic IBCs with the unprecedented efficiency.

Growth to Maturity stage (2000's –??'s)

In the 2000's buyers' choices have become broader not only hardware wise but also software wise. The Australian hire concept firstly introduced by Sumitomo Corporation has gradually permeated in 1990's and has been recognized as the rationalized idea in 2000's. Hire service contains various operational activities which buyers must be involved such as relocation of empty containers, cleanings and maintenances. The spread of hire service urged the conventional tank IBCs suppliers to consider additional services. The local IBCs pioneer KBS has started to provide pick-up and cleaning services. Brain Five collaborates with the logistic company to provide the nationwide delivery and pick-up services. Nihon Container provides their old important customers with cleaning service. The industry is now aware that it is difficult to survive by just selling the IBCs. It entered the era of the value added service. The diminished attractiveness of the industry resulted in few entrants in 2000's

2.3 Competitors' analysis

See **Table 2.1** for each suppliers experience, features and sales trends for the past ten years.

Competitors summary (As of 2001)

No.	Supplier	Nos. of employee		Experience	Features	Structure	Approach	Saels trend
		Corporate	IBC Div.					
1	KBS	29	29	30 years	Pioneer of the local IBC industry	Tank	Sales	↑
2	HET	87	30	25 years	The eldest IBCs supplier based in Kanto	Tank	Sales	↓
3	Container Kaihatsu	9	9	25 years	One of Kasai IBCs specialists	Tank	Sales	↓
4	Nihon Container	12	12	25 years	One of Kasai IBCs specialists	Tank	Sales	→
5	Nihon Buturyu	2	2	15 years	Flexible 5 kilo litre bag	Tank	Sales	→
6	Kawatetsu Container	441	?	10 years	No.2 drum supplier	Tank	Sales	→
7	Nittetsu Drum	341	?	10 years	No.1 drum supplier	Tank	Sales	↑ ↑
8	MMB (SpaceKraft)	19	4	10 years	Pioneer of dismountable liner IBCs (USA)	Liner	Sales	↑ ↑
9	NRS	71	5	10 years	Tank container operator	Tank	Hire	↑ ↑
10	Zeon	97	18	7 years	Local dismountable containers pioneer	Liner	Sales	→
11	Taiyo Kogyo	612	2	7 years	Flexible containers (for dry products) supplier	Liner	Sales	↓
12	Kodama (Powertote)	330	?	6 years	Licensee of Mauser (Germany)	Tank	Sales	↑ ↑
13	Fujimori (Div.)	-	2	6 years	No.1 bag in boxes supplier	Liner	Sales	↑
14	Sumitrans Japan (Maxicon)	90	9	6 years	Pioneer of hire IBCs service	Liner	Hire	↑ ↑
15	Chuo Kasei	49	?	6 years	Fine chemicals specializer	Tank	Hire	↑ ↑
16	Furukawa (Ecobulk)	110	4	5 years	Licensee of Shutz (Germany)	Tank	Sales	↑ ↑
17	Hikawa (Liquitote)	68	4	5 years	Tank container operator	Tank	Sales	↑ ↑
18	Brain Five	22	8	5 years	Hirer of stainless steel IBCs	Tank	Hire	↑ ↑
19	Showa Link	60	4	3 years	All aluminum IBCs	Liner	Sales	↑ ↑
20	Dodwell Japan (Intacept)	110	30	6 years	Licensee of Intacept aseptic system (NZ)	Tank	Sales	↑
21	DNP (Div.) (Starcept)	-	5	4 years	Licensee of Starcept aseptic system (Sweden)	Tank	Sales	↑
22	Goodpack Japan (Metal Box)	4	4	3 years	Stackable cheap IBCs (Singapore)	Liner	Hire	↑ ↑

Table 2.1

More than half numbers of the researched firms have only single figure employees for IBCs division. Four firms out of twenty-two have more than 20 year experiences. The pioneer KBS has run its specializing business for thirty years. Six companies have over 10-year existence in the market, and the other 12 firms' experiences are under 10 years. The features of the researched companies illustrate a variety of their backgrounds. IBCs suppliers have two classifications. One is structure and the other is sales approach. Structure means the hardware of the IBCs, which are divided into two categories. Tank IBCs are the conventional rigid containers, whereas, Liner IBCs are comparatively new containers of which outer box can be dismountable. Products are filled into disposable liner bags. Sales approach denotes the way of business, i.e. sale or hire. There are thirteen Tank IBCs suppliers and nine Liner IBCs suppliers.

Corporate growth

Table 2.2 indicates us that half of the twelve companies have been growing and the other ten firms have been declining for the past three years. The merger boosted HET (263%) and Nittetsu (37%) growths. The new entrants, Goodpack (83%) and Brain Five (59%) tend to show higher growth rate. DNP BIB division (54%) supplies the aseptic filling system, which

has increasingly installed in fruits fresh suppliers to dairy companies. Declining companies take two patterns of action. Taiyo Kogyo (-8%) exited of the market in 2002 after making consecutive losses to focus back to their core business. Furukawa (-0.2%) and Showa link (-22%) recently entered the IBCs industry from the depressed aluminum building materials industry to diversify their business lines.

