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Longitudinal Change in the Distribution Pattern of Value Added:

Did Japanese Manufacturers Change Priorities among Stakeholders?

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Abstract

Management styles of business firms can be characterized by three main components: capital structure, business strategy and sovereignty of firms. Most large Japanese manufacturers had formed a management style which consisted of dominant outside-capitals by borrowing from banks, proceeds-expansion strategy and corporate sovereignty of human capital providers such as employees and corporate managers. They were highly successful on international markets for three decades from the 1960s to the 1980s. However, many large manufacturers began to finance the capitals directly from stock and bond markets in the late 1980s, and domestic banks lost their lending power owing to an increase in bad loans after the collapse of Japan's economic bubble at the beginning of the 1990s. As a result, large manufacturers changed their capital structure from outside-capital dominant styles to equity dominant ones. They also changed their corporate strategy from proceeds-expansion to corporate value-maximization after the 1990s. Considering this, we examined whether large Japanese manufacturers changed the sovereignty style of firms in conjunction with the shifts of their corporate capital structure and business strategy. We approached this research question with the analysis of value distribution patterns among stakeholders for the three decades from the 1980s to the 2000s.

Key Words

Large Japanese manufacturers, Value added distribution, The sovereign of human capital providers

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Ⅰ. Introduction

The purpose of this research is to examine whether large Japanese manufacturers changed their traditional management styles in the new business environment from the 1990s onwards. Japanese manufacturers were extremely successful in the three decades from the 1960s to the 1980s. According to the Industrial statistics of METI (Ministry of Economy, Trade and Industry), although shipment values of every manufacturing industry remained around several trillion yen respectively in 1970, that of electric machinery industry reached

approximately 60 trillion yen ; that of transportation industry went up to nearly 50 trillion yen ; and that of general & precision machinery industry surpassed 40 trillion yen in 1990. They had international success with the so called Japanese style management (Abegglen, 2006 ; Dore, 2001) and lean production system (Krafcik, 1988) in the 1980s.

Japanese manufacturing industries stopped the rapid growth abruptly and their production began to fluctuate with a two- or three-year-cycle of ups and downs in the beginning of the 1990s when the asset-inflated bubble economy collapsed. For example, the shipment value of electric machinery industry began to fluctuate between 50 and 60 trillion yen in the 1900s, but it plunged below 50 trillion yen in 2002 and reached approximately 40 trillion yen after the economic downturn precipitated by the Lehman Brothers bankruptcy in 2008.

Judging from changes of their shipment values, traditional Japanese manufacturers seem to be almost and totally changed in the 1990s. The fact is contrary to what it seems. While the business environment has changed drastically since the beginning of the 1990s, Japanese manufacturers firmly maintained some aspects of traditional management styles. That is why the manufacturers were not able to cope with changes of markets and reduced their proceeds. In other words, they were not able to adapt themselves to environmental changes after the 1990s, for example a persistent strength of the yen ; the development of ICT innovation ; new rivalry among competitors in Korea, Taiwan and China ; and capital transaction increases on global financial markets.

The question with which we are concerned is what maladaptive patterns they made in changing environments after the 1990s. For this question, we posit that Japanese manufacturers were not able to innovate their management systems in an integrated and consistent manner, including capital structure, strategy and sovereignty of firms. In the four decades since the end of World War Ⅱ, they had successfully established a management style called *Japanese style management* with borrowed capitals from main banks, the expansion strategy of companies' proceeds and sovereignty of human capital providers including corporate managers and employees. Although they changed capital structures and business strategies in the changing environment after the 1990s, they maintained the style of corporate sovereignty of human capital providers. We posit that such an inconsistent configuration of new and old management styles can potentially explain the unsuccessful adaptation of Japanese manufactures to a changing environment after the 1990s.

The paper is structured as follows. Hypotheses for this reasoning are provided in the next section, followed by data and methods of examinations in the third section. We discuss the results in the fourth section and conclude this research with some comments on a new direction of unintegrated configuration of management styles of Japanese manufacturing firms.

Ⅱ. Theoretical Background and Hypothesis Development

Management style of business companies can be potentially characterized by its three components : capital structure, sovereignty of business organization (who substantially decide on fundamental policies in business) and business strategy. A typical management style of large Japanese manufacturers consisted of dominant outside-capital structures, sovereignty of human capital providers and proceeds-expansion strategy.

The dominant outside-capital structure means that banks lend more money than the shareholders' investment to a firm. Most Japanese manufacturers had more liability than equity for a few decades since the end of World War Ⅱ. Although they needed more capital to invest for their business expansion, it was difficulty

for them to finance capital directly from stock markets. According to the MOF's Financial Statements Statistics of Corporations by Industry, the averaged capital-to-asset ratio of manufacturers with capital above one billion yen declined from 29.3 percent at the beginning of the 1960s to 17.0 percent in the middle of the 1970s. Therefore, as major outside-capital providers, main banks held the substantial ownership of large manufactures by lending more capital than equity capital.

On the other hand, for approximately half a century since the end of the second world war, human capital providers including corporate managers and employees of firms, potentially had the sovereignty of manufacturing firms in Japan. The term sovereignty here means substantial power to make decisions on appointing corporate managers, fundamental policies and distribution of value added in firms.

Japanese manufacturers established the human capital providers' sovereignty of firms in conjunction with the process of formation of traditional employment practices after the latest war. At the end of the Second World War, GHQ (General Headquarters of Allied Forces) dissolved the zaibatsu conglomerates into many new companies. At that time many corporate managers in large manufacturing firms were appointed from their employees' positions in their companies, because corporate managers in the business firms under the conglomerates were purged from their positions for their alleged commitments to the war. After that incumbent presidents of companies in Japanese companies had the power to appoint other corporate managers and the next president of the company, which was expected to be followed by approval in shareholders' meeting. They often appointed a new president among corporate executives who had a long career as an employee in the company. Although incumbent presidents sometimes needed the agreement of main banks when appointing new corporate managers, the banks made it a rule not to interfere when their businesses had no problems.

