

Chapter 7

Has the Management Quality in Korean Firms Caught Up with That in Japanese Firms? An Empirical Study Using Interview Surveys

Tsutomu Miyagawa, Keun Lee, YoungGak Kim, Hosung Jung,
and Kazuma Edamura

This paper is a revised version of RIETI Discussion Paper 10-e-013. We thank Professors Mitsuhiro Fukao (Japan Center for Economic Research and Keio University) and Haruo Horaguchi (Hosei University) for their insightful comments. Professors Masahisa Fujita (President of RIETI), Kyoji Fukao (Hitotsubashi University), Kozo Kiyota (Yokohama National University), Jeong-Dong Lee (Seoul National University), Hideaki Miyajima (Waseda University), Elias Sanidas (Seoul National University), Dr. Masayuki Morikawa (Vice President, RIETI), other members of the project entitled 'Research on Intangible Assets in Japan' at RIETI, and participants at the seminar in RIETI, CAED Tokyo Conference held in October, 2009, Waseda University, Seoul National University, and Workshop on 'Intangibles, Innovation Policy, and Economic Growth' at Gakushuin University also gave us helpful comments to improve our paper. We also thank Professor Takizawa of Toyo University, and Professor Kawakami of Teikyo University for their excellent research assistance. The interview survey in Korea was supported by Japan Center for

T. Miyagawa (✉)

Faculty of Economics, Gakushuin University, 1-5-1 Mejiro, Toshima-ku, Tokyo 171-8588, Japan

RIETI, Tokyo, Japan

e-mail: 19990230@gakushuin.ac.jp

K. Lee

Seoul National University, Seoul, Korea

Y. Kim

Senshu University, Tokyo, Japan

H. Jung

Samsung Economic Research Institute, Seoul, Korea

K. Edamura

National Institute of Science and Technology Policy, Tokyo, Japan

Economic Research, Nikkei Inc., and Samsung Research Institute. The views expressed in this paper are solely for those of authors and do not represent those of organizations to which authors belong.

Abstract Bloom and Van Reenen (Quarterly Journal of Economics 122:1351–1408, 2007) show that differences in management practices are related to productivity differences at the firm level. In this paper we conducted a similar interview surveys on management practices in Japanese and Korean firms in 2008 and 2012. We find that overall management scores as an average of organizational and human resource management scores in Japan are higher than those in Korea. However, the second survey shows that the gap in management scores between two countries has shrunken over time. In addition, average management quality in Korean large firms has surpassed that in Japanese large firms, which are consistent with the literature comparing big businesses in Korea and Japan. This study also compares additional aspects of the management style, such as speed in decision-making and the role of various communication channels, which are not done in the previous literatures.

Keywords Management practices • Organizational management • Human resource management • Korean firms • Japanese firms • Kolmogorov-Smirnov Test • Productivity differences

7.1 Introduction

The classical growth model developed by Solow (1956) predicts that GDP per capita would converge in the long run. As Hall and Jones (1999) pointed out, however, the income gap between rich and poor countries remains wide. Jones and Romer (2009) in their paper titled “New Kaldor Facts: Ideas, Population and Human Capital” state that the income gap can be attributed to differences in productivity as one of the stylized facts. Productivity differences can be considered not only at the country, but also at the firm level. Empirical studies since the 1990s also found that the productivity gap continues to exist at the firm and establishment levels. Bartelsman et al. (2009, 2013), in constructing the productivity database at the firm level across countries, investigate the determinants of these productivity gaps and find that activating entry and exit of firms and more efficient resource reallocation would improve the economy-wide productivity.

The economic performances in Japan and Korea, which both suffered from the financial crises in 1997 and successive deep recessions are also different. While the Japanese economy has stagnated for two decades due to large non-performing loans, the Korean economy recovered rapidly. As a result, firm performance in Korea caught up with those of Japan in some competing industries such as electric machineries and electric devices as shown in Fukao et al. (2008). In growth accounting using the framework of McGrattan and Prescott (2005, 2010),

Miyagawa and Takizawa (2011) showed that the labor productivity gap between Japan and Korea after the financial crises was explained by the difference in TFP growth.

Many studies at the firm level found that Korean firms are rapidly catching up with Japanese firms in terms of productivity and market shares in several sectors. Jung et al. (2008) noted that while the productivity of Korean firms were as low as half of that of Japanese firms in the mid 1980s, and there had been substantial catch-up in productivity by the listed Korean firms which were now on average within the 10 % range in the late 1990s. Jung and Lee (2010) find both sectoral-level and firm-level factors responsible for the productivity convergence. While explicit knowledge oriented sectors, like IT, tend to show faster catch-up, firm-level factors, such as innovation capability and export-orientation, were also significant. Joo and Lee (2010) compare Samsung and Sony in terms of the various indicators created using patent data including citations, and conclude that while Samsung caught up with Sony in the mid 2000s in terms of market capitalization and sales volume, technological catch-up, in terms of patent count, quality and mutual citations, etc, occurred as early as the mid 1990s.

While the reasons behind Korea catching up to Japan should involve many diverse factors, the existing studies tend to consider mostly tangible aspects of the firms which are often reflected in standard financial statements or patent application data. In the survey of research on micro-level productivity, Syverson (2010) divides factors that affect changes in productivity into intra-firm factors and environmental factors external to the firm. He argues that one of the main intra-firm factors is in management practices. Aoki (2010) also emphasizes that the organizational architecture within a firm is a major driver of the corporation system in each country. These arguments are in line with the seminal paper by Bloom and Van Reenen (2007) in which they conducted their own survey on management practices of four advanced countries (France, Germany, the UK, and the US) and examined the relationship between the management score and firm level productivity. In their paper, management practices were converted to scores based on interview results, and these scores were included as independent variables when they estimated the production function. The key finding in their paper is that there is a significant difference in management score among countries surveyed. US firms got the highest score of the four countries. They believed that the low score in continental European firms was partly explained by weak competition and the prevalence of many family-owned firms. The estimation results showed that the productivity differences corresponded to the differences in average management scores.¹ In Japan, Kurokawa and Minetaki (2006), Kanamori and Motohashi (2006), and Shinozaki (2007) examined the effects of organizational reform

¹Bloom et al. (2012) expanded the sample of countries to 12 countries and examined the relationship between the *trust* measure based on World Value Survey on cross-country cultural characteristics and the level of the firms' *decentralization* of managers' decision making authority related to investment, hiring, introduction of new products, product sales, and marketing at the establishment level.

resulting from IT investment on firm performance by using the *Basic Survey on Business Enterprise Activities* and the *IT Workplace Survey*. Their studies suggested that organizational reform resulting from IT investment was partially responsible for improving firm performance. This study extends the previous studies by focusing on comparison of management practices in Korean and Japanese firms in a same framework.

The purpose of this paper is to compare the management quality between Korea and Japan that is considered as a cause for productivity differences in the two countries. We conduct a similar interview survey with respect to Korean and Japanese firms to Bloom and Van Reenen's survey, and compare the organizational and human resource management practices in firms of the two countries. In the next section, we describe an outline of our interview survey. In the third section, we construct a management score by quantifying the two interview results of Japanese and Korean firms, and compare the management practices. Although our interview survey basically follows Bloom and Van Reenen (2007), we incorporate some questions that were not included in their surveys to capture some unique features of Japanese and Korean firms such as the role of informal meetings within the firm and the speed of decision-making. Hence, we compare not only management scores that represent organizational and human resource management practices but also other management styles between Korea and Japan. In the last section, we summarize our studies and discuss the future studies on management practices and firm performances.

7.2 Outline of Interview Surveys in Japan and Korea

The surveys on management practices in Japan and Korea were conducted twice: Once in 2008 and the second time in 2011–2012. The description of each survey is summarized in Table 7.1. The two Japanese surveys were conducted by Research Institute of Economy, Trade & Industry (RIETI). The first Korean survey was conducted by Japan Center for Economic Research (JCER), and the second Korean survey was conducted by Samsung Economic Research Institute. The second Japanese survey was originally scheduled to be conducted in 2011, but was postponed to 2012 due to the Great East Japan Earthquake in March 2011. The number of responses in the second survey was drastically lower than the first, because of the earthquake and the fact that the interviewees were limited to publically traded firms.

In our study, we followed the interview survey conducted by Bloom and Van Reenen (2007). However, we conducted the survey by meeting the managers of the planning departments of firms face-to-face, while Bloom and Van Reenen (2007) conducted their survey by telephone. The reason that we conducted face-to-face interviews is that we were afraid of low response rates. In Japan and Korea, when we want to ascertain qualitative features in firms, face-to-face communication is a more useful tool than telephone interviews.