Corporate growth, revenue and profit

'99-'01 million JPY in 2001

	Growing companies Supplier	Principal business	3 year Rev. growth	Revenue Corporate	IBCs	Contribution	Profit Corporate	IBCs	Contribution
1	HET	Plastic material	263.6%	4,200	750	17.9%	8.0	120.0	1500.0%
2	Goodpack Japan	IBCs	83.3%	550	550	100.0%	100.0	100.0	100.0%
3	Brain Five	IBCs	59.1%	350	180	51.4%	15.0	19.0	126.7%
4	DNP (BIB Div.)	Printing & packaging	53.8%	1,162,403	150	0.0%	48,632.0	45.0	0.1%
5	Nittetsu Drum	Steel drums	36.7%	22,397	161	0.7%	342.0	8.0	2.3%
6	Nihon Container	IBCs	17.5%	658	658	100.0%	16.5	16.5	100.0%
7	KBS	IBCs	14.5%	1,530	1,080	70.6%	117.0	90.0	76.9%
8	Sumitrans	Logistics services	15.1%	11,897	751	6.3%	382.0	199.0	52.1%
9	Chuo Kasei	Fine chemicals	10.9%	16,570	?	?	85.0	?	?
10	Dodwell Japan	Industrial machines	7.4%	7,433	300	4.0%	726.0	120.0	16.5%
11	Kodama	Plastic containers	2.1%	13,778	900	6.5%	217.0	150.0	69.1%
12	Fujimori Kogyo	Bag in box	1.9%	62,305	20	0.0%	2,040.0	0.0	0.0%

	Declining companies Supplier		Rev. growth	Revenue Corporate	IBCs	Contribution	Revenue Corporate	IBCs	Contribution
1	Furukawa Al-tech	Aluminum building materials	-0.2%	8,583	380	4.4%	-655.0	-125.0	19.1%
2	Taiyo Kogyo	Building materials	-7.6%	33,828	50	0.1%	-734.0	0.0	0.0%
3	Container Kaihatsu	IBCs	-8.6%	350	350	100.0%	?	?	?
4	NRS	Transport	-9.6%	7,216	570	7.9%	451.0	30.0	6.7%
5	MMB	Timber, building materials, pulp	-12.0%	14,150	520	3.7%	205.0	120.0	58.5%
6	Kawatetsu Container	Steel drums	-11.5%	15,838	450	2.8%	-237.0	9.0	-3.8%
7	Zeon Kasei	Compound, logistics materials	-16.6%	12,120	110	0.9%	120.0	6.0	5.0%
8	Showa Link	Aluminum building materials	-21.9%	6,167	120	1.9%	-320.0	1.7	-0.5%
9	Hikawa	ISO tank operation	-21.9%	75,000	50	0.1%	320.0	2.0	0.6%
10	Nihon Buturyu	IBCs	-26.7%	220	220	100.0%	5.0	5.0	100.0%

Table 2.2

IBCs division's contribution:

Product range of each supplier and the contribution (or impact) of IBCs business to its parent body is a significant analysis factor. Because it strongly affects to which degree a firm commits itself to IBCs business, and help as predict competitor's future actions. There are six companies who are specializing in the IBCs business, and the rests are the firms of which IBCs divisions' contribution to the corporate revenue is minor. Within the latter more than 50% IBCs business contribution in HET, MMB, Kodama and Sumitrans Japan are remarkable.

2.4 Market size and share

The numbers of IBCs sold and the revenues in 2001 by suppliers and are summarized in **Table 2.3**. The whole IBCs market in 2001 was 8.7 billion yen ($82millon). The products transported and processed by IBCs were around 700 thousand tons. *Tank IBCs* share was 70% in revenue and 82% in use. Among *Tank IBCs PE (B)* has over 70% share in numbers

of sales and 25% share in revenue. These figures clearly indicate that new Germany origin plastic containers have rapidly become widespread as overviewed in the history. Regarding Liner IBCs Sumitrans 42% sales share rank first selling 54,000 liner bags a year.

The market share (2001)

	Nos. of units sold						*Estimated tons of products transported		Revenue (million yen)						Revenue Market
Tank	SUS	SUS	PE (R)	PE (B)	Liner	Sales	and processed by IBCs		SUS	PE (R)	PE (B)	Others	Total	%	
Supplier	Sales	Hire Fleet	Sales	Sales	Total	Share									Share
KBS	1,300		5,150		6,450	8%	161,250	23%	250.0	830.0		0.0	¥1,080	18%	12%
Kodama				35,000	35,000	44%	35,000	5%			900.0	0.0	¥900	15%	10%
HET	250		4,800		5,050	6%	126,250	18%	50.0	750.0		0.0	¥800	13%	9%
Nihon Container	600		1,500		2,100	3%	52,500	7%	180.0	470.0		8.0	¥658	11%	8%
NRS		7,000			7,000	-	35,000	5%	570.0	-		0.0	¥570	9%	7%
Kawatetsu Container	600		1,400		2,000	2%	50,000	7%	145.0	280.0		25.0	¥450	7%	5%
Furukawa	400			15,000	15,400	19%	25,000	4%	80.0		300.0	0.0	¥380	6%	4%
Container Kaihatsu	400		1,800		2,200	3%	55,000	8%	80.0	270.0		0.0	¥350	6%	4%
Chuo Kasei		500			500	-	2,500	0%	343.0			0.0	¥343	6%	4%
Nihon Buturyu	100		800		900	1%	22,500	3%	20.0	120.0		80.0	¥220	4%	3%
Brain Five		50			50	-	250	0%	180.0			0.0	¥180	3%	2%
Nittetsu Drum	300			3,000	3,300	4%	10,500	1%	72.0		75.0	14.0	¥161	3%	2%
Hikawa	130			120	250	0%	3,370	0%	35.5		6.0	8.5	¥50	1%	1%
Total nos. of units sold	4,080	7,550	15,450	53,120	80,200	100%	* Nos. of units sold x 5 year depreciation x 5 cycle use/year					* Nos. of units hired out x 5 cycle use/year			
Estimated tons	102,000	37,750	386,250	53,120	**579,120** tons		**579,120**	**82%**	2,005.5	2,720.0	1,281.0	135.5	**¥6,142**	100%	**70%**
%	18%	7%	67%	9%											