On the other hand, although Public Order and Police Law prohibited labor movement in the prewar period at the beginning of the 20th century, all the workers in business firms became to be employed at will and obtained the right for labor activities after the war. When the Labor Union Act was announced officially in 1945, workers created many labor unions and launched strikes. In the development of the employees' sovereignty in Japanese companies, however, a good relationship between labor and management was nurtured by having a strong bonding between non-owner presidents and employees, as well as some concessions of management to employees in negotiations of their working conditions. The relationship between them become cooperative especially since the 1970s because labor and management faced common challenges such as a strong yen and oil crises, which would weaken the competitiveness of Japanese manufacturers. Both labor and management were fearful of becoming bankrupt or a target of takeover by foreign firms if the competitiveness of their companies weakened. In this way, in the process of the high growth of Japanese manufacturing firms, human capital providers, including corporate managers and employees, held the sovereignty of firms and cohesively coped with all the difficulties in their business.

Meanwhile, most Japanese manufacturers with sovereignty of human capital providers set a proceeds-expansion strategy which led to the growth of firms, and more chance for employees to be promoted but less chances for firms to be taken over. The proceeds-expansion strategy mainly aims to enlarge the size of firms. It does not always raise profits directly in proportion to the growth of sales, however, because more expenditure for man power and assets is required in order to enlarge the sales amount. Therefore, the expansion strategy is expected to benefit more to human capital providers than equity capital providers. Besides, employees in large manufacturers were given priority in bearing business risks. Public firms in Japan had a tacit

rule to distribute value added they created in a year. When they experienced a bad business year, firstly, the management would make a spontaneous offer not to receive a bonus ; secondly, shareholders were paid no dividends that year ; lastly, employees would be paid less bonus or wages. Employees hardly had a chance to be dismissed just because of temporal declines of firms' performance. In this way, for three decades from the 1960s to the 1980s, human capital providers held sovereignty of firms, and enlarged their business in diversified ways using capitals mainly borrowed from banks without much consideration to the shareholders' benefits.

However, the growth of Japanese manufacturers' production stopped at the beginning of the 1990s when the bubble economy collapsed, and environmental conditions began to change significantly. In the development of ICT innovation and globalization of the economy, management styles also have been changing gradually since the beginning of the 1990s.

Firstly, capital structures of Japanese manufacturers began to change : the ratio capital-to-asset began to rise while that of liability-to-asset in large Japanese manufacturers began to decline, because they started to finance capital from stock markets directly in the late 1980s and ailing banks lost their lending power to business firms with huge of worthless debt in the 1990s. According to the Financial Statements Statistics of Corporations by METI 2016, the manufacturing firms capitalized with one billion yen or more began to increase their capital-to-asset ratio in the middle of the 1970s, and boosted the ratio up to above 30 percent in the late 1980s and 40 percent in the late 1990s. They kept the ratio to a high 40 percent in the 2000s.

In conjunction with the increase of ratio of capital to asset, the pattern of shareholder structure began to change. While the holding ratios of individual investors and business firms decreased, those of foreign investors and institutional investors increased. After the collapse of the bubble in the stock markets, share prices of all the public firms in Japan plunged. This is the reason why those business firms had to sell cross-holding stocks in the corporate group to which they belonged. According to the survey[1] on the distribution of public companies' shareholding, the ratio of institutional investors' holding share was hovering at between 15-19 percent in the first half of the 1980s and it fluctuated between 25-29 percent in the 1990s. On the other hand, the shareholding ratio of foreigners had been only several percent up in the 1980s but it began to increase at the beginning of the 1990s, surpassing 10 percent in 1995 and 20 percent at the beginning of the 2000s, and reached 31.7 percent in 2014.

Secondly, Japanese manufacturers shifted their corporate strategy in conjunction with changes in environmental conditions. It became evident that they were no longer able to expand business without regard to profitability of the business in the stagnant economy. Therefore, they began to abandon some money-losing business lines, and concentrate on those other selected fields to keep their business afloat. Most manufacturers shifted their corporate strategies from traditional expansion to "selection and concentration" to survive on global markets. In fact, to Japanese manufacturers, the term "selection and concentration" or "*sentaku to shuchu*" in Japanese had been introduced in the 1980s by GE in which the CEO, Jack Welch, restructured its business drastically based on his business philosophy that a company should be No.1 or No.2 in an industry, or leave it completely : "Fix, Sell or Close". Although in those days most Japanese manufacturers' CEOs did not pay attention to GE's restructuring strategy, boasting their world class competitiveness, and continued

1) Refer to Tokyo Stock Exchange, Nagoya Stock Exchange, Fukuoka Stock Exchange and Sapporo Stock Exchange (2016). "2015 nendo kabusshiki bunpu chousa no chousa kekka ni thuite".
http : //www.jpx.co.jp/markets/statistics-equities/examination/nlsgeu 000001q8j8-att/j-bu npu 2015.pdf.

to expand their business globally in the 1980s. They only adopted this "selection and concentration" strategy when the Japanese economy plunged into a long stagnation period at the beginning of the 1990s.

Even though many large manufacturers implemented the "selection and concentration" strategy for the last two decades, only a few of them succeeded. Among those few who succeeded with this strategy are Canon Inc. which concentrated on copiers and printers, Takeda Pharmaceutical Company which focused on development, production and sales of medicines, and Asics Corporation which focused exclusively on production and sales of running shoes. Most of those which took this restructuring approach were not able to restore their competitive edge. In this regard, however, their major setback should be one of theoretical consequences: when several dozens of competitors go into a single product market, just one or two of them should be able to survive but most others would be defeated on the fiercely competitive market. Furthermore, there should be a risk of tragic consequence waiting for all the participants who focus on a single market. While a strategic focus on a single market or product allows companies to invest more resources in production and marketing in that one area, it simultaneously has them carry the risk of significant losses in such events as a drop in the market demand, an appearance of new technology or new substituting goods, and an entry of new rivals.