Table 7.1 Outline of surveys

	Japan		Korea	
	First	Second	First	Second
Survey period	Feb.–Sep., 2008	Jan.– March, 2011 July–Sep., 2011	May–Sep, 2008	Oct. 2011– May, 2012
Firms surveyed	Machinery industries (Electric, Information and communication, Transportation, Preci- sion, Information ser- vice, Media Service, and Retail industries) (includes privately owned firms)	All indus- tries, Pub- licly Traded Firms	Machinery industries (Electric, Information and communication, Transportation, Preci- sion, Information ser- vice, Media Service, and Retail industries) (includes privately owned firms)	All indus- tries, Pub- licly Traded Firms
Number of sur- veyed firms that responded	573	402	350	505
Response rate	52.8 %	22.2 %	59.2 %	28.9 %

Bloom and Van Reenen (2007) classified their 18 interview questions into four categories: product management, monitoring, the firm’s target, and incentives for workers. While their survey was extended to only manufacturing plants, our survey was also extended to firms in the service sector. Thus, we excluded questions about product management in the service sector. As a result, we can classify our questions into two categories: organizational management and human resource management. In the first category, we wanted to examine the organizational goals, communication within the firm, and organizational reform. The second category about human resource management covers questions on promotion and training programs.

The interview also includes questions that are not directly related to management practice and human resource management. Since the IT revolution, changing a pyramid-type decision-making process into a more flat process became more popular. We ask questions targeted to help our understanding of whether firms underwent such organizational restructuring that includes the decision-making process. In the first round, we also ask about the vision of the firm. In the second round of interviews, considering the globalization that was taking place, we include questions regarding firms’ primary market and competitiveness (the number of competitors), and the time it takes to enter and exit businesses. The detailed interview questions are shown in Appendixes 1 and 2.

For each question, we have three sub questions. The structure of the point system is that the more sub-questions answered positively in each large question, the more points you score, for instance, in human resource management. In each question with three sub-questions, you score 4 points if you answer positively to all of the three sub-questions. Similarly, with positive answers to the first two sub-questions

only, you would score 2 points. In other words, we quantify the responses to the above questions as follows: If the firm manager responds negatively to the first sub-question, we give the response 1 out of a possible total of 4 points for the entire question and move to the next question. If he responds positively to the first sub-question, we move to the second sub-question. If the manager responds negatively to the second sub-question, we mark a 2 and move to the next question. If he responds positively to the second sub-question, we move to the last and third sub-question. In the last sub-question, if the manager responds with a positive answer, he is given 4 points for the positive responses for all three sub-questions while a negative response is given a point of 3 for the two previous sub-questions he answered positively.

7.3 Comparison of Results in Interview Surveys Between Korea and Japan

7.3.1 Distribution of Sample Firms by Sector and by Size

We first show the distribution of the firms interviewed. Table 7.2 provides the share of firms in the manufacturing sector and the service sector for both surveys. In the first survey, we interviewed machinery industries for the manufacturing sector and information service, media-related industry, and retail industry for the service sector. In the second survey, since the sample was limited to public traded firms, we did not limit the interview to specific industries. As the first Japanese survey focused on specific industries in the manufacturing sector, the share of firms in the manufacturing sector is relatively small with the ratio of the manufacturing to service sector being 1–2. In the second survey, the ratio is reversed. In both of the Korean surveys, on the other hand, the manufacturing sector constitutes approximately 80 % of the interviewees.

Table 7.3 shows the distribution of firms by size. In the Japanese surveys, small and medium sized firms with less than 250 employees constituted a slightly greater than one-third share of the sample. On the other hand, in the first Korean survey, the share of small and medium-sized firms dominated the survey and accounted for 65 % of the sample. In the second Korean survey, however, this share fell to 46.3 %.

7.3.2 Comparison of Management Scores

We now compare management scores. In the first survey, we take the average of these scores in Q2, Q4, Q5, and Q7-13 to obtain an overall management score. In the second survey, we take the average of the scores assigned to Q3, Q4, Q5, Q6-1, Q10-2, Q10-3, and Q10-4 to obtain the overall management score.

Table 7.2 Distribution of industries surveyed

	Japan (%)		Korea (%)	
	First	Second	First	Second
Manufacturing	33.9	67.7	84.9	79.0
Services	66.1	32.3	15.1	21.0

Table 7.3 Size distribution of surveyed firms

Number of employees	Japan (%)		Korea (%)	
	First	Second	First	Second
Less than 250	37.6	34.6	64.9	46.3
250–499	27.3	22.6	18.4	25.0
Above 500	35.2	42.8	16.7	28.7

The organizational management scores are the average scores in Q2 in the first survey and by the average score in Q3 and Q10-1 in the second survey. Lastly, the human resource management score is the average score in the questions that are not related to organizational management. A high management score implies that management targets within a firm are set and are widely recognized by the employees. On the other hand, the human resource management score is high when employees with high performance receive rewards and promotion swiftly, and when firms invest in human capital accumulation.

Table 7.4 shows the management scores in Japan and Korea. In both surveys, management scores in Japanese firms are higher than those in Korean firms except for the case of management scores in large firms in the second survey. However, the Japanese management score falls slightly between the first and second survey while the Korean management score increases greatly between the first and second survey, catching up with Japan. In particular, the management score in Korean large firms surpasses that in Japanese large firms in Japan.

Figures 7.1, 7.2, 7.3, and 7.4 show the distribution of scores in all firms and all interview questions in Japan and Korea by using Kernel density. We find that the distributions of management scores in Korean firms are more dispersed than those in Japanese firms. This implies that there are many high score firms and low score firms in Korea while management scores in Japanese firms are more concentrate around their mean values. When we compare the distributions in the two surveys in both countries, the distributions in the second survey in Japan shift slightly to the left. On the other hand, the distributions in the second survey in Japan shift drastically to the right.

We check similar distributions by type of management and by firm size (see Figs. 7.5, 7.6, 7.7, 7.8, 7.9, 7.10, 7.11, and 7.12). The distributions of organizational management scores and human resource management scores show similar patterns to Figs. 7.3 and 7.4. When we compare the two surveys, the distributions of two types of management scores in the second survey in Japan do not change much. However, the two distributions of the management scores in the second survey in Korea shifts greatly to the right. In the case of small and medium sized firms, we also see similar patterns for other cases.

Table 7.4 Management scores based on the interview surveys

The 1st survey	Total			Japan			Korea		
	N	Mean	Variance	N	Mean	Variance	N	Mean	Variance
<i>MS (all questions)</i>									
All samples	923	2.458	0.321	573	2.609	0.243	350	2.211	0.351
Manufacturing firms	491	2.343	0.336	194	2.606	0.245	297	2.171	0.321
Service firms	432	2.588	0.273	379	2.610	0.243	53	2.433	0.468
Large firms	459	2.625	0.256	339	2.687	0.213	120	2.450	0.340
Small and Medium-sized firms	426	2.290	0.324	204	2.502	0.256	222	2.094	0.308
<i>MS (Organizational management)</i>									
All samples	923	2.593	0.463	573	2.749	0.398	350	2.339	0.466
Manufacturing firms	491	2.493	0.459	194	2.782	0.367	297	2.305	0.430
Service firms	432	2.707	0.444	379	2.732	0.414	53	2.528	0.634
Large firms	459	2.744	0.418	339	2.830	0.368	120	2.501	0.483
Small and Medium-sized firms	426	2.446	0.448	204	2.645	0.388	222	2.264	0.435
<i>MS (Human resource Management)</i>									
All samples	923	2.356	0.398	573	2.504	0.305	350	2.115	0.458
Manufacturing firms	491	2.231	0.424	194	2.475	0.322	297	2.071	0.428
Service firms	432	2.499	0.330	379	2.518	0.296	53	2.361	0.562
Large firms	459	2.536	0.312	339	2.580	0.271	120	2.411	0.410
Small and Medium-sized firms	426	2.172	0.421	204	2.395	0.338	222	1.967	0.412
The 2nd survey	Total			Japan			Korea		
	N	Mean	Variance	N	Mean	Variance	N	Mean	Variance
<i>MS (all questions)</i>									
All samples	907	2.541	0.311	402	2.568	0.226	505	2.518	0.379
Manufacturing firms	671	2.530	0.336	272	2.552	0.242	399	2.515	0.401
Service firms	236	2.570	0.240	130	2.603	0.191	106	2.530	0.300
Large firms	534	2.644	0.288	263	2.616	0.211	271	2.671	0.362
Small and Medium-sized firms	373	2.393	0.309	139	2.478	0.243	234	2.342	0.342
<i>MS (Organizational management)</i>									
All samples	907	2.669	0.413	402	2.694	0.322	505	2.649	0.485
Manufacturing firms	671	2.662	0.442	272	2.668	0.343	399	2.657	0.511
Service firms	236	2.691	0.330	130	2.750	0.276	106	2.618	0.391
Large firms	534	2.736	0.405	263	2.727	0.328	271	2.745	0.481
Small and Medium-sized firms	373	2.573	0.410	139	2.632	0.308	234	2.538	0.469
<i>MS (Human resource Management)</i>									
All samples	907	2.444	0.414	402	2.474	0.313	505	2.420	0.495
Manufacturing firms	671	2.432	0.443	272	2.465	0.320	399	2.409	0.526
Service firms	236	2.479	0.334	130	2.492	0.300	106	2.463	0.379
Large firms	534	2.574	0.385	263	2.533	0.303	271	2.615	0.463
Small and Medium-sized firms	373	2.257	0.398	139	2.362	0.315	234	2.195	0.439