Liner	Outer Box Sales		Outer Box Hire		Liner Sales		*Estimated tons of products transported						Adjsted		Revenue Market
Supplier	Sales	Share	Fleet	Share	Sales	Share			Outer Box	Share	Liner Bag	%	Total	%	Share
Sumitrans Japan			7,000	58%	54,000	42%	54,000	8%	515.7	45%	155.5	22%	¥751	29%	9%
Goodpack System Japan			5,000	42%	1,200	1%	1,200	0%	150.0	13%	6.0	1%	¥550	21%	6%
MMB	30,000	92%			40,000	31%	40,000	6%	240.0	21%	280.0	40%	¥520	20%	6%
Dodwell Japan					15,000	12%	15,000	2%			150.0	22%	¥300	12%	3%
DNP					8,000	6%	8,000	1%			80.0	11%	¥150	6%	2%
Taiyo Kogyo	1,500	5%			1,500	1%	1,500	0%	52.5	5%	1.5	0%	¥50	2%	1%
Showa Link	800	2%			-	-	-	-	120.0	10%			¥120	5%	1%
Zeon Kasei	400	1%			-	-	-	-	80.0	7%			¥110	4%	1%
Fujimori Kogyo					8,000	6%	8,000	1%			24.0	3%	¥20	1%	0%
Total Nos. of liners sold	32,700	100%	12,000	100%	**127,700**	100%	**127,700**	**18%**	1,158.2	#REF!	697.0	100%	**¥2,571**	100%	**30%**
Estimated tons of products transported and processed by IBCs					**706,820** tons				Total revenues				**¥8,713** million		

Table 2.3

According to **Table 2.4** nearly 70% of the revenues of *Tank IBCs* suppliers come from the chemical industry and the same percentage of the revenues of *Liner IBCs* suppliers depend on the food industry.

Revenues by industries (2001)

C = Chemical
F = Food
T = Toiletry
P = Pharmaceutical

Tank IBCs	Revenue (share)				Revenue (million yen)					
Supplier	C	F	T	P	C	F	T	P	Total	Targeted industries in the near future
KBS	70%	30%			756	324	0	0	1,080	F,T
HET	60%	30%	5%	5%	480	240	40	40	800	F
Nihon Buturyu	80%	20%			176	44	0	0	220	C
Kawatetsu	95%	5%			428	23	0	0	450	C
Container Kaihatsu	55%	20%	15%	10%	193	70	53	35	350	F
Brain Five	80%	20%							?	F,T
Nihon Container	100%				658	0	0	0	658	F,T
Furukawa	80%	20%			304	76	0	0	380	F
Kodama	60%	25%	10%	5%	540	225	90	45	900	F
Nittetsu Drum	100%				161	0	0	0	161	C
NRS	90%	5%	5%		513	29	29	0	570	F,T
Hikawa	85%	15%			43	8	0	0	50	F
Chuo Kasei	100%								?	C
	76%	18%	4%	2%	4,251	1,038	211	120	5,619	

Liner IBCs	Revenue (share)				Revenue (million yen)					
Supplier	C	F	T	P	C	F	T	P	Total	argeted industries in the near futur
Zeon		100%			0	110	0	0	110	F
MMB	35%	55%	10%		182	286	52	0	520	C
Goodpack	96%	4%			528	22	0	0	550	F
Showa Link	5%	90%	5%		6	108	6	0	120	F
Taiyo	60%	40%			30	20	0	0	50	F
Fujimori	10%	80%	10%		2	16	2	0	20	F,T
Dodwell		100%			0	300	0	0	300	F
DNP		100%			0	150	0	0	150	F
Sumitrans		80%	18%	2%	0	601	135	15	751	F,T,P
	29%	63%	8%	1%	748	1,613	195	15	2,571	

Table 2.4

Highlights

Total market = ¥8.7 billion

Total products transported/processed by IBCs = 700,000 tons

	Market leader	*Market share*	*Major playground*
Tank IBCs	*KBS*	*12%*	*Chemical industry*
Liner IBCs	*Sumitrans Japan*	*9%*	*Food and pharmaceutical industry*

2.5 Market share analysis

Porter picked up 112 US industries (1972) in his book “Competitive Strategy” as examples of fragmentation. The average total market share of top 4 firms is 21% and that of top 8 firms is 32%. The top 4 firms preempted 41% market share, and the top 8 firm’s share reached 67%. Hence our industry may be rather oligopolistic than fragmented, if the Porter’s examples represent the fragmented industries. However the seven out of twelve factors, which he diagnosed as the causes of the fragmentation, are applicable to our industry.

Low entry barriers: As overviewed in the history there seem to have been no entry barriers to the industry. The numbers of players have kept increasing for the past thirty years.

Absence of economies of scale or experience curve: The market leader KBS was not a manufacturer who normally appreciates the scale economy and learning curve effect. KBS rather devotes its all energies to cutting the manufacturing cost not by experience curve, but by making small fabricators compete each other.

Diseconomies of scale: Customization has been the common industry practice, which requires a great deal of user-manufacturer interface on small volumes of product. Personal consultative skills and experiences enable a small firm to survive. Nihon Buturyu (=CEO’s personal innovative skills) and Brain Five (=engineering skills) are the good examples.

The well-balanced market shares graph and the above analysis draw the first hypothesis that the each supplier has its own fixed customers. The following two questions in the research questionnaire were helpful to verify this hypothesis, i.e. “Who are your top 20% customers?” “How frequently are they replaced with others?” Very interestingly almost all companies replied that replacement of these top customers is few, or almost nil, and their top 20% customers’ revenue shares reach 80%. It clearly indicates that buyers do not change the IBCs suppliers often. Underlying reasons of immobility should be:

High switching cost

IBCs look like commodities, but actually not. They must be tested before purchase to confirm if they are conformable to the products to be filled into. Once conformity and applicability are affirmed, the supplier and its products acquire credibility and are locked in the customers operation.