However, we assume that there is another reason for most failures in the restructuring strategy of Japanese manufacturing firms. We provide a more positive explanation for their failures: most Japanese manufacturers were not able to change their management styles in a consistent and integrated way. They changed the capital structure of firms from borrowing capital to shareholders' equity dominant one. They also shifted their business strategy from diversified proceeds-expansion to the "selection and concentration" approach. However, they do not seem to have changed the governance style. If they change management systems to cope with changing environmental conditions consistently, they can potentially shift the sovereign right from human capital providers to shareholders. In other words, we assume that an irrelevant configuration of management styles (the new capital structure, the new business strategy, and the traditional corporate sovereignty style) would result in poor performances of Japanese manufacturers; and the traditional management styles with the human capital sovereignty conflict the management style of maximization of corporate value in financial markets.

Vogel (2006) remarked on the corporate governance style of Japanese firms from the view point of the configuration of management styles. He discussed the influence of corporate governance styles on the extent to which Japanese firms restructured their business with some case-studies. He claimed that the firms with more foreign-owned capital were likely to shift the weight of sovereignty of firms to shareholders when their business performance deteriorated. According to the contraposition of his claim, the firms maintain the traditional corporate governance style when they have relatively low foreign-owned capital and run their business without loss.

On the other hand, Jacoby (2005) analyzed the corporate governance system of Japanese firms with quantitative and qualitative data, based on the assumption that the central HR function represents not only its narrow sectional interests but also the collective interests of the regular worker, the lifetime employees while the emerging power of CFO directors on the board represents increasing weight of shareholders and investors. When he surveyed one of the largest electrical companies which adopted the corporate-officer system in 1999, he noticed that the company did not provide the HR managing director a board position but the CFO managing director a seat, which he interpreted as meaning that HR's loss of a board seat was a sign that the

collective interests of the regular workers began to reduce; and increasing voices of CFO on board represented shareholders' interests. He also claims that even at companies that have not adopted the corporate-officer system, they paid closer attention to financial markets, investor relations, and share prices by way of the provision of stock options to board members; the intentional announcement of huge reduction in workforce to financial markets; and monitoring the effect of wage negotiations on share prices by both the HR and investor-relations departments (Jacoby 2005, 60-61). He observes that most Japanese executives in large firms believe that both the traditional governance systems of Japanese firms and the U.S. system have benefits as well as costs; and that they doubt that the corporate management, as opposed to macro factors like monetary stringency, is the main source of Japan's economic problems since the middle of the 1990s. He claims that a majority of large companies is expected to remain with the postwar governance system rather than adopt American-style outsider boards, with the exception of firms that have a relatively high proportion of foreign shareholders, because the corporate systems of Japanese firms ultimately depend as much on the extent to which the systems are embedded in the political and normative factors in the county as on the one to which Japanese firms are involved in global competitive imperatives (Jacoby 2005, pp.166-173).

Both Vogel and Jacoby produce a similar finding that the large companies in this county seem to maintain the traditional employee-oriented management style while paying more attention to the shareholders and investors. From the same viewpoint, our research question is whether the human capital providers in large Japanese manufacturers still hold substantial sovereignty power of firms regardless of changes in capital structures and strategies.

We approach this research question through a perspective of changes in the distribution pattern of value added in companies. We may find some changes in the behavioral pattern of large Japanese manufacturers between the past and the present if they changed their management style from the traditional worker-oriented style to the shareholder-oriented style in the 1990s. Since the ultimate purpose of business companies is to create new value, the power balance in a company would show in the distribution pattern of value added among stakeholders.

It is not appropriate, however, to assume that there was a trend change at industrial level from the worker-oriented style to the shareholder-oriented one because each manufacturer should be different from each other in its own business context, such as company's history, product markets, core technology and so on. For example, Sony and Olympus belong to the same industry, but they seem to have different corporate governance style. Sony seems to be a shareholder-oriented company with open-type governance system based on facts that the company listed itself to New York Stock Exchange in 1970 and their invitation of a foreign CEO in 2005. On the other hand, Olympus scandal revealed that the company maintained the traditional worker-oriented governance style despite employing a foreign CEO in the company (Woodford, 2012). Therefore, it is more appropriate to examine our research question on individual firm level.

In addition, it is inappropriate to compare the relative percentage of employee costs to payment for dividends in the 1980s and that in the 2000s to examine whether sovereignty of Japanese manufacturers shifted from worker-oriented to shareholder-oriented, because value added in a year should be distributed to all stakeholders, including employees, creditors, banks, government, shareholders, and corporate managers, and still some of them can possibly be reserved in companies. Therefore, the ratio of employee costs to payment for dividends for each year does not necessarily indicate the consistent relative importance between employees and shareholders in a company because the ratio changes depending on the respective shares for employ-

ees and shareholders as well as the entire amount of value added in that year.

In fact, from a long-term perspective, many public Japanese companies had a traditional policy to pay constant rewards to both human capital providers and equity capital providers based on investments. They gave preference to making effort not to reduce the number of employees or their income over reporting a profit even when their business was in a bad situation. This company's effort to minimize employees' risk in exchange for their commitment to their hard work was an embodiment of employees' sovereignty. On the other hand, large Japanese manufacturers had a policy to pay a certain amount of money on the equity capital at face value. Most shareholders did not demand payments linked to profits but preferred constant dividends because most manufacturers were financed with borrowed capitals from main banks and paid-in capital of other companies from the same corporate group to which they belonged. They set aside surplus profit when performance was good and withdrew the money saved when performance was poor, trying to pay constant dividends to shareholders every year. For these reasons, it should be more appropriate to compare labor shares in the 1980s to those in the 2000s, and distribution patterns of dividends in the 1980s to those in the 2000s separately rather than compare the distribution pattern of value added to employees and shareholders in the 1980s and the 2000s. Consequently, based on the above discussion, we propose the following two hypotheses for our research question.