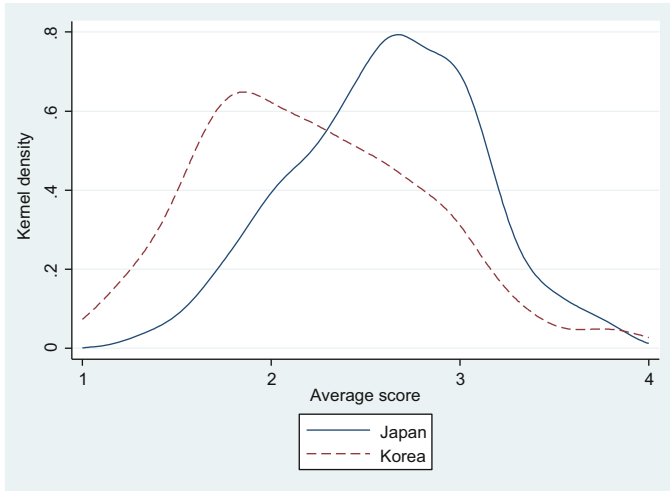


Fig. 7.1 Distribution of management scores (all firms in the 1st survey)

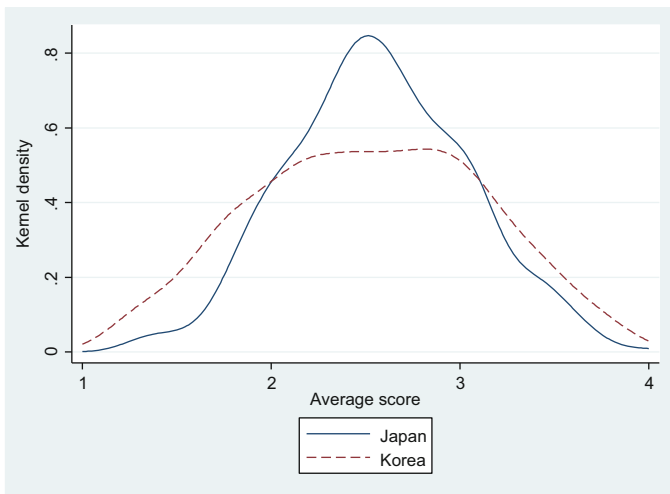


Fig. 7.2 Distribution of management scores (all firms in the 2nd survey)

The distributions of management scores by firm size show similar patterns to those by type of management. In large firms, the distribution of management score in the second survey in Korea showed a great shift to the right, while that in Japan shifted slightly to the left. These shifts suggest that the means of the management scores in Korean large firms is greater than that in Japanese large firms. In addition, these results support the notion that the performances in the listed Korean firms surpassed those in the Japanese listed firms, as Jung et al. (2008) and Joo and Lee (2010) showed. Similarly, the distribution of management scores of the Korean

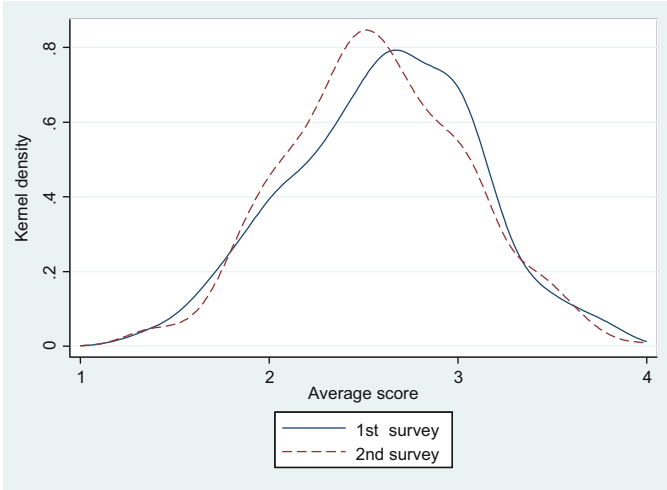


Fig. 7.3 Distribution of management scores (1st vs. 2nd in Japan)

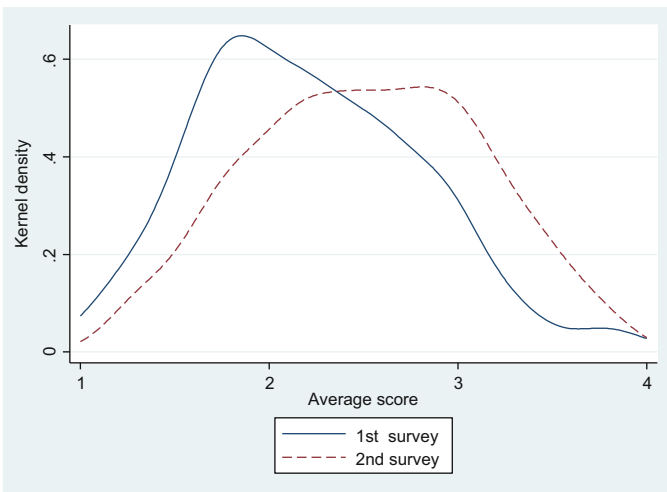


Fig. 7.4 Distribution of management scores (1st vs. 2nd in Korea)

SMEs shifts to the right, although the distribution of management scores in the Japanese SME in the second survey does not move much.

We check the two distributions between the first and second surveys of Japan and Korea by using the Kolmogorov-Smirnov test. Suppose the two cumulative distribution functions ($F(x)$ and $G(x)$) and take the maximum differences between two distributions (D_{mn}) defined from the sample distribution functions of $F(x)$ and $G(x)$.

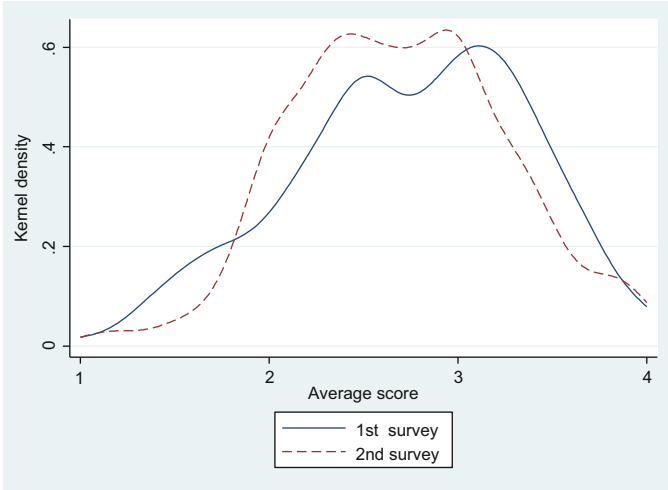


Fig. 7.5 Distribution of organizational management scores (1st vs. 2nd in Japan)

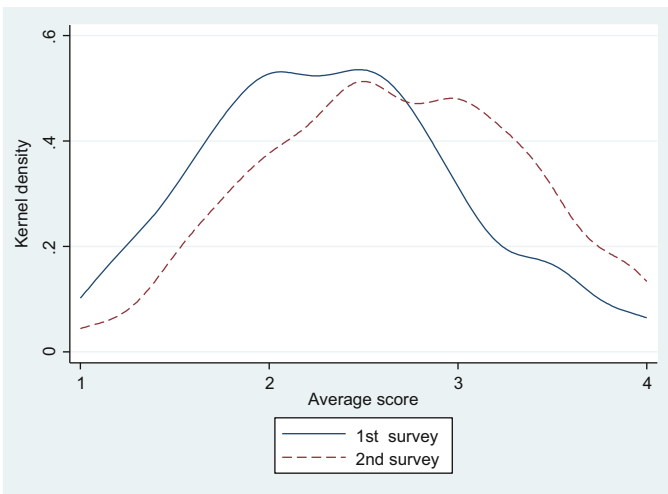


Fig. 7.6 Distribution of organizational management scores (1st vs. 2nd in Korea)

$$D_{mn} = \sup_{-\infty < x < \infty} |F_m(x) - G_n(x)|$$

In the Kolmogorov-Smirnov test, the null hypothesis is that the two distributions are the same ($F(x) = G(x)$). If the test statistics $\left(\frac{mn}{m+n}\right)^{1/2} D_{mn} > c$ and c is an appropriate constant, the null hypothesis is rejected.