Workers' resistance to change

Once both senders' and receivers' operators get familiar with handling the particular type of IBCs, it becomes difficult for them to change the IBCs with substitutes without their consent. Workers tend to oppose the changes of their routines.

Supplier's increased knowledge about the buyer's product

A supplier gradually increases knowledge about buyer's products, which enable them to render professional advice to the buyer. Especially when a buyer is employee of a large company, he or she does not always have enough knowledge and experiences due to periodical personnel rotations.

Purchaser's risk avoidance

The firms tend to become risk avoiders after purchase. Under above mentioned workers' reluctance circumstances, a person placing an order feels he/she won't be challenged to defend that decision.

2.6 Habitat segregation (omitted)

Chapter 3 - Strategic groups

Chapter 2 overviewed the industry. In this chapter the emphasis shifts to the strategic groups in the industry.

3.1 Finding strategic groups

A **strategic group** is the group of firms in an industry following the same or a similar strategy along the strategic dimensions. (Competitive Strategy, Porter, 1980, p129) The research questionnaire includes the questions, which are '"who are the most competitive rivals to your firm?" and "From which industries are your firm's revenues generated?" Combinations of answers to these questions contribute to make an interesting map. See **Figure 3.1**. Arrows show the perceived rivals. The density and directions of arrows indicate the degree of rivalry. This rivalry map roughly outlines the strategic groups.

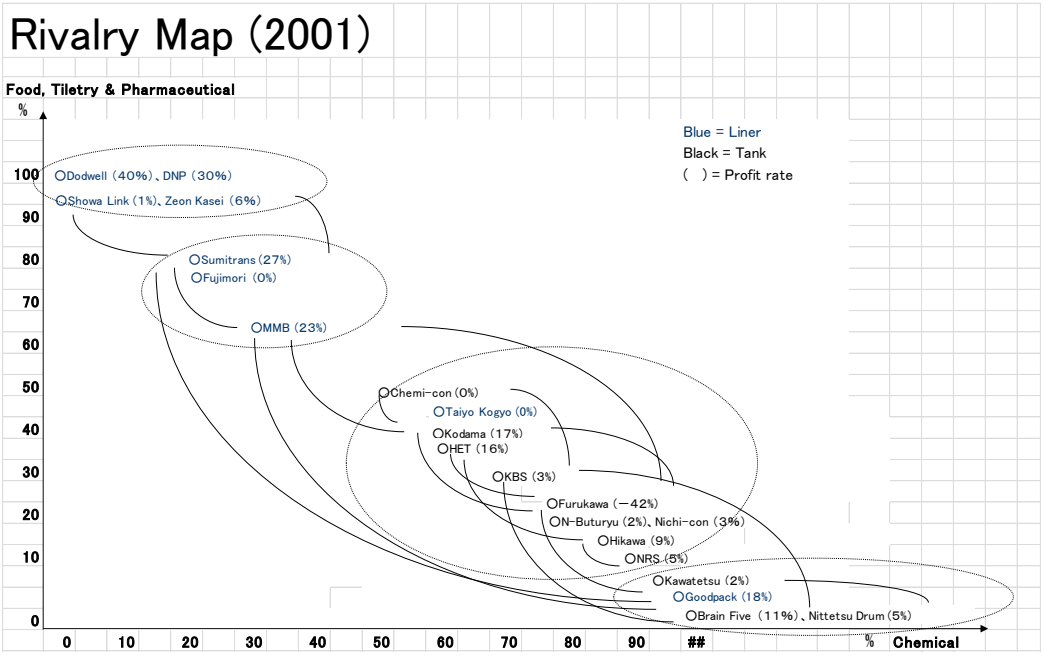

Figure 3.1

Figure 3.2 is the matrix rearranged by adding the category variables i.e. the sales approaches. Each firm is vertically located at the same percentage as the rivalry map. Firms in blue ink are Liner IBCs suppliers and firms in black ink are Tank IBCs. These processes subdivide the industry into six strategic groups.

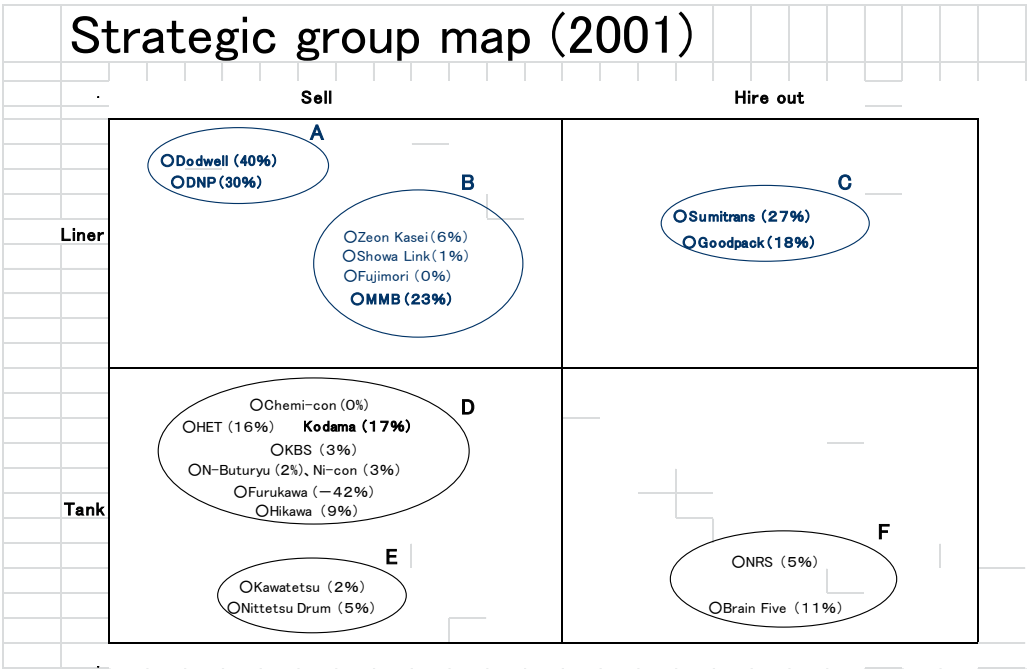

Figure 3.2

3.2 Strategic groups' profitability

The strategic groups identify significant differences of performances.