Hypothesis 1 : There is no remarkable change in the labor shares of large Japanese manufacturers between the 1980s and the 2000s.

Hypothesis 2 : There is no remarkable change in distribution patterns of dividends which large Japanese manufacturers paid between the 1980s and the 2000s

Ⅲ. Data and Method

Unconsolidated financial data of 815 manufacturing firms listed on Tokyo Stock Exchange were retrieved from the NIKKEI financial data-base. Among the sample data, we eliminated the companies for which calculating each decade average of variables was not available, and those which had abnormal value of labor share with more than 100 percent or with less than 20 percent were also eliminated, as the purpose of the test was to find out if there existed any changes in an overall trend in distribution pattern of value added among the stakeholder of large Japanese manufacturers. After the elimination of 205 firms through this screening, a sample data of 610 manufacturers remained, which accounted for three quarters of the entire manufacturing firms listed on TSE (Tokyo Stock Exchange).

Firstly, we calculated the variables of each firm for every accounting year for the 1980s, the 1990s and the 2000s, and defined the average of each variable in the 1980s as the variable which should describe the traditional distribution pattern of value added, and the average of that in the 2000s as showing the current pattern. Secondly, we compared all the averages of variables in the 1980s and all those in the 2000s, and checked whether there existed remarkable differences between them.

Hypothesis 1 was tested by comparing labor share averaged in the 1980s and the ratio in the 2000s of each company, and seeing if there existed remarkable differences between them. Hypothesis 2 was tested by comparing dividend ratio averaged[2)] in the 1980s and that in the 2000s for each company, and checking re-

2) Note we eliminate the data of accounting year with loss (minus profit) when we calculate the average of dividend ↗

markable differences between them. The hypothesis was also tested by dividend on equity ratio (DOE), because most manufacturers had a policy to pay a fixed dividend amount for equity capital, for example 10 percent of the face value of the stock. Since up to the beginning of the 1980s most Japanese companies usually increased capital by allocating newly issued stocks to incumbent shareholders at face values instead of current prices of the stocks, some investors had paid attention to the DOE ratio. Therefore, based on these facts, we tested the second hypothesis with the dividend on equity ratio as well as dividend ratio.

Ⅳ. Results and Discussion

Results of the tests for the two hypotheses are summarized in the tables below. The hypotheses were tested with all the data of companies in the whole manufacturing industry, and with the data of those in each industry. The tables show the averaged variables for the 1990s as well as those for the 1980s and the 2000s to see the trend in the changes.

Table 1 presents the results of the test for hypothesis 1 and in-depth analyses. Further we observed the change in the pattern of value sharing for human capital providers over time. The averaged labor share of 610 companies in all the manufacturing industries increased 3.7 points from 57.8 percent in the 1980s up to 61.5 percent in the 2000s. and 373 companies out of 610 companies, which accounted for 61.1 percent of the whole of the companies, increased the ratio. The companies in electronic appliances, machinery, oil& coal, precision instrument industries and miscellaneous manufacturers made relatively large increases over the same period. On the other hand, the companies in transportation, iron & steel and rubber products industries made small decreases in the ratio. Since labor share is the ratio of labor cost to value added, the ratio rises in inverse proportion to the amount of value added. Therefore, labor share increases when the amount of value added decreases.

Net income is the most volatile component of value added, because net income is the difference between sales revenue and all the costs which include labor cost, and sales revenue tended to fluctuate after the 1990s.

Allowing for the effect of fluctuating net income on labor share, we checked the changes in labor share over time and we understood that the changes in the ratio of net income to value added served as a counterbalance to the changes in labor share. The entire 610 companies made a rise of 3.7 points in labor share but there was a fall of 5.1 points in the ratio of net income to value added, which meant that a fall of the latter ratio potentially contributed to a rise in the former ratio. 438 companies, which accounted for 72 percent of all the 610 companies, had the opposite effect of the change in the ratio of net income to value added against the change in labor share over these three decades.

When we tentatively calculated the change of the labor share adjusted by the ratio of net income to value added in 610 companies each year, the difference between the averaged labor shares in the 1980s and the 2000s after adjustment reduced to 1.32 points. Furthermore, the differences between averaged labor share in the 1980s and that in the 2000s and the differences of averaged ratio of net income to value added are respectively +10.4 and −10.7 points in electronic appliances industry; +7.3 and −11.0 points in miscellaneous manufacturers; +7.3 and −5.6 points in machinery industry; +5.1 and −0.4 points in oil & coal

↘ ratio for each decade. The reason to eliminate those data is that dividends are normally paid based on profit in that accounting year and inclusion of those date which shows minus value of dividend ratio make the average of dividend ratio for that decade low abnormally.