The test results are shown in Table 7.5. The Kolmogorov-Smirnov test is conducted in four cases: the comparison of two distributions in Japan and Korea

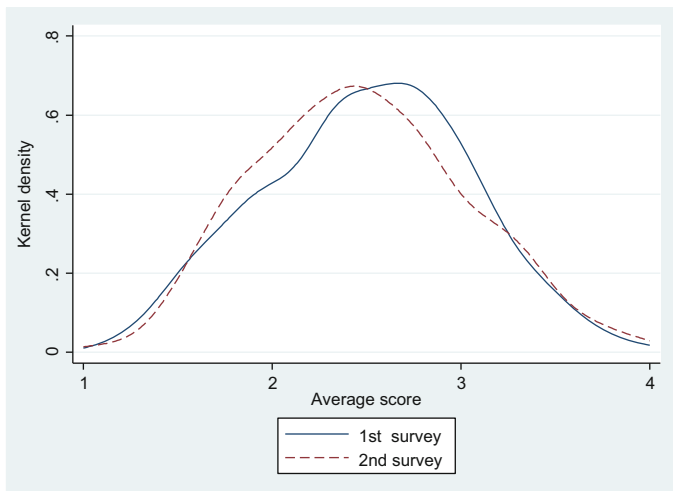


Fig. 7.7 Distribution of human resource management scores (1st vs. 2nd in Japan)

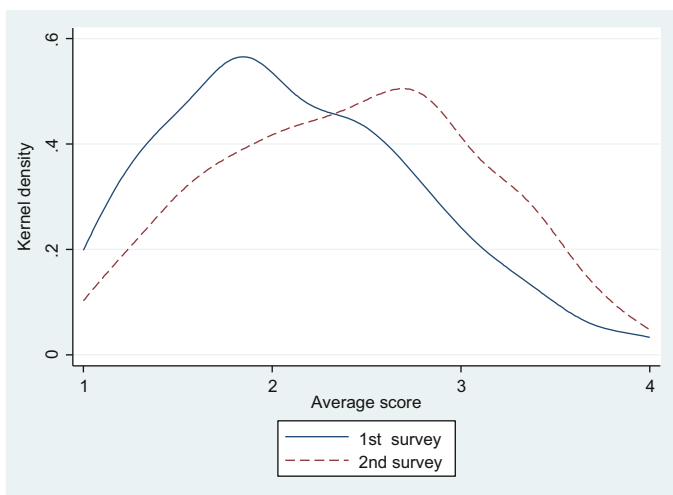


Fig. 7.8 Distribution of human resource management scores (1st vs. 2nd in Korea)

in the first survey, the comparison of two distributions in Japan and Korea in the second survey, the comparison of two distributions in the first and second surveys in Japan, and the comparison of two distributions in the first and second surveys in Korea. In the first row of the table, we test the hypothesis of whether the sample values in Japan are significantly smaller than those in Korea. ‘Distance’ in the second column shows the maximum distance in the case where the sample value in Japan is less than that in Korea. P values in the first and second surveys show that sample values in Japan are not significantly smaller than those in Korea. However,

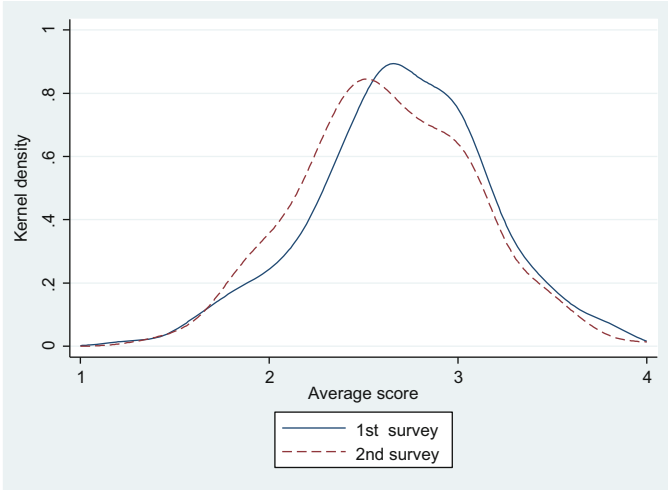


Fig. 7.9 Distribution of management scores in large firms (1st vs. 2nd in Japan)

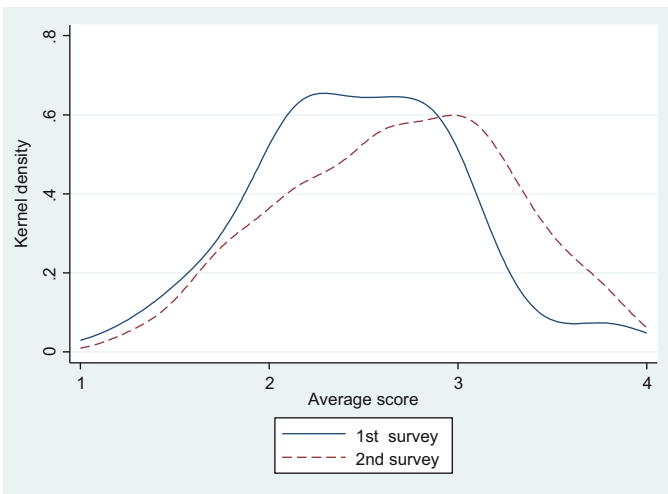


Fig. 7.10 Distribution of management scores in large firms (1st vs. 2nd in Korea)

the P value in the third table shows that the sample values in the first survey are significantly smaller than those in the second survey in Japan. In the case of Korea as well, the sample values in the first survey are significantly smaller than those in the second survey. The second row of the table tests the opposite case. The Kolmogorov-Smirnov test shows that sample values in Japan are significantly larger than those in Korea in both surveys. In the case of the first and second surveys in Japan, the sample values in the first survey are significantly larger than

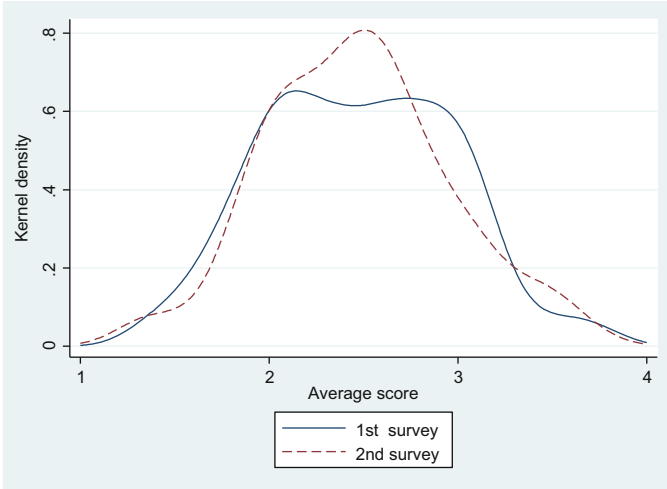


Fig. 7.11 Distribution of management scores in SME (1st vs. 2nd in Japan)

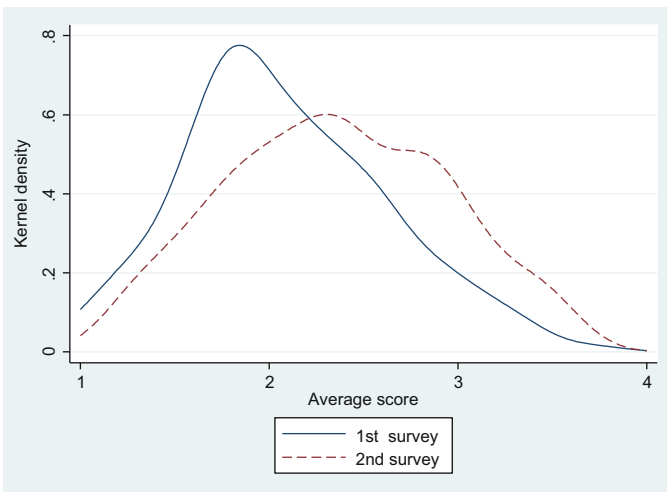


Fig. 7.12 Distribution of management scores in SME (1st vs. 2nd in Korea)

those in the second survey in Japan. The last row shows the combined results of the previous two tests.

These tests imply that the distributions of management scores in Japan have shifted significantly to the right more than those in Korea in both interview surveys. Overall, the organizational targets are clear to all employees in Japan in more cases than in Korea, or Japanese firms improve their organizational structures more

Table 7.5 Kolmogorov-Smirnov test

	All questions		Organizational management		Human resource management	
	Distance	p-value	Distance	p-value	Distance	p-value
First survey						
Japan < Korea	0.007	0.981	0.005	0.987	0.009	0.965
Japan > Korea	-0.326***	0.000	-0.273***	0.000	-0.294***	0.000
Combined test	0.326***	0.000	0.273***	0.000	0.294***	0.000
Second survey						
Japan < Korea	0.060	0.195	0.048	0.354	0.047	0.369
Japan > Korea	-0.110***	0.004	-0.100**	0.011	-0.109***	0.005
Combined test	0.110***	0.009	0.100**	0.022	0.109**	0.010
Japan						
Japan 1st < Japan 2nd	0.017	0.869	0.053	0.265	0.017	0.866
Japan 1st > Japan 2nd	-0.081**	0.047	-0.103***	0.006	-0.065	0.140
Combined test	0.081*	0.093	0.103**	0.013	0.065	0.279
Korea						
Korea 1st < Korea 2nd	0.215***	0.000	0.199***	0.000	0.203***	0.000
Korea 1st > Korea 2nd	-0.003	0.996	0.000	1.000	-0.003	0.997
Combined test	0.215***	0.000	0.199***	0.000	0.203***	0.000

Note:

‘Japan < Korea’ means that sample values in Japan are smaller than those in Korea, and vice versa
 *p < 0.10, **p < 0.05, and ***p < 0.01

aggressively than Korean firms, because high scores in organizational management indicate a greater degree of transparency of organizational goals or aggressive organizational reform. As for human resource management, Japanese firms are more flexible in their human resource management than Korean firms. However, the flexibility of human resource management improves in Korea, while it declines in Japan.