Group A : Aseptic Liner IBCs sellers

This is a group of the combination of Liner IBCs and sales. The two firms, Dodwell Japan and DNP, belong to the most profitable group in the industry. They provide the aseptic filling machine and liner bags, but do not have boxes. Hence they collaborate with the collapsible IBCs suppliers. Dodwell Japan has collaborated with MMB, Sumitrans and Showa Link. DNP has the long established partnership with Zeon. The group revenue is 450 miillion yen and the group profitability is 37%.

Group B: Non aseptic Liner IBCs sellers

This is another group of the combination of Liner IBCs and sales approach. The group revenue is 820 million yen and the group profitability is 16%. This group is divided into three sub-groups. 1) MMB and Taiyo Kogyo are the suppliers of both liners and boxes. 2) Fujimori supplies liner bags only, and 3) Zeon and Showa Link are the box suppliers. The profitability of the sub-group 1) is 21%, while the remainders have only 2%.

Group C: Liner IBCs hirers

This is a group of combination of non-aseptic Liner IBCs and hire approach. The group enjoys 1.3 billion yen revenue and 23% EBIT which is the second highest in the industry. As the members of Group A are unable to supply boxes, it is regarded as the highest profitable group who provides the complete set of Liner IBCs. Two firms, Sumitrans and Goodpack belong to this strategic group.

Group D: Tank IBCs sellers (IBCs specialists)

This is a group of combination of rigid tank IBCs and sales approach to which most of the local firms have belonged. It is also a group who has received the majority of the new entrants for the past thirty years. As a result the group revenue exceeded 4 billion yen, which is the largest in the industry. The lower profitability (6%) reflects the group competitiveness.

Group E: Tank IBCs sellers (Steel drums suppliers)

This is another group of combination of Tank IBCs and sales approach. While the majority of the suppliers in Group D specializing in IBCs, the two suppliers of Group E are the two

leading steel drums suppliers. Nittetsu Drum is a subsidiary of Nippon Steel, the largest steel manufacturing company in Japan. Kawatetsu Container is also a subsidiary of Kawasaki Steel, which is also one of major iron makers. As reviewed in the history both companies defensively entered the IBCs industry to protect their drum customers. The group revenue and profitability is 611 million yen and 3% respectively.

Group F: Tank IBCs hirers

This is a minority group of combination of Tank IBCs and hires approach. The group revenue is 750 million yen. 7% profitability is in between Group D and E.

3.3 Mobility barriers and strategic opportunities

In the Porter's theory the foundations of the groups' profitability differences are the **mobility barriers**. The IBCs industry mobility barriers are illustrated in **Figure 3.3**. The color of letters indicates the same skills and technologies required to enter the group. Group A has the highest elevated mobility barrier. An attacker, if any, must have the specialized competence and knowledge on the aseptic filling system. Group C has the second highest mobility barrier combined by the three different types of skills. The mobility barrier between Group C and B is also difficult to clear, because hire service requires nationwide hire network facilities and the operational skills and experiences. The barrier between Group B and D/E/F is higher than it looks, as the skills and technologies required entering the Liner IBCs group is totally disparate. Collapsible containers need high engineering know-how especially in the joint parts between separate panels and lightening know-how of those components. Further to it making plastic liner bags requires totally different engineering skills and facilities than producing containers.

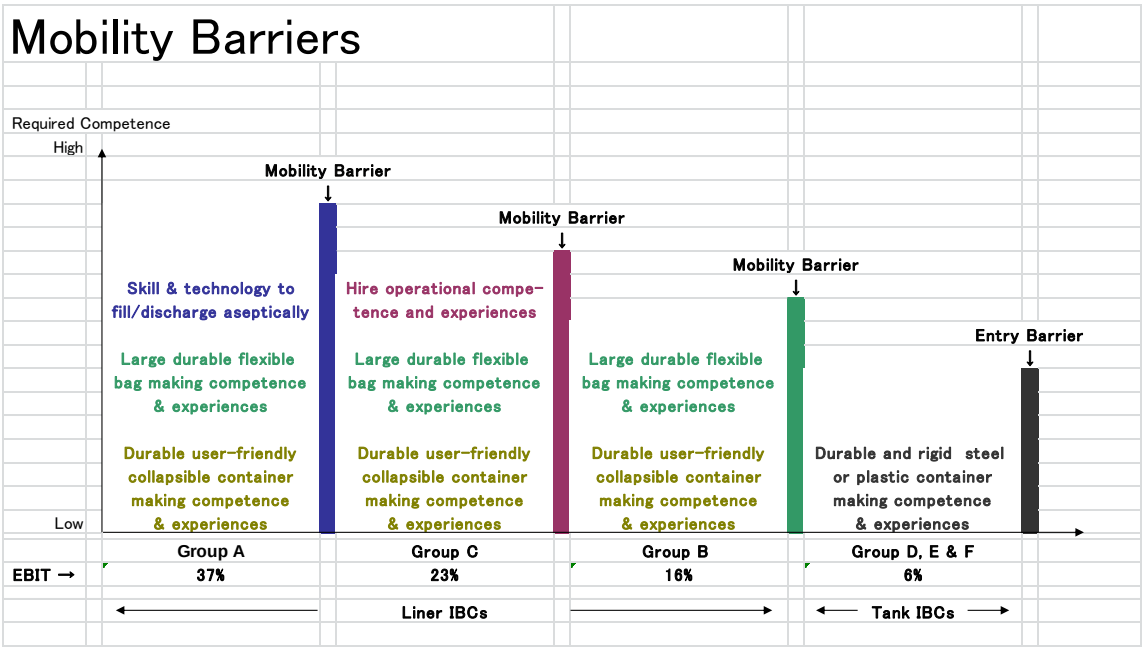

Figure 3.3

Mobility barriers give us a hint to design our future strategy. As Porter says, we have the following four possible strategic opportunities.