Table 1 Results of Tests for Hypothesis 1 and Indepth Analyses

		Labor Share (percent)				Net Income/Value Added (percent)				Change of VA (1980s'avg=100)		Elasticity	
		1980~ 1989 Avg.	1990~ 1999 Avg.	2000~ 2009 Avg.	Dif. bet. 2000s' and 1980s' Avg.	1980~ 1989 Avg.	1990~ 1999 Avg.	2000~ 2009 Avg.	Dif. bet. 2000s' and 1980s' Avg.	1990~ 1999 Avg.	2000~2009 Avg.	No.of Emplpyee to Labor Cost	Per Capita Ann. Wage to Labor Cost
All Industries	Avg.	57.8	60.9	61.5	3.7	9.6	6.2	4.5	▲ 5.1	149.6	145.3	0.527	0.473
	Stdev.	12.5	11.9	14.6		6.8	11.3	18.9		49.8	91.2	0.514	0.514
(610 companies)		P-value in T-test for diff. bet. 1980s' and 2000s'avg.			0.00	P-value in T-test for diff. bet. 1980s' and 2000s'avg.			0.00	No. of companies with 2000'avg. < 1990'avg.	393	0.612	0.388
												0.532	0.532
		Number of companies increasing the value			373	Number of companies increasing the value			251	No. of companies with 2000s'avg. < 1980s'avg.	189	0.993	0.007
												0.508	0.508
		Number of companies decreasing the value			237	Number of companies decreasing the value			359	No. of companies with 2000s'avg. < 1990s'avg. < 1980s'avg.	49	1.263	▲ 0.263
												0.548	0.548
Foods (47)	Avg.	56.0	58.8	59.0	3.0	11.4	8.6	11.0	▲ 0.4	141.7	130.4	0.560	0.440
	Stdev.	11.2	13.2	16.6		6.8	7.5	14.4		53.7	91.8	0.600	0.600
Textiles & Apparels (32)	Avg.	63.2	66.1	62.3	▲ 0.9	7.9	▲ 0.9	0.2	▲ 7.7	120.6	85.8	0.901	0.099
	Stdev.	11.3	9.9	12.6		6.6	32.0	21.4		28.8	36.0	0.721	0.721
Pulp & Paper (8)	Avg.	47.2	47.7	46.9	▲ 0.3	7.4	5.2	3.9	▲ 3.5	152.0	149.0	0.299	0.701
	Stdev.	13.8	10.9	10.2		2.6	2.8	7.8		44.5	55.8	0.457	0.457
Chemicals (93)	Avg.	52.7	55.9	53.6	0.9	9.0	7.4	9.4	0.4	139.7	135.0	0.451	0.549
	Stdev.	10.8	9.6	12.9		6.1	7.1	10.3		37.3	57.4	0.517	0.517
Pharmaceutical (25)	Avg.	53.1	54.1	51.7	▲ 1.4	12.5	10.8	18.5	6.0	179.5	210.3	0.326	0.674
	Stdev.	12.7	13.4	15.0		7.8	11.3	11.2		65.8	118.3	0.251	0.251
Ceramic(24)	Avg.	59.5	62.5	59.1	▲ 0.3	8.3	6.2	4.6	▲ 3.8	114.8	113.7	0.782	0.218
	Stdev.	15.2	10.7	12.4		5.0	5.3	10.8		32.2	60.9	0.628	0.628
Oil & Coal Products (6)	Avg.	39.8	41.6	44.9	5.1	11.8	13.6	11.4	▲ 0.4	152.3	125.7	0.222	0.778
	Stdev.	11.1	13.8	16.9		8.4	4.5	10.5		41.9	27.9	0.295	0.295
Rubber products (11)	Avg.	63.4	63.0	61.1	▲ 2.3	6.6	7.3	8.9	2.3	147.9	129.7	0.203	0.797
	Stdev.	7.3	8.0	8.2		5.1	5.1	6.6		33.3	51.6	0.562	0.562
Iron & Steel (31)	Avg.	54.3	55.9	51.0	▲ 3.3	7.7	4.9	3.0	▲ 4.7	121.5	98.8	0.907	0.093
	Stdev.	11.8	12.1	15.3		7.3	12.7	19.9		26.8	36.8	0.557	0.557
Nonferrous & Metal prods. (42)	Avg.	59.2	58.8	60.7	1.5	7.5	7.6	1.9	▲ 5.6	161.2	143.9	0.623	0.377
	Stdev.	10.6	10.1	15.1		6.3	7.1	21.0		55.6	144.6	0.472	0.472
Machinery (82)	Avg.	62.2	66.0	69.5	7.3	9.9	4.8	2.6	▲ 7.3	148.4	140.4	0.575	0.425
	Stdev.	12.2	11.4	11.5		7.3	10.8	14.6		42.0	70.0	0.529	0.529
Electronic Appliances (106)	Avg.	57.9	64.2	68.3	10.4	11.3	6.0	0.6	▲ 10.7	164.0	164.8	0.453	0.547
	Stdev.	13.2	11.9	13.3		6.8	10.1	23.2		54.4	102.1	0.340	0.340
Shipbuilding (3)	Avg.	72.5	72.9	74.8	2.2	10.6	▲ 0.5	4.1	▲ 6.6	125.5	89.8	0.573	0.427
	Stdev.	19.3	11.6	1.9		15.7	0.2	5.7		52.4	41.6	1.001	1.001
Automobile & Parts (42)	Avg.	62.7	65.3	66.2	3.6	7.6	4.5	▲ 0.8	▲ 8.4	156.4	185.9	0.240	0.760
	Stdev.	8.9	6.3	8.8		5.9	4.4	31.1		36.7	106.3	0.331	0.331
Transportation Equip. (7)	Avg.	69.6	61.9	66.2	▲ 3.4	6.8	7.9	7.5	0.7	159.1	135.7	0.493	0.507
	Stdev.	13.2	15.3	14.4		4.2	6.8	10.1		53.3	67.2	0.462	0.462
Precison Insrument (23)	Avg.	57.3	64.3	62.1	4.8	9.6	5.2	4.7	▲ 4.9	145.9	175.0	0.512	0.488
	Stdev.	12.2	9.6	13.5		7.0	7.4	18.1		38.6	106.9	0.458	0.458
Misce. Manu-facturers (28)	Avg.	56.1	58.3	63.8	7.7	11.3	8.1	0.3	▲ 11.0	188.0	167.3	0.543	0.457
	Stdev.	12.6	11.0	10.5		6.2	7.1	20.2		77.3	94.3	0.373	0.373

products industry; +4.9 and −4.9 points in precision instrument industry; −3.4 and +0.7 points in transportation equipment industry; −3.3 and −4.7 points in iron & steel industry, and −2.3 and +2.3 points in rubber products industry, which shows that only 6 companies in oil & coal product industry and 31 companies in iron & steel industry did not show offset effects.