However, the difference in management scores partially reflects the difference in samples between the first and the second survey. When we limit the sample to be the same and consistent between two surveys for Japan, the management scores in consistent samples show similar patterns to those in the entire sample in the second survey (see Table 7.6). This implies that the shrinking gap of management scores between Japan and Korea cannot be entirely attributed to changes in the samples.

Table 7.6 Comparison of management scores in corresponding industries in the first and second surveys in Japan

	First survey			Second survey (corresponding industries)			Second survey (entire sample)		
	N	Mean	Variance	N	Mean	Variance	N	Mean	Variance
<i>MS (all questions)</i>									
All samples	573	2.609	0.243	105	2.545	0.266	402	2.568	0.226
Manufacturing firms	194	2.606	0.245	67	2.516	0.269	272	2.552	0.242
Service firms	379	2.610	0.243	38	2.596	0.265	130	2.603	0.191
Large firms	339	2.687	0.213	72	2.626	0.248	231	2.642	0.213
Small and Medium-sized firms	204	2.502	0.256	33	2.368	0.268	171	2.469	0.226
<i>MS (Organizational management)</i>									
All samples	573	2.749	0.398	105	2.656	0.370	402	2.694	0.322
Manufacturing firms	194	2.782	0.367	67	2.642	0.419	272	2.668	0.343
Service firms	379	2.732	0.414	38	2.680	0.293	130	2.750	0.276
Large firms	339	2.830	0.368	72	2.708	0.389	231	2.755	0.336
Small and Medium-sized firms	204	2.645	0.388	33	2.540	0.321	171	2.612	0.293
<i>MS (Human resource Management)</i>									
All samples	573	2.504	0.305	105	2.462	0.356	402	2.474	0.313
Manufacturing firms	194	2.475	0.322	67	2.422	0.323	272	2.465	0.320
Service firms	379	2.518	0.296	38	2.533	0.416	130	2.492	0.300
Large firms	339	2.580	0.271	72	2.565	0.335	231	2.557	0.314
Small and Medium-sized firms	204	2.395	0.338	33	2.239	0.338	171	2.361	0.291

7.3.3 Features of the Results in the Second Survey

In the second survey, we asked additional questions to shed some light on management styles in Japanese and Korean firms and the market conditions that they face. Table 7.7 summarizes the responses to the supplementary questions. Question 1 in the second survey asks outline of business and several economic environments which Korean and Japanese firms face. As for the first question in Question 1 which asks the main market for a firm, almost two thirds (2/3) of the Japanese firms answered that they sell more than 75 % of their products in their domestic market. On the other hand, less than half of the Korean firms are selling more than 75 % of their products in their domestic market (see Table 7.7a). The competitive environment asked in the fourth question in Question 1 also differs greatly between Japan and Korea. While more than half of the Japanese firms have more than six competitors, approximately half of the Korean firms have fewer than five competitors (see Table 7.7b).

It is often argued that the major difference between Japanese and Korean firms is the speed of the decision-making process. In the second survey, we ask questions related to this issue. Table 7.7c illustrates that time it takes much less time to change

Table 7.7 Summary of responses to additional questions in the second interview survey

(a) Share in Domestic Market (based on the Question 1a in the second interview survey)		
	Japan (%)	Korea (%)
Above 75 %	66.4	43.6
50–75 %	16.7	18.2
25–50 %	9.7	18.8
Less than 25 %	6.7	19.4
(b) Number of Competitive Firms (based on the Question 1d in the second interview survey)		
	Japan (%)	Korea (%)
One firm	1.5	2.2
From 2 to 5 firms	40.8	52.9
From 6 to 9 firms	20.0	19.8
Above 10 firms	36.5	25.1
(c) Months Required to Revise Organizational Goals and Executing Measures to Attain Them (based on the second question in Question 3-3-4 in the second interview survey)		
	Japan (%)	Korea (%)
Less than 1 month	5.8	25.6
From 1 to 3 months	16.0	40.1
From 3 to 6 months	4.6	17.5
From 6 months to 1 year	63.2	10.4
Above 1 year	10.4	6.3
(d) The Share of ‘nemawashi’ Hours Required for Organizational Decision for Starting New Business (based on the Question 9-1 in the second interview survey)		
	Japan (%)	Korea (%)
Above 60 %	10.1	17.4
40–59 %	18.3	29.6
20–39 %	27.5	29.8
Less than 20 %	44.2	23.0
(e) Period from the Initial Consideration of New Business till It Begins (based on the supplementary question in Question 9-1 in the second interview survey)		
	Japan (%)	Korea (%)
Less than 1 month	26.3	2.0
From 1 to 3 months	17.9	11.6
From 3 to 6 months	8.9	21.6
From 6 months to 1 year	21.3	37.5
One year and above	24.3	27.3
(f) Period from the Initial Consideration of Exit till It Exits (based on the auxiliary question in Question 9-2 in the second interview survey)		
	Japan (%)	Korea (%)
Less than 1 month	26.6	4.9
From 1 to 3 months	17.1	16.3
From 3 to 6 months	13.5	20.4
From 6 months to 1 year	23.5	29.5
One year and above	18.0	28.9
(g) Share of Amount of Information Held by Managers in the Total Information within a Firm (based on the Question 9-3 in the second interview survey)		
	Japan (%)	Korea (%)
Above 80 %	12.7	29.9

(continued)

Table 7.7 (continued)

60–79 %	17.3	34.5
40–59 %	29.4	24.0
Less than 40 %	40.8	11.7
(h) Share of Informal Information to the Total Information Held by Managers (based on the Question 9-4 in the second interview survey)		
	Japan (%)	Korea (%)
Above 60 %	3.2	4.0
40–59 %	7.1	12.3
20–39 %	25.7	34.1
Less than 20 %	64.0	49.5

the existing targets of the firm for Korean firms than for Japanese firms based on the second question in Question 3-3-4. While 65 % of the Korean firms revise organizational goals and other production processes within 3 months, it takes more than 6 months for approximately three fourths (3/4) of the Japanese firms to reach similar decisions.

However, in Table 7.7d constructed from Question 9-1, over 40 % of the Japanese firms responded that less than 20 % of the time before the project begins is spent on the “nemawashi” informal consensus building. On the other hand, approximately 60 % of the Korean firms spend 20–60 % of their time on this consensus building. Yet, considering the time it takes for the Japanese firms to change its targets, we cannot conclude that the time for these preparations is shorter for Japanese firms than Korean firms. Based on the information in Table 7.7c, suppose that the time it takes for the organizational decisions to take place is 10 months for Japanese firms. The time spent on the informal consulting building constitutes 20 % of that time, which is 2 months. On the other hand, the Korean firms spend on average 3 months to reach organizational decision. Then, 40 % of the 3 months would be spent on this consensus building, which would be 1.2 months.

However, Table 7.7e constructed from the results of the supplementary question in Question 9-1 shows that the time it takes to decide on new projects is not necessarily shorter for the Korean firms. In Japan, the cases can be extreme: cases in which decisions would be made very quickly and those in which decisions would take more than 6 months. On the other hand, almost 60 % of Korean firms take more than 6 months to make a decision on new projects. A similar trend is observed when it comes to the termination of existing projects in Table 7.7f constructed from the results of the supplementary question in Question 9-2. Contrary to common perceptions, a large fraction of Japanese firms take less time to make decisions than their Korean counterparts.

Lastly, we compare the amount of information shared with the manager at establishment level by using the results in Questions 9-3 and 9-4. Table 7.7g indicates that only 12 % of the Korean firms share less than 40 % of pertinent information to project managers while 40 % of Japanese firms do. This indicates that overall, Korean firms tend to give more decision-making authority to project

managers than Japanese firms and that decentralization is more common in Korea. Table 7.7h also shows that the share of information obtained by a project manager is via informal route and is not necessarily higher in Japan than in Korea.

7.4 Conclusions and Discussions

In the last 20 years, Korean firms have been catching-up with Japanese firms and some firms have already surpassed the Japanese firms in productivity or market shares. According to growth accounting in Japan and Korea, the accumulation of intangible assets has played a key role in explaining the difference in economic performance in the two countries. Among several types of intangibles, management skills and human capital are crucial to the improvement of a firm's performance. Bloom and Van Reenen (2007) examined the effects of organizational and human resource management on firm performance using interview surveys conducted in France, Germany, the UK, and the US. Following their study, we conducted interview surveys on organizational and human resource management in Japan and Korea.

In this paper, we constructed scores on management practices in each firm based on the two interview surveys. For the scores in organizational management, firms that have clear organizational targets, better communication amongst employees, and conduct organizational reforms would have a higher score. For the scores in human resource management, firms that evaluate human resources flexibly and strive to keep employees motivated would mark higher scores.

When we compared the distributions in average management scores between Japanese and Korean firms, the mean value in Japan was higher than that in Korea except in the case of large firms in the second survey. However, the gap in management scores between Korea and Japan shrunk significantly in the second survey, because management practices in Korean firms improved compared to their scores in the first survey to the second survey. In particular, the higher mean value of management scores seen in large firms in Korea than those in Japan in the second survey is consistent with recent studies comparing firm performances in large firms in Korea and Japan.