Option 1: Create a new strategic group

We created a new strategic group (Liner IBCs + Hire-out category) ten years ago. We have had been a sole group member until Goodpack recently entered into this group.

Option 2: Shift to a more favorably situated strategic group

Moving to a more favorably situated strategic Group A is not a wise option for us. First reason is the highest mobility barrier. Second reason is that that we share the customers with the firms in Group A. Nearly twenty percent of our revenue is generated from the same customers.

Option 3: Strengthen the structural position of the existing group or the firm's position in the group

This is the most practical strategic opportunity for us. I will discuss 'how' in Chapter 6.

Option 4: Shift to a new group and strengthen that group's structural position

This is not our choice, as other groups' profitability is inferior to our group.

Chapter 4 - Firms' chosen generic strategies

In the previous chapter we acknowledged the reasons of high profitability of the groups in the industry. Obviously the groups' high profitability stems from the aggregated high individual firms' profits. This chapter narrows the focus down to firms and explores their chosen strategies. First the above average performers and their strategies are analytically discovered. Second it is diagnosed why others are average or under-average performers. Third the Profit/Market share matrix is introduced as a framework, which analyzes and predicts the firms' current and future performances. At the end of this chapter I will summarize the findings of the whole research from Chapter 2 through 4.

To verify Porter's generic competitive strategies theory I picked of the most profitable firms from the research list and examined their sales prices. I simply defined if the sales prices were high, they were differentiators, if low, cost leaders. As the judgment of uniqueness tends to be subjective, factors such as products features, differences of services were not taken into account. Only incontrovertible were used for analysis.

4.1 Finding above-average performers and their strategies

Porter's generic competitive strategy has two dimensions. One is cost/differentiation, and the other is scope of targets. Regarding the first dimension I presume very simply that a cost leader must have high profitability by the lowest pricing, and differentiator must enjoy higher profitability with higher pricing. By the research we know the earnings of the nineteen suppliers in 2001. (Unfortunately EBIT of the three firms were not obtainable.) The issue is how to compare the pricings fairly. One sells an IBC, say 150,000 yen ($1,400) per unit; the other hires it out with the rate of 200 yen ($1.90) per unit a day. Which is more competitive? From the customers' standpoint the package is evaluated how it costs to the value of the product to be packaged. Having factors such as depreciation, estimated lifetime and hire cycles into account the cost per kilo of each supplier is calculated in **Table 4.1**.Concerning the second dimension the *rivalry map* (**Figure 3.1**) is helpful to define the scope of targets of each firm. Firms of which targets are broad tend to locate in the middle of the map covering chemical, food and pharmaceutical industries, whereas, narrow targets firms are positioned at either ends.

Pricings & profits (2001)

Rigid Tank IBC		JPY .000	JPY	JPY .000	JPY	
Supplier	Trade Name	SUS	Price/kg	PE	Price/kg	EBIT
KBS	Tough-tainer	202	8	167	7	8%
HET	Yuka-tainer	300	12	156	6	15%
Nihon Buturyu	Vital Silcon	200	8	150	6	2%
Kawatetsu Container	River-tainer	242	10	200	8	2%
Container Kaihatsu	Chemi-con	200	8	150	6	0%
Nihon Container	Nichi-con	251	10	175	7	3%
Furukawa	Ecobulk	200	8	20	4	-33%
Kodama	**Powertote**	**-**	**-**	22	**4**	**17%**
Nittetsu Drum	Dannetsu-container	240	10	-	-	5%
Hikawa Shoji	Liquitote	273	11	-	-	4%
Brain Five	BMC	?	?	-	-	11%
Chuo Kasei	-	?	?	-	-	?
NRS	-	?	?	-	-	9%

Dismountable Liner IBC		JPY .000	JPY	JPY	
Supplier	Trade Name	Outer Box	Liner	Price/kg	EBIT
Sumitrans	**Maxicon**	12	3	**15**	**26%**
MMB	**SpaceKraft**	15	7	**22**	**23%**
Taiyo Kogyo	Fluid-bag	20	7	27	0%
Showa Link	Cargo PL	10	3	13	1%
Zeon Kasei	STEC L	11	3	14	5%
Goodpack	**Metal Box**	2	3	**5**	**18%**
Dodwell	**Intacept**	15	13	**28**	**40%**
DNP	**Starcetp**	15	8	**23**	**30%**
Fujimori	PL1000	10	3	13	0%

Table 4.1

Who is the cost leader?

According to **Table 4.1** Kodama is the lowest pricing (¥4/kg) company with higher profitability (17%). The *rivalry map* (**Figure 3.1**) indicates that their targets are broad. Kodama is the local leading plastic containers company who recently entered the IBCs industry with the Mauser Powertote. It has the established strong sales nationwide network and forces. The German technology remarkably reduced the production cost enabling them to enjoy the reasonable margin even if they sell the product with one-fifth retail price compared with the conventional rigid containers. Thus the Kodama's chosen strategy is conceived as the ***cost leadership***. Goodpack Japan's low pricing (¥5/kg) is also remarkable. They hire out simple metal boxes without the frills, which were originally designed to export low value latex from Malaysia to other countries. It is the product for users who appreciate the low cost and hire system. Hence their strategy is ***cost leadership focus***.

Who are the differentiators?