Based on these results, we may say that there are no remarkable differences in the labor shares of Japanese manufacturers listed on TSE between the 1980s and the 2000s. These findings, however, lead us to another question. The fact that there exists no remarkable change in labor share between the 1980s and the 2000s means that labor cost had been changing flexibly in parallel to the changes of value added over time. Since the main factor that gives effect to the change of value added is the profit of the accounting year, that is, the performance of the firm in that year, the constant ratio of labor share over time means that labor cost has been controlled in parallel to changing corporate performances. How has the labor cost been controlled to be so flexible over time then?

To analyze the change of labor cost for the last three decades, we decomposed the change of labor cost of each company into the change in number of employees and the change in annual wages per person by calculating the elasticity of these factors. With L, N and W representing labor cost, annual averaged number of employee and annual averaged wages per person, the elasticity of workforce to labor cost and that of wages to labor cost are defined $(\Delta N/N)/(\Delta L/L)$ and $(\Delta W/W)/(\Delta L/L)$ respectively. The elasticity for these factors can be estimated using the following logarithm linear regression model respectively: $\ln N = \alpha_1 + \beta_1 \ln L + \gamma$ ($\alpha_1 = 0$) and $\ln W = \alpha_2 + \beta_2 \ln L + \gamma$ ($\alpha_2 = 0$). Estimated $\beta_1$and β_2 represent the elasticity of workforce to labor cost and that of wages to labor cost respectively. Since labor cost is the product of the number in the workforce and per capita wages, the sum of each elasticity is one ($\beta_1 + \beta_2 = 1$). The purpose of this in-depth analysis is to explore how the changes of labor cost were absorbed by those of workforce and wages per person because labor cost has been controlled in parallel with the change of value added over time. Then we made a time series index of value added of each company to grasp the change of value added over three decades. The change of value added over time and the elasticity for the separated factors are shown in the third and fourth columns in Table 1.

The elasticity of number of employees to labor cost and that of wages are 0.527 and 0.473 respectively, which seems to show that the changes of the entire labor cost have been absorbed by those of workforce and that of wages evenly. The standard deviation of the elasticity is as large as 0.514, which tells us that the elasticity is not distributed uniformly in the sample companies. In other words, it is difficult to find a pattern of control in the change of labor cost over these three decades. On the other hand, the averaged index of value added increased approximately 50 percent to 149.6 in the 1990s from 100 in the 1980s, but it decreased to 145.3 in the 2000s. The standard deviation of the averaged index of the 2000s, 91.2, however, shows that some manufacturers produced more value added while others produced less in the 2000s.

Industrial break down data shows that companies in iron & steel, textiles & apparels and ceramic industries have a relatively high elasticity of workforce, and those in rubber, oil & coal and pulp & paper industries have a relatively high elasticity of wages. The relatively large standard deviations of the averaged elasticity, however, do not provide any evidence that there exists a pattern of controlling labor cost in these industries. We can find out, however, that companies in textiles & apparels and iron & steel industries have a high elasticity of workforce (0.901 and 0.907 respectively), and they did not increase the amount of value added in the 2000s in comparison to the 1980s. These findings lead us to assume that there might be a pat-

tern of labor cost adjustment in conjunction with the performance of companies. In this light, we chose the companies which did not increase the amount of value added and calculated the elasticity of both the workforce and wages. 393 companies, which produced less amount of value added in the 2000s than the 1990s have a relatively large averaged value of the elasticity of workforce, 0.612. Those 189 companies which produced less in the 2000s than the 1980s and those 49 companies which produced less continuously in the 1990s and the 2000s have larger elasticity of workforce, 0.993 and 1.263 respectively, with a relatively small standard deviation. These results suggest that the manufacturers with deteriorated performance tend to control labor cost with workforce adjustment. In other words, even the big companies in Japanese manufacturing industries which had a reputation for an international competitive edge by collective effort of their workforce with life-time employment had been controlling labor cost by flexible employment adjustment. The companies in industries like electronic appliances and auto & parts have been controlling their workforce with seasonal workers[3)] in conjunction with the fluctuation of their business. Although workers dispatching has been employed in manufacturing industries in Japan since March 2004, the manufacturers did not put those dispatched workers on their payroll, let alone hire them as their regular employees.

Next, we analyzed the test results for the second hypothesis (Table 2). Averaged dividend ratio of the Japanese manufacturers increased from 36.3 percent in the 1980s up to 68.0 percent in the 2000s. 416 companies, which increased the ratio, account for 68 percent of the whole of the 610 manufacturers. We cannot not say, however, that the Japanese manufacturers changed their dividend policy because dividend ratio is the ratio of dividend to net income, and if they maintain a dividend policy in which they pay a certain amount of cash regardless of the amount of net income, the ratio will increase when they do not have enough net income to pay that amount of cash.

On the other hand, 498 companies decreased the dividend on equity ratio from the 1980s to the 2000s. The averaged ratio of companies in most of industries except oil & coal products, shipbuilding, and precision instrument industries decreased in the 2000s compared to the 1980s. Most large Japanese companies are said to have a stable dividend policy to pay a certain percentage, for example 10 percent, of the book value of stock. The amount of equity capital, which is the denominator of the DOE ratio, included not only the cash which shareholders paid in but the retained profits which were not paid out to the shareholders as dividends. Those unpaid out profits were accumulated more in the 2000s than in the 1980s. However, some manufacturers increased their equity capital by issuing new shares at market prices in the late 1980s. Therefore, those manufacturers tended to decrease the DOE ratio over time when they maintained the dividend policy to pay a certain percentage of cash to equity capital and they increased amounts of equity capital.

Based on the above facts that most of large Japanese manufacturers increased the dividend ratio but decreased the DOE ratio over the three decades from the 1980s to the 2000s, we may posit that although the manufacturers had been maintaining a stable dividend policy, most of them increased the dividend ratio because of decreased incomes but decreased the DOE ratio because of increased equity capital after the 1990s.