Kolmogorov-Smirnov statistics comparing the distributions between Korea and Japan show that the distributions in the average score in Japan are significantly different from that in Korea. The results show that the overall management quality in Japanese firms is higher than that in Korean firms. However, the distribution of management scores in Korean firms has shifted to the right, while that in the Japanese firms moved slightly to the left. In particular, the distribution of the human resource management score of Korean firms shifted to the right in the second survey, which suggests that there was the improvement in human resource management in Korean firms.

Our next task is to examine whether the improvement in firm performance is associated with better management practices. Lee et al. (2012) have already

examined the relationship between management practices and productivity at the firm level by conducting production function regressions using the results in the first interview surveys. They show that management scores are positively associated with productivity. In particular, better human resource management is positively correlated to the productivity. From these results, we expect that improvement in human resource management in Korean firms in the second survey is associated with productivity improvement in those firms and the slight decline in management scores in the second survey in the Japanese firms is related to stagnating productivity in those firms. After constructing a database for the management scores in the second survey and corresponding financial statements in the sample firms, we will be able to conduct more rigorous and comprehensive verification of the relationship between the management practices and productivity performance.

Appendix 1: Questionnaire (The First Interview Survey)

1. Dissemination of management principles (vision)

- Does your company have management principles that it has upheld for many years?
- What efforts are in place to have those management principles shared by all employees? (For example, announcing them at morning assemblies, or making them portable by writing them on business cards etc.)
- Are management principles also supported by parties such as external partners (customers, suppliers) or the shareholders?

2. Implementation of organizational goals

- Are there specific quantifiable goals on multiple levels that go beyond being just a vision or a slogan, regardless of the level of the goals (such as company-wide, divisional or sectional goals)?
- Do you ensure that the goals amongst divisions are consistent?
- Is consistency maintained between these goals and the goals of management principles or long-term company-wide goals?

2-1. Implementation of organizational goals (setting target levels)

- For example, are the parameters for divisional or sectional target levels simply given to you in a top-down fashion? Or is the input of your division or section considered in the setting of these goals?
- Are the target levels appropriately set as non-binding challenges?
- Are target levels checked to ensure they are equitable between divisions or sections? Please provide an example of how they are checked. ()

2-2. Implementation of organizational goals (penetration of goals)

- Are all employees aware of these goals?
- If goals exist on various levels (such as company-wide, divisional and sectional goals), do all employees understand the level of priority of the goals?
- Do all employees accept these target levels? Please provide an example if possible. ()

2-3. Implementation of organizational goals (degree to which goals are met, checks on performance)

- Are checks conducted to see how far goals have been achieved? Please give an example of how such checks are conducted. ()
- Are such checks conducted on a periodic rather than on an as-needed basis? And how frequently are such checks conducted? ()
- Are additional checks conducted that are decided by the section or department involved itself, rather than just being mandated checks?

2-3-1. Implementation of organizational goals (permeation of degree to which goals are met, and results of performance checks)

- Are the results of such checks made openly available within your division?
- Are the results of such checks made openly available within not only your division but also between relevant divisions?
- Are adjustments made to ensure that the comparison of the attainment of goals between divisions is fair? (for example, by utilizing common measures such as overtime hours?)

2-3-2. Implementation of organizational goals (results of checks - response when goals have not been achieved)

- Is a meeting of managerial staff and employees held as soon as it is determined that the goals were not achieved?
- After investigations, are action items to improve shared throughout the division, and are measures for handling the failure to achieve the goals promptly implemented?
- Are problematic issues and countermeasures made thoroughly known throughout the relevant division, and if necessary, other divisions? Please provide an example if possible. ()

2-3-3. Implementation of organizational goals (results of checks - response when goals have been achieved)

- When goals are achieved, are investigations conducted so that those goals are renewed on a continuous basis or so that higher goals are set?
- How long does it take for the operation/implementation of those goals after the higher goals have been set?
- Are these measures institutionalized at a company-wide level?

3. Informal communication within the organization

- Are measures and activities other than formal meetings used to enhance informal communication? (for example, informal meetings consisting only of key personnel)? Please provide an example. ()
- Are informal meetings held between divisions?
- Are informal meetings held between persons of various ranks?

4. Implementation of organizational reform

- Has your company undergone any organizational reforms in the last ten years? When did these occur? ()
- Did your company use a consulting company at that time? What was the cost? ()
- Did you determine the results of the reform in a quantifiable manner? By what percentage did profits increase or by what percentage were costs reduced? ()

4-1. Period of organizational reform or strategic change

- Did the implementation of the organizational reform take more than one year? How many years were spent including the preparation period? ()
- Why was organizational reform necessary? Did this have to do with the leadership of senior management?
- During the organizational reform, did mid-level management also strive to achieve the reform, thereby giving the sense of unity in the company?

4-2. Scope of the effects of organizational reform

- Were the effects of the reform evident in the divisions or sections? If they were, please provide an example of the effects. ()
- Were the effects of the reform evident between divisions, and not just within one division? If they were seen between divisions, please provide an example of the effects. ()
- Were the effects of the reform evident between the company and the business partners, and not just within the company? If they were, please provide an example of the effects. ()

4-3. Details of the organizational reform (delegation of authority)

- Was decision-making authority delegated to those in a lower position as a result of the organizational reform?
- Were posts simplified in conjunction with decision-making authority being delegated to those in a lower position?
- As a result, was there a change in the description of the job or the way of doing the job? Please provide an example. ()

4-4. Details of the organizational reform (IT activities)

- Did the IT system make your company more streamlined, for example by reducing the amount of paper-based documentation?

- In the last decade, did your company launch organizational reform, rather than raise business efficiency, by utilizing the IT system?
- Did an opportunity to earn new profits arise as a result of the organizational reform based on the IT system? Please provide an example. ()

5. Promotion system

- Does your company have a mainly performance-based promotion system?
- If the promotion system is mainly performance-based, does your company have a management-by-objectives system? If so, when did that system begin?
- Did the performance of the employees improve as a result of using the management-by-objectives system and introducing a performance-based promotion system?

6. Programs to improve motivation

- Are there any programs other than promotion or pay-related schemes to increase the motivation of the employees? Please provide an example. ()
- Is that scheme used on an institutional basis throughout the company?
- Do you monitor when the employees' motivation, retention rate or job performance increases as a result of such a program?

7. Handling employees that perform poorly

- Are poor performers handled in some formalized way other than by verbal warnings?
- Does the response to poor performers include their movements to another positions?
- Are the measures implemented as soon as a problem is confirmed (before a routine rotation)?

8. Handling employees that perform well

- Is it an employee's good performance shared within the division, for example by management praising employees at meetings?
- Do you have a system that ensures that good performance is linked to financial rewards or promotions?
- Was the motivation of the employees raised through introducing such a system?

9. Retaining talent

- How do you identify the high performance and core employees, mentioned in question 9, in your company? Please provide an example. ()
- Are excellent employees treated well compared with ordinary employees? If so, how they are treated? ()
- Do you have measures to prevent the loss of your excellent employees ?

10. Evaluating the interpersonal skills of managers

- Do the managers give clear criteria such as the degree to which persons of a lower position could be developed?

- Is there an incentive system, such as a pay-related or promotion-related system, to reward managers that have developed excellent staff of a lower position?
- Did the managers' motivation increase as a result of introducing such a system?

11. Training for development of human resources

- Is there training on an occupational ability basis or an assignment basis, aiming to improve the work skills of the employees? Over the course of one year, on average how long is spent on training? ()

(Training on an occupational ability basis refers to training in specialist capabilities that are required in each field, such as management, business, research and development, and manufacturing.

Assignment-based training refers to training in areas such as languages, OA, computing, and acquisition of official certifications.)

- Do business results improve as a result of these training activities? Please provide an example. ()
- Are the effects of those training activities adaptable to other companies?

12. Developing human resources through OJT

- Is OJT performed on a daily basis?
What percentage of the supervisor's working time is spent on providing instructions to those in a lower position? ()
- Does OJT contribute to business results? Please provide an example. ()
- Are the effects of OJT monitored? Please provide an example of the methods used. ()

13. Employees' expertise

- Are employees rotated to different positions under a fixed schedule, such as once every two or three years?
- To improve the expertise of the employees, are they assigned to a position for a significant amount of time?
- Is there a systematic program in place to ensure the employees acquire some expertise?

Appendix 2: Questionnaire (Second Interview Survey)

1. Business environment and responses to changes

- With regard to the market your company is operating in, what are the percentages of revenue from your domestic and overseas markets?
 - Domestic market accounts for 75 % or higher.
 - Domestic market accounts for 50–75 %.
 - Domestic market accounts for 25–50 %.
 - Overseas market accounts for 75 % or higher.