Four firms fulfill higher pricings and profits. Dodwell Japan (¥28/kg pricing with 40% EBIT) and DNP (¥23/kg pricing with 30% EBIT) are the both aseptic filling system providers who

targets the very limited highly hygiene conscious food industry. It serves high-end customers who can afford the high packaging cost. It is obvious that their chosen strategy is the ***differentiation focus strategy***. Sumitrans (¥15/kg pricing with 26% EBIT) is the first company who brought the unique 'Hire' concept into the industry. It can supply the both robust and the user-friendly dismountable boxes and competitive superior quality flexible liner bags. Customers are in high-end of the food, pharmaceutical industries where the strict bacteria controls are required. It also serves some chemical companies who appreciate disposable liner bags and the one-way hire service. MMB (¥22/kg pricing with 23% EBIT) supplies the unique one-way containers. The customers both in chemical and food industries are high-end customers who appreciate disposable sanitary liner bags and recyclable cardboards especially for international use. Sumitrans' and MMB's broad targets and the unique products and services to serve the high-end customers are the typical characters of the ***differentiation strategy***.

NRS is the transport company who has logistics approach. IBCs are the part of their logistics services, which include transports, containers rentals and handlings. Brain Five has the engineering and consultative approach. Their core employees are engineers. They hire out their own designed stainless steel rigid as a part of their consulting services. Considering of these firms' unique approaches their targeted strategy is regarded as differentiation. However the lower profitability probably stems from its structure. Relocation is costly, as it cannot be collapsible. Cleaning of tanks, pipes and valves is labor intensive, and elimination of remainder, impurities and aroma inside these parts is logically impossible.

4.2 Stuck-in-the-middlers

The failure and challenge of the former cost leader

As above one cost leader, one cost focuser, two differentiators and two differentiation focusers are identified as above-average performers. Then how about others? Porter says that a firm that engages in each generic strategy but fails to achieve any of them is "stuck in the middle. Becoming stuck in the middle is often a manifestation of a firm's unwillingness to make choices about how to compete. Becoming stuck in the middle also afflicts successful firms, who compromise their generic strategy for the sake of growth or prestige." (*Competitive Strategy*, Porter, p17) We have a good example in our industry. As overviewed in the history KBS is the industry pioneer and still keeps the top market share. However it was not selected as an above-average performer because of its lower profitability. KBS belongs to the most competitive strategic group D i.e. the group of Tank IBCs sellers. This group had

been very local and prosperous for the past 25 years, but was raided by the German innovation five years ago. KBS's past successful experiences seem to have narrowed their perspective, or they were not competent to deal with the overseas companies, nevertheless they are in an easier position. Another possible reason is that the fact which they are not a manufacturer may have averted them from appreciating the cost leader's common weapons i.e. scale economy and learning curve effect. They rather devoted their fortune to exploring cheaper suppliers. It is interesting that KBS is currently challenging to move to the more profitable strategic group by developing Liner IBCs. It is also observed that they shift their focus from sales to maintenance services. If these efforts are rewarded, KBS will be the first firm, which overcomes the mobility barrier underlying Group C and D.

4.3 Correlation of the market position and profitability

I drew the profit/market share correlation line in **Figure 4.1**. The twenty-two firms' market shares and their profitability show positive correlation that verifies the PIMS logic. (*3). Although the two most profitable firms with lower market share support Porter's U-shaped pattern (*4), it is also identified that many other firms with low market shares accept lower profitability and the top market share leader's profitability is ranked in the middle. These are the negative facts to his theory.

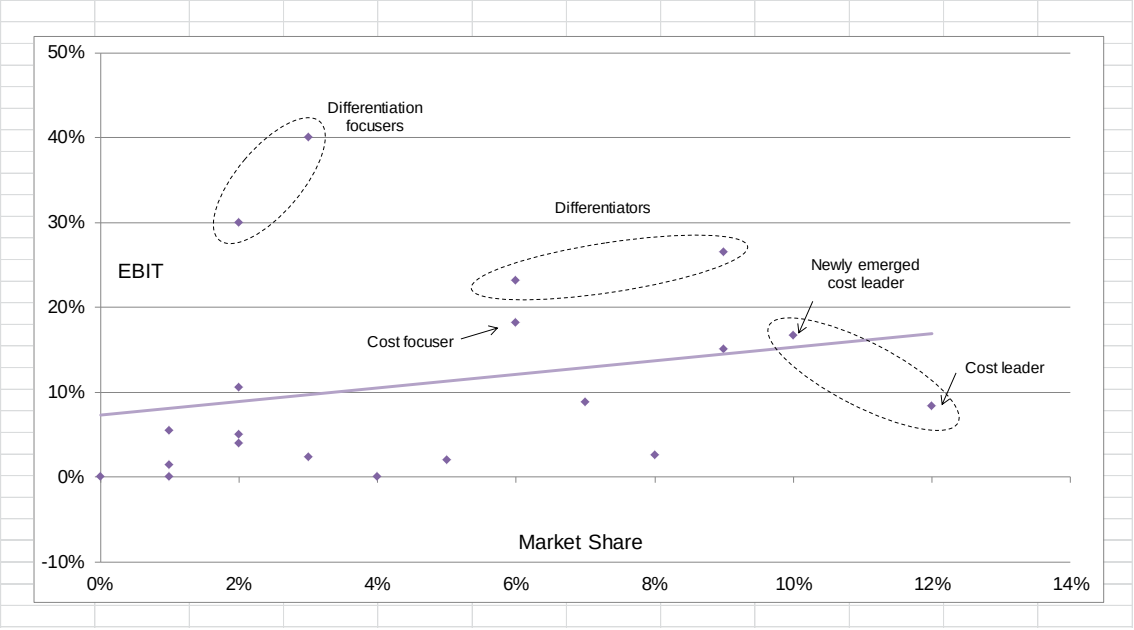

Figure 4.1

If this graph is drawn periodically, it will expectedly represent the evolution of the industry. For example the former cost leader's position (=KBS's), which was presumably over the correlation line currently dropped down. Kodama has emerged as the new cost leader over the correlation line. See the direction of the dotted arrows in Figure 4.1. The real outperformers must always be positioned remote from the average line.