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3) Agricultural workers in farms' slack seasons were the most of contingent workers in manufacturing companies in the 1960s, the 1970s and the 1980s. Young people who could not a regular job and Japanese Brazilians began to provide contingent workforce in the 1990s. The companies began to outsource temporal workers in the areas which were not core to its business in the 2000s. Since those contingent workers were demanded in temporal gain of sales of firms, they were often forced to work long time on two-shift or three-shit system and they tended to lose their jobs with the expiry of contract term after the end of those hot-selling products.

Table 2 Results of Tests for Hypothesis 2 and Indepth Analyses

		Devidend/Net Income (percent)				Devidend/Equity Capital (percent)				Average of all industries	r & β btw. Dividend and Equity Capital					
		1980~1989 Avg.	1990~1999 Avg.	2000~2009 Avg.	Dif. bet. 2000s' and 1980s' Avg.	1980~1989 Avg.	1990~1999 Avg.	2000~2009 Avg.	Dif. bet. 2000s' and 1980s' Avg.		1980~1989		1990~1999		2000~2009	
											r	β	r	β	r	β
All Industries	Avg.	36.3	46.1	68.0	31.7	1.74	1.10	1.14	▲ 0.60	r/β	0.874	0.015	0.891	0.012	0.831	0.015
	Stdev.	93.9	54.4	262.1		0.84	0.64	0.67								
		(P-value for T-test)			0.00	(P-value for T-test)			0.00	r:Correlation Coefficient btw. Dividend and Equity Capital. β:Regression Coeffi. Div.=β*EquityCapital (r and β estimated by pooling data with div.>0)						
(610 companies)		No. of sample companies			610	No. of sample companies			610							
		No. of companies increasing the value			416	No. of companies decreasing the value			498							
Foods (47)	Avg.	40.3	70.5	201.1	160.7	2.29	1.45	1.38	▲ 0.91	r / β	0.919	0.010	0.921	0.008	0.931	0.010
	Stdev.	54.6	89.0	882.4		1.03	0.75	0.66		Sample No.	480		559		576	
Textiles & Apparels (32)	Avg.	27.8	51.3	53.8	26.1	1.69	1.27	1.19	▲ 0.50	r / β	0.892	0.016	0.875	0.012	0.884	0.012
	Stdev.	16.6	43.5	34.9		0.97	0.99	0.87		Sample No.	241		268		282	
Pulp & Paper (8)	Avg.	29.3	32.0	82.1	52.8	2.06	1.00	0.96	▲ 1.11	r / β	0.946	0.015	0.946	0.015	0.946	0.012
	Stdev.	17.6	8.5	110.1		0.95	0.49	0.31		Sample No.	86		86		90	
Chemicals (93)	Avg.	37.2	48.7	52.6	15.5	1.81	1.18	1.18	▲ 0.63	r / β	0.637	0.010	0.769	0.007	0.691	0.008
	Stdev.	53.9	54.4	69.0		0.90	0.68	0.52		Sample No.	871		997		1045	
Pharmaceutical (25)	Avg.	24.1	25.7	41.5	17.4	1.74	1.06	1.23	▲ 0.51	r / β	0.670	0.015	0.898	0.014	0.890	0.027
	Stdev.	13.3	18.6	66.8		1.08	0.50	0.60		Sample No.	291		306		311	
Ceramic(24)	Avg.	35.5	66.5	72.9	37.4	1.74	1.02	0.96	▲ 0.78	r / β	0.910	0.013	0.966	0.009	0.914	0.012
	Stdev.	20.0	56.4	112.8		0.85	0.44	0.34		Sample No.	237		257		243	
Oil & Coal Products (6)	Avg.	22.7	34.9	81.0	58.3	1.80	2.05	2.47	0.66	r / β	0.868	0.012	0.601	0.009	0.592	0.010
	Stdev.	13.6	15.9	28.9		0.91	1.58	1.65		Sample No.	64		71		78	
Rubber products (11)	Avg.	24.1	34.2	108.1	84.0	1.69	1.08	1.15	▲ 0.54	r / β	0.983	0.012	0.958	0.008	0.971	0.008
	Stdev.	11.5	30.3	251.6		0.54	0.25	0.25		Sample No.	105		121		119	
Iron & Steel (31)	Avg.	36.0	74.8	68.7	32.7	1.66	0.94	0.94	▲ 0.72	r / β	0.983	0.028	0.969	0.021	0.872	0.027
	Stdev.	32.7	108.3	128.3		0.84	0.35	0.57		Sample No.	280		286		276	
Nonferrous & Metal prods. (42)	Avg.	47.1	46.1	112.0	64.9	1.62	1.09	0.97	▲ 0.65	r / β	0.719	0.013	0.789	0.010	0.754	0.010
	Stdev.	106.9	40.0	218.7		0.92	0.70	0.52		Sample No.	435		499		490	
Machinery (82)	Avg.	59.0	42.9	53.6	▲ 5.4	1.70	1.17	1.10	▲ 0.60	r / β	0.910	0.015	0.940	0.013	0.797	0.009
	Stdev.	229.1	57.8	65.8		0.74	0.64	0.58		Sample No.	942		1022		979	
Electronic Appliances (106)	Avg.	29.0	36.6	45.0	16.1	1.61	0.96	1.08	▲ 0.53	r / β	0.925	0.011	0.926	0.009	0.766	0.010
	Stdev.	26.5	27.6	51.1		0.65	0.49	0.61		Sample No.	1195		1248		1287	
Shipbuilding (3)	Avg.	35.7	44.3	34.1	▲ 1.5	1.22	2.72	1.59	0.37	r / β	0.924	0.039	0.844	0.028	0.924	0.039
	Stdev.	33.9	5.2	17.0		0.46	1.15	0.10		Sample No.	12		24		12	
Automobile & Parts (42)	Avg.	23.3	31.2	26.1	2.7	1.49	0.92	0.95	▲ 0.54	r / β	0.992	0.011	0.991	0.010	0.899	0.021
	Stdev.	17.6	29.2	17.3		0.52	0.38	0.46		Sample No.	442		458		445	
Transportation Equip. (7)	Avg.	42.9	78.8	47.5	4.6	1.64	1.10	1.16	▲ 0.48	r / β	0.693	0.009	0.803	0.007	0.684	0.012
	Stdev.	32.3	84.3	33.5		0.98	0.64	0.63		Sample No.	79		77		75	
Precison Insrument (23)	Avg.	24.0	36.1	34.7	10.7	1.41	0.86	1.49	0.07	r / β	0.959	0.011	0.964	0.010	0.667	0.013
	Stdev.	11.7	27.7	17.4		0.52	0.46	1.59		Sample No.	241		254		268	
Misce. Manu-facturers (28)	Avg.	31.3	39.6	69.1	37.8	2.08	0.90	1.04	▲ 1.05	r / β	0.927	0.012	0.981	0.009	0.948	0.010
	Stdev.	21.9	39.1	80.3		0.99	0.30	0.43		Sample No.	318		413		427	