- b. How do you see the competitive environment surrounding the market for your company's major product or service (i.e., the product or the service that has the largest share in your company's revenue)?
- Mild
 - Medium
 - Intense
 - Highly intense
- c. What is your market share of the major product or service which relates previous question?
- About 0–5 %
 - About 5–10 %
 - About 10–25 %
 - 25 % or higher
- d. How many rival firms are competing for a larger market share?
- None or one firm
 - Two to five firms
 - Six to ten firms
 - Eleven or more firms
- e. What actions are typically taken when the market for your main product is favorable and prevailing prices are rising? (Please choose one or two that best describe the situation.)
- Expand investment
 - Increase operating time to expand production capacity
 - No changes
 - Increase employees (transfer, or newly recruit employees)
 - Reduce advertising and marketing expenses
- f. What actions are typically taken when the market for your main product remains stagnant?
- Cut down operations (reduction in sales and production including restructuring)
 - Reduce prices
 - Develop production methods to save production costs
 - Explore new marketing methods
 - Improve product quality and design as well as develop new products
- g. We would like to offer our deepest condolences to your employees who greatly suffered from the East Japan Earthquake that hit Japan on March 11, 2011. Please provide any examples of significant changes in corporate strategy caused by this unprecedented disaster, such as the relocation of production bases, or changes in product line-up.

Thank you for sharing your business environment with us so far.

We would appreciate it if we could obtain a brochure that explains your major product or service when we leave your office after completing today's interview. We would like to study it to have a better understanding of your company.

(Yes/No)

Then, let us move on to topics concerning corporate visions, followed by goals/targets on a more operational level. Questions can be answered 'Yes' or 'No'.

2. Production management system

2-1. Production system

- Please describe your company's production system? Has your company introduced a system aimed at minimizing inventory on the production line?
- Please let us know if your plant has a unique system of inventory management.
- How does your company manage inventory? How do you maintain the proper balance between inventory management and smooth operation of the production line?

2-2. Reason that your company introduced the production system

- What factors led to the introduction of your production system?
- Is your inventory management system mainly designed to reduce costs?
- Or do you believe that your system is more than just a cost-reduction method and that the system has far-reaching positive impacts on logistics, innovation and other systems?

2-3. Improvement of production process

- How has your company improved the production process in the last five years?
- How are problems regarding production processes typically identified and fixed? Please provide an example in which your workers recently identified and fixed a problem with regard to the production line.
- Do factory workers take the initiative to suggest ideas for improving production process?

3. Organizational goals/targets

3-1. Questions about goal or target setting

- Is each operating division responsible for setting its own goals/targets, rather than their being set at higher departmental levels?
- In terms of the difficulty of achieving the goals/targets, does the company consider ways to maintain appropriate levels of the division's goals/targets (i.e., ensure they are not too difficult, not too easy)?
- Does the company ensure that all the divisions are treated fairly in terms of difficulty of division's goals/targets? If any, can you provide an example of specific ways to manage these goals/targets? ()

3-2. Questions about how goals/targets are shared by employees

- Do all employees understand the goals/targets of their divisions?
- If different goals/targets are established on various levels such as section, department, company etc., do employees understand how they relate to each other and what these priorities are?
- Have most employees fully bought into the goals/targets and are motivated into action by them, rather than just “being aware of” the goals/targets?

3-3. Questions about monitoring the degree of achievement

- Does your company monitor the achievement of the goals/targets? If so, can you provide an example of the monitoring method used? ()
- Is such monitoring conducted periodically? If so, what is the frequency that it is conducted? ()
- In addition to a system of institutional monitoring, do employees take the initiative to monitor their own achievements?

3-3-2. Questions about how monitored results are utilized

- Do employees share the monitored results of achievement, regardless of whether the results are good or bad?
- Do employees have easy access to the monitored results of achievement of the other departments with whom they work closely?
- Are there specific ways to make a fair evaluation of achievement across divisions such as the measurement of overtime etc.? If so, can you provide an example of such evaluation method? ()

3-3-3. Questions about cases in which goals/targets are not achieved

- In case set goals/targets are not achieved, do managers and staff have a meeting in a timely manner?
- When the managers and staff come up with ideas for improving performance in such meetings, are these ideas shared by staff in the division and put into action in a timely manner?
- Does the company ensure that such ideas for improvement are also shared by the other divisions? Please provide an example of specific ideas for improvement that are shared by the other division ()

3-3-4. Questions about cases in which goals/targets are achieved

- When the goals/targets are met, does your company consider revising them to higher goals/targets?
- Is the time frame required to revise the goals/targets and to implement actions toward such new goals/targets within three months? How long is the time frame? ()
- When revising the goals to higher level after earlier goals are achieved, are such actions institutionalized as part of a formal corporate process?

4. Human resource management

4-1. We understand that various measures are taken to improve employee motivation.

- Do managers evaluate employees mainly on the basis of performance (performance-based system)?

When was such performance-based evaluation system introduced? (Year)

- Do you use incentives other than promotion and compensation to help improve the motivation of employees? If so, can you provide an example? ()
- Do you monitor how these incentives lead to better outcome, such as greater motivation, higher retention rate or better financial results?

4-2. When we discussed organizational issues previously, we touched on the management and achievement of goals. Here, we would like to ask similar questions in terms of human resource management.

- Do managers take any specific measures other than verbal advice to employees when their achievements do not reach targets?
- Do such measures include transferring the employee to another position even if he or she has been in their current position for less than the average rotation period?
- Do such internal transfers take place promptly, and no later than the timing of regular rotation?

4-3. Questions regarding high-achieving employees

- When an employee achieves a high performance, do managers announce this within the division by praising the employee at meetings, for example?
- Does your company adopt a compensation and promotion system that is aligned with performance targets and achievements?
- Have you seen improvements in motivation by adopting such performance-based systems of compensation and promotion?

4-4. Questions about managers

- Does the company provide managers with clear guideline as to how they should cultivate the talent of their subordinates?
- Does your company adopt a promotion or compensation system in which managers are incentivized to foster high-achieving employees?
- Have you seen an improvement in the motivation of managers by adopting such an incentive scheme?

5. Human resource development

5-1. Questions about human resource development

- Does your company conduct employee training on a regular basis to develop their business skills?

- a. How many days a year, on average, does an employee spend on training? (days)
- b. There are two types of corporate training programs: 1) functional training designed to obtain technical knowledge and 2) theme-based training designed primarily to obtain a certificate. Which do you focus on?
 - Focus on functional training
 - Focus on theme-based training
 - Both training are conducted roughly equally.
- Do these training programs contribute to improving financial results? If so, please provide an example. ()
- Do employees obtain a high level of transferable skills that could be utilized soon after she or he moves to another company?

5-2. Questions about OJT (on-the-job training), which is also an important training program

- Does on-the-job training (OJT) take place during daily operations? Roughly what percentage of a manager’s time is allocated to such OJT?

If it is difficult to specify the corporate-wide percentage, please base your answers on one of the divisions.

- a. On average (throughout the company) (%)
- b. Front office/factory (%)
- c. Back office (%)
- d. Other specialist divisions (%)
- Does this OJT contribute to improving financial results? If so, please provide an example. ()
- Do you monitor the results of OJT? If so, please provide an example of how you monitor them. ()

5-3. We understand that job rotation leads to the development of a company’s human resources.

- Is your company’s job rotation program flexible? Do you think, for example, that the majority of employees are transferred within the base rotation period of two to three years?
- Do some employees stay in one division for a long period to cultivate a high level of specialized skill and expertise?
- Do you have a human resource development program that integrates various aspects such as training, OJT and job rotation that will help acquire a high level of skill and expertise?

6. Acquisition of human resources

6-1. Questions about your workforce, human resources itself

- Is your company able to identify core skilled workforce (star performers) in each division? What quality is typically shared by such star performers? ()
- Are these star performers treated differently from other employees? If so, in what regard are they treated differently? ()
- Has your company been successful in retaining your top talent?

6-2. An increasing number of Japanese companies are interested in utilizing non-Japanese employees or management.

- Does your company have non-Japanese employees or management? What is the percentage of non-Japanese to total number of management and employees? (%)
- Do overseas subsidiaries have non-Japanese management?
- Do your board members (head office) include any non-Japanese persons?

7. Lifetime employment system

Last topic is lifetime employment.

How does your company view the lifetime employment system?

- Important
- Somewhat important
- Somewhat unimportant
- Unimportant

8. Relationships between employees (mainly full-time) and management

Which of the followings best describe your company situation regarding how corporate strategy is formulated?

- Top down decision making
- There are regular meetings between management and employees regarding compensation and human resource management, but corporate strategy is determined only by the management.
- In addition to 2, informal communication is common, where management tries to reflect the opinions of employees when it comes to issues related to compensation and human resource management, though corporate strategy is decided only by the management.
- Communication between management and employees plays a key role in reflecting employees' opinions not only in human resource issues but also in corporate strategy.

9. Decision making and information flow

- 9-1. Let us suppose that multiple divisions are involved to discuss a new business project. If we say the total time spent from starting the feasibility study to launch the project is 100 %, what is the percentage of the time spent on nemawashi (i.e., the consensus-building process outside of formal meetings)?

- 60 % or above
- 40–59 %
- 20–39 %
- 19 % or below

9-2. Let us assume the case in which you must close or exit an existing business. Let us also say that the total time spent from the formation of the project team for winding down the business to start implementing the plan is 100 %, what is the percentage of the time spent on *nemawashi* (i.e., consensus-building process outside of formal meetings)?