(*3) It stands for Profit Impact of Market Share. Simple logic extracted from the analysis of the hard data. Firms that have achieved a large share of the markets they serve are considerably more profitable than their smaller-share rivals.
(*4) The smaller (focused or differentiated) firms are the most profitable, and the medium-sized firms are the least profitable. This implies a U-shaped relationship between profitability and market share. (M.E.Porter, *Competitive Strategy*, 1980, p43)

4.4 Summary of analysis

It is the time to summarize the series of analysis from chapter two through four. The following six points are remarkable findings from the research. See **Table 4.2** together.

Point 1 = Clear-cut strategists are higher profit makers.
The above average performers take 80% of the whole industry profit. Stuck-in-the-middlers preempting 62% revenue of the industry take only 20% industry profit. Profitability of strategists group in 2001 was 23%, which is nearly as six times as that of stuck-in-the-middlers'. It indicates that clear-cut strategists are seemingly running the winning game.
Point 2 = Above-average performers are not necessarily in the same strategic group.
This is interesting. Groups in elevated mobility barriers have higher profitability as analyzed in Chapter 3. It is true as a group. However the cost leader can survive and retain high profitability within a group with lower mobility barrier.

Point 3 = Firms to which above-average performers belong are revenue growers.
Average corporate revenue growth (1999-2001) of the above average performers is 25%, while the same of the stuck-in-the-middlers is only 1% (Merged firms are excluded from the calculation.) It denotes that the successful business should be supported by the healthy 'mother body'.

Point 4 = Liner IBCs are more profitable than Tank IBCs.

The above-average performers supply Liner IBCs with the only one exception. The profitability difference stems from not only the difference of structure but also the unique strategies chosen by the suppliers.

Point 5 = Strategiests are above the PIMS correlation line

This is another interesting finding, which visually helps our understanding of the strategists' competitiveness and positioning in the industry.

Point 6 = Origin of strategists is NOT local.

See **Figure 4.2**. Very interestingly country of origin of all outperformers and above-average performers is overseas. The local market was devastated by the overseas origin products and services who have taken 80% of the total profit of the whole industry enjoying the nearly eightfold profitability compared to the local conventional firms. (*5)

Summary of analysis from Chapter 2 through 4 (2001)

Outperformers & Above-average performers

Firm	Strategic Group	Chosen Strategy	Revenue (JPY mil)	EBIT (JPY mil)	Profitability	Corporate grouwth	IBC's profit contribution	IBC's type	Sales approach	Country of Origin
Kodama	D	Cost leadership	900	150	17%	2%	69%	Tank	Sales	Germany
Sumitrans Japan	C	Differentiation	751	199	26%	15%	52%	Liner	Hire	Australia
Goodpack Japan	C	Cost leadership focus	550	100	18%	83%	100%	Liner	Hire	Singapore
MMB	B	Differentiation	520	120	23%	-12%	59%	Liner	Sales	USA/Canada
Dodwe	A	Differentiation focus	300	120	40%	7%	17%	Liner	Sales	New Zealand
DNP	A	Differentiation focus	150	45	30%	54%	0.1%	Liner	Sales	Sweden
Total/Average			3,171	734	26%	25%	50%			

Stuck-in-the-middlers

Firm	Strategic Group	Chosen Strategy	Revenue (JPY mil)	EBIT (JPY mil)	Profitability	Corporate grouwth	IBC's profit contribution	IBC's type	Sales approach	Country of Origin
KBS	D	-	1,080	90	17%	2%	69%	Tank	Sales	Japan
HET	D	-	750	120	26%	15%	52%	Tank	Sales	Japan
Nihon Container	D	-	658	17	18%	83%	100%	Tank	Sales	Japan
NRS	F	-	570	30	23%	-12%	59%	Tank	Hire	Japan
Kawatetsu Container	E	-	450	9	40%	7%	17%	Tank	Sales	Japan
Furukawa	D	-	380	-125	40%	7%	17%	Tank	Sales	Germany
Container Kaihatsu	D	-	350	0	40%	7%	17%	Tank	Sales	Japan
Nihon Buturyu	D	-	220	5	40%	7%	17%	Tank	Sales	Japan
Brain Five	F	-	180	19	40%	7%	17%	Tank	Hire	Japan
Nittetsu Drum	E	-	161	8	40%	7%	17%	Tank	Sales	Japan
Showa Link	D	-	120	2	40%	7%	17%	Liner	Sales	Japan
Zeon Kasei	D	-	110	6	40%	7%	17%	Tank	Sales	Japan
Hikawa	D	-	50	2	40%	7%	17%	Tank	Sales	Japan
Fujimori	D	-	20	0	40%	7%	17%	Liner	Sales	Japan
Total/Average			5,099	183	35%	11%	32%			

Table 4.2

(*5) This result coincides with the conclusion of the book "Can Japan Compete?" written by Porter and Takeuchi in 2000, which is that Japanese firms do not have strategies. However the precondition that firms always pursue higher profitability is not necessary right in all countries.

Particularly in Japan profitability has been historically lower than that of western firms. Coexistence might have been inherently pursued as diagnosed in Chapter 2. Thus the fourteen firms listed as “stuck-in-the-middlers” are not necessarily feeling unhappy.

Chapter 5 - Diagnosis of our differentiation strategy (omitted)

Chapter 6 - Reinforcement of the Porter’s differentiation theory (omitted)

Chapter 7 – Conclusions (omitted)

Chapter 8 – Recommendations (omitted)

Chapter 9 – Reflections (omitted)

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