If this reasoning be true, we may say that large Japanese manufacturers did not change the distribution pattern of value added for their shareholders after the 1990s. Therefore, the question is whether Japanese manufacturers changed their dividend policies over these three decades: whether they maintained the dividend policy with a constant yield to equity capital. To answer this question, we utilized two methods. Firstly, we calculated correlation coefficients between the dividends and equity capitals of each manufacturer in each decade from 1980 to 2009. Secondly, we estimated regression coefficients between dividend and equity capital with a regression model with the pooling data[4] of each firm in the same periods.

The results of the analyses are also summarized in Table 2. The averages of correlation coefficients of 17 manufacturing industries are relatively large regardless of the passage of time, 0.874 in the 1980s, 0.891 in the 1990s and 0.831 in the 2000s. In the 1980s, 14 out of 17 industries showed a strong correlation with a large coefficient of over 0.7, and all of them, except for precision industry, maintain a strong correlation in the 2000s. The weakest, although it is in the 2000s, is the oil & coal products industry with a coefficient of 0.592, which is not so small. The data tells us that most Japanese big manufacturers have been paying dividends based on their equity capitals.

On the other hand, all regression coefficients of equity capital upon dividend hold around one percent steady over three decades. Since the companies of sample data in these analyses are public companies listed in the Tokyo Stock Exchange, their stocks were exchanged at market prices. Since the aggregate market price of companies is usually several times book value of equity capital, around one percent of dividend on equity capital should mean less than one percent of yield of dividend to market price of stock. The risk premium of stocks should normally make investors reluctant to buy stocks of Japanese manufacturers with less than one percent yields, even in the security market for which the Japanese government maintained a low-interest policy for these decades. We can assume, based on this discussion, that there are no facts which show that investors in Japanese stock markets have been purchasing stocks based on yield of dividends to current stock prices, and vice versa; that corporate managers of Japanese manufacturers have been paying dividends based on the market prices of their stocks.

Based on these evidences, we may say that, in the 2000s, Japanese big businesses in manufacturing industries maintained the dividend policy in which they pay a certain percentage of cash based on the equity capital that initial shareholders paid in, instead of paying more dividends from net income.

V. Conclusion

This article focused on the unintegrated configuration of management styles in large Japanese manufacturers after the 1990s. It analyzed the longitudinal change in the distribution pattern of value added in order to examine whether Japanese manufacturers changed priorities of value added allocation from employees to shareholders in the last two decades. We approached this research question by comparing the distribution patterns of value added in the 1980s and those in the 2000s. We empirically tested two hypotheses for distribution patterns of value added for employees and shareholders with the financial data of Japanese manufacturers listed on the Tokyo Stock Exchange.

We found robust evidences which showed that large Japanese manufacturers did not change their value

4) For example, the pooling data of food industry in the 1980s are composed of the data of all the companies in the food industry from 1980 to 1989. The data of the year with no dividend, however, were omitted from both the calculation of coefficient of correlation and the estimation of the regression of coefficient.

sharing pattern over the three decades. In other words, Japanese manufacturers maintained their traditional value sharing patterns, which means that they still employed human capital provider oriented management style in the first decade of this century. These results lead us to the conclusion that large Japanese manufacturers have been conducting their business with an unintegrated configuration of management styles (of equity-dominant capital structure, the strategy of maximizing corporate value and the traditional employees' sovereignty) for two decades since the 1990s.

In the future, it is necessary to analyze how large manufacturers in Japan are going to create an integrated management style. Concretely, a new research question in future studies is how they innovate the traditional worker-centered management style in alignment with other management styles to cope with conditions of current business environment. We would like to conclude our study with a few comments on this issue for future studies. The innovation of worker-oriented sovereignty of large manufacturers in this country will be attended with much difficulty because Japanese people have some stereotyped ideas for public companies in the manufacturing industries. Firstly, Japanese people have a different view on business corporations from that of people in Anglo-Saxon countries. People in those countries take it for granted that shareholders own business companies and their principal purpose is to maximize the value of equity capital. Most Japanese people, however, believe that firms exist for society and its principal purpose is to provide society with goods and services, and places where people can work to be paid. Secondly, they believe that employees may be treated better than shareholders because of their views : since employees are paid in such a way based on seniority system in which they receive lower payment in younger ages and higher payment as they age, the security of employment is important for their fair remuneration. On the other hand, capital providers can be relatively easy to be in or out of companies at their will by buying or selling stocks. Thirdly, most of university graduates, especially male young elite, regard large and established companies as a primary place where they achieve self-actualization. In an established company, they compete on the ladder of success, seek appreciation and live their lives. A large public company is an authorized entity which postwar democracy has incorporated into the traditional Japanese society, where members of organizations place recognition or status first, before money. Money and perquisites come with status in such traditional organizations. Therefore, since the view of business firms as a people-oriented organization appears to be embedded in the Japanese society, future studies may need to find ways to modify the management style of worker-oriented sovereignty to have an affinity to other shareholders-dominant management styles.

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