- 60 % or above
- 40–59 %
- 20–39 %
- 19 % or below

Next, let us cover topics on information flow within the company.

9-3. Let us suppose that the total amount of strategic information within the company is 100 %, what percentage of information does the person who is in charge of one business unit have?

- 40 % or below
- 40–60 %
- 60–80 %
- 80 % or above

9-4. Let us suppose that the total amount of strategic information that one employee has is 100 %, what percentage of information does the person obtain informally (e.g., unofficial dinner with colleagues or bosses) rather than through formal ways such as conversation with the boss during business hours or corporate meetings?

- 20 % or below
- 20–40 %
- 40–60 %
- 60 % or above

10. Organizational reform

10-1. Please let us know whether your company underwent organizational reform in the past and how great the reform was.

- Has the company undergone an organizational reform in the last 10 years? If yes, we will continue questions. If no, we will move to question 5.
- Did the organizational reform entail changes to the existing organizational framework (e.g., was there restructuring of existing departments and/or sections)?
- Did the organizational reform go beyond the creation of a new business groups or the consolidation of existing business groups?

- Was the organizational reform conducted on a far greater scale that involved company-wide reform? The examples include transformation from a functional organization to a divisional organization or to a matrix organization, transition to a divisional organization or creation of a pure holding company.

Please allow us to continue asking about organizational reform.

- In which year did the organizational reform start? ()
- How many employees were involved in planning and/or implementing the reform as a percentage of total employees? How long did the reform take?
(%)()
- What was the major reason that your company decided to implement organizational reform? ()

(If the answer is not apparent, we ask you to consider the following possibilities).

- It was clear that the existing organizational structure was not effective to save the company from further deteriorating business performance.
 - Though business performance was not deteriorating, we felt it necessary to transform the organization as a countermeasure to competitors who had made similar reforms.
 - Though business performance was not deteriorating, our external stakeholders such as major customers advised us to do so.
 - Though business performance was not deteriorating, we felt it necessary to better meet the changing needs of the future.
- What was the major focus of the objective of such organizational reform?

(If the answer is not apparent, we ask you to consider the following possibilities).

- The major objective was to meet customer demand in a more timely manner.
- The major objective was to increase capacity to develop new products, services or new production processes
- Instead of volume or quantity, the major objective was to enhance the ability to offer better quality of new products or services.
- The major objective was to reduce costs, such as labor cost.

We imagine that much internal coordination was required to reform the organization. Such a reform must have resulted in a number of changes. Please answer Yes or No to following questions.

10-2. Questions about the organizational reform process.

- Was the time required for the proposed organizational reform to be accepted by a majority of employees less than one year?
- Did a majority of employees work with middle management in line with the proposed reform after the plan was accepted?

- Did employees suggest other constructive alternatives regarding organizational reform?

10-3. Questions about changes due to organizational reform

- Was some of the decision-making authority delegated to lower-level managers/employees as a result of organizational reform?
- Did such delegation of decision-making authority help simplify the organizational structure?
- Did the organizational reform lead to changes in terms of what employees do and how they view their jobs? If any, please provide an example. ()

10-4. Questions about the relationship between IT investment and organizational reform, which are generally considered to be correlated.

- Did your company step up investment in IT after the organizational reform compared with the same period prior to the reform?
- Did your company make company-wide efforts to improve the utilization of information technology, rather than each section or division making IT-related plans individually?
- Did your company strengthen IT management to include not only the internal network but also external business partners such as customers and/or suppliers?

Please provide an example where an effective use of IT helped generate a new business opportunity, if any. ()

10-5. We understand that a large budget is generally required for organizational reform. Please let us know about funding the reform, which is usually one of the challenges.

What do you estimate is spent on organizational reform as a percentage to your company's annual revenue? (%)

- a. How does your company raise these funds required for reorganization?
- b. Please provide a ballpark figure of the percentage of each source of funds to the budget?

Internally-generated cash flow	(%)
Borrowings	(%)
Issuance of bonds	(%)
Issuance of stocks	(%)
Other	(%)
Please specify if you choose "other".	()

Next question is asked only to those who answered "borrowings" in the question b.

- c. How did lenders such as banks evaluate the proposed organizational reform?

Please choose the response closest to lenders' attitude.

- The reorganization plan was incorporated into their evaluation and reflected in borrowing conditions (loan amount, interest rate, maturity, security etc.).
- The reorganization plan was evaluated but was not reflected in borrowing conditions.
- The reorganization plan was not evaluated.

Next question is asked only to those who did not choose “borrowings” to the above question b.

c'. Did your company discuss with the banks the possibility of borrowing to fund your reorganization? How did banks evaluate the proposed plan of organizational reform?

Next question is asked only to those who answered yes to the above question c'. Please choose the response closest to the lenders' stance.

- The banks analyzed the reorganization plan and tried to reflect it in borrowing conditions (loan amount, interest rate, maturity, security etc.).
- The banks analyzed the reorganization plan but it did not seem to be reflected in borrowing conditions.
- The banks did not analyze the reorganization plan.

d. If reorganization costs can be recorded as assets, over how many years do you think they should be amortized/depreciated?

Please choose the one closest to your opinion.

- Over 7 years
- 5–6 years
- 3–4 years
- 2 years
- 1 year

References

- Aoki, M. (2010). *Corporations in evolving diversity, cognition, governance, and institutions*. Oxford: Oxford University Press.
- Bartelsman, E., Haltiwanger, J., & Scarpetta, S. (2009). Measuring and analyzing cross-country differences in firm dynamics. In T. Dunne, J. Bradford Jensen, & M. Roberts (Eds.), *Producer dynamics new evidence from micro data* (pp. 15–79). Chicago: University of Chicago Press.
- Bartelsman, E., Haltiwanger, J., & Scarpetta, S. (2013). Cross-country differences in productivity: The role of allocation and selection. *American Economic Review*, *103*, 303–334.
- Bloom, N., Sadun, R., & Van Reenen, J. (2012). The organization of firms across countries. *Quarterly Journal of Economics*, *127*, 1663–1705.
- Bloom, N., & Van Reenen, J. (2007). Measuring and explaining management practices across firms and countries. *Quarterly Journal of Economics*, *122*, 1351–1408.
- Fukao, K., Inui, T., Kabe, S., & Liu, D. (2008). An international comparison of the TFP levels of Japanese, South Korean, and Chinese listed firms. *Seoul Journal of Economics*, *21*(1), 5–33.

- Hall, R., & Jones, C. (1999). Why do some countries produce so much more output per worker than others? *Quarterly Journal of Economics*, 114, 83–116.
- Jones, C., & Romer, P. M. (2009). *The new Kaldor facts: Ideas, institutions, population, and human capital* (NBER Working Paper No. 15094).
- Joo, S. H., & Lee, K. (2010). Samsung's catch-up with Sony: An analysis using U.S patent data. *Journal of the Asia-Pacific Economy*, 15(3), 271–287.
- Jung, M., & Lee, K. (2010). Sectoral systems of innovations and productivity catch-up by the Korean firms with the Japanese firms. *Industrial and Corporate Change*, 19, 1037–1069.
- Jung, M., Lee, K., & Fukao, K. (2008). Total factor productivity of Korean firms and catching up with the Japanese firms. *Seoul Journal of Economics*, 21(1), 93–137.
- Kanamori, T., & Motohashi, K. (2006). *Centralization or decentralization of decision rights? Impact on IT performance of firms* (RIETI Discussion Paper Series 06-E-032).
- Kurokawa, F., & Minetaki, K. (2006). How can IT raise productivity linked with workplace re-organization and human capital in Japan? *The Economic Analysis*, 178, 54–95 (in Japanese).
- Lee, K., Miyagawa, T., Kabe, S., Lee, J., Kim, Y., & Edamura, K. (2012). *Comparing the management practices and firm performance in Korean and Japanese firms – An empirical study using interview surveys*. Presented at the workshop on “Intangibles, Innovation Policy, and Economic Growth” at Gakushuin University on December 17 and 18, 2012.
- McGrattan, E., & Prescott, E. (2005). *Expensed and sweat equity* (Federal Reserve Bank of Minneapolis, Working Paper no. 636).
- McGrattan, E., & Prescott, E. (2010). Unmeasured investment and the puzzling U.S. boom in the 1990s. *American Economic Journal: Macroeconomics*, 2, 88–123.
- Miyagawa, T., & Takizawa, M. (2011). Productivity differences between Japan and Korea and the role of intangible assets. In K. Asako, N. Iiduka, & T. Miyagawa (Eds.), *Great recessions in the global economy and business cycle analysis*. Tokyo: University of Tokyo Press (in Japanese).
- Shinozaki, A. (2007). Effective reforms with information technology: Logit model analysis on business process reengineering, business unit restructuring, and human resource management. *The Economic Analysis*, 179, 36–54.
- Solow, R. (1956). A contribution to the theory of economic growth. *Quarterly Journal of Economics*, 70, 65–94.
- Syversen, C. (2010). What determines productivity? *Journal of Economic Literature*, 49, 326–365.