

Chapter 3

A Survey of Management Control Systems and Managerial Behavior in Japanese Companies



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3.1 Introduction

The developments in theoretical research on management control systems (MCS) that took place in the early 2000s (Ferreira & Otley, 2009; Malmi & Brown, 2008; Merchant & Otley, 2007) motivated Yokota and Senoo (2011) to conduct a mail-based questionnaire survey during February and March 2010 to clarify the status of and changes in MCS in Japanese companies. However, the Great East Japan Earthquake that occurred in March 2011 impacted Japanese companies such that their MCS may have further changed. Therefore, to clarify the status of MCS in Japanese companies, we conducted a mail-based questionnaire survey from February through March 2012. Specifically, the survey gathered information about budgeting, business environments, organizational characteristics, and managerial leadership and behaviors.

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This study reports the simple tabulation results of the survey. The term “manager” was broadly defined in the questionnaire as management; the term is used in this study to describe only high-ranking managers such as organizational unit managers (e.g., business division managers, company system managers, department managers) who head an organizational unit (e.g., business division, company system, department). The tables in the study reflect the questions as written in the questionnaire; thus, “manager” in the tables refers to all managers—a meaning different from the term “manager” as used in this study.

3.2 Survey Method and Sample Characteristics

The survey was administered as follows. On February 27, 2012, a mail-based questionnaire survey titled “2012 Factual Investigation on MCS in Japanese Companies” was sent to those responsible for management control at 1674 companies listed on the First Section of the Tokyo Stock Exchange, with a reply deadline of March 14, 2012. The postal addresses were extracted from Diamond’s “D-VISION” series, “Employee/Manager Information File.” Specifically, the highest priority was to select the person who functioned as the division/department manager of the corporate planning department; the division/department manager of the accounting and finance department was selected for companies without such a position. When companies reported no data for either, the person in charge of management control was independently identified from the company website.¹

A total of 263 companies responded, including responses from 40 companies that were received after the response deadline, resulting in a response rate of 15.7%. Using a 5% significance level, test for non-response bias was performed as follows.² We first compared the industry-type distribution of the responding and non-responding companies; the responses by industry are shown in Table 3.1.³ As a result of the goodness-of-fit test (χ^2 -test), it was confirmed that the industry distribution of the responding companies conformed to the industry distribution of the companies listed on the First Section of the Tokyo Stock Exchange. Second, the sizes of responding and non-responding companies were compared. Table 3.2 reports the differences between the mean values of the size measures (sales, number of employees) of responding and non-responding companies.⁴ The mean for responding companies is higher for both sales and number of employees, and a

¹If the person in charge of management control could not be identified after going through this process, a questionnaire was sent to the “person in charge of management control.”

²The data for the test were obtained from recent surveys by Nikkei NEEDS. However, when the necessary data for a company was not available from Nikkei NEEDS, the data were obtained from the company’s securities report.

³We used TOPIX Sector Indices to identify industries.

⁴Since the surveyed companies included pure holding companies, consolidated data were used. If there was no consolidated company, non-consolidated data were used instead. In addition, instead

Table 3.1 Response by industry

Industry	Number of responding companies	Number of companies survey was sent to	Industry	Number of responding companies	Number of companies survey was sent to
Fisheries, agriculture, and forestry	1 (.4%)	5 (.3%)	Precision equipment	2 (.8%)	26 (1.6%)
Mining	1 (.4%)	7 (.4%)	Other products	7 (2.7%)	46 (2.7%)
Construction	16 (6.1%)	95 (5.7%)	Electric, power, and gas	2 (.8%)	17 (1.0%)
Food	13 (4.9%)	65 (3.9%)	Land transportation	10 (3.8%)	34 (2.0%)
Textiles and apparels	3 (1.1%)	39 (2.3%)	Marine transportation	1 (.4%)	9 (.5%)
Pulp and paper	0 (.0%)	11 (.7%)	Air transportation	1 (.4%)	3 (.2%)
Chemicals	14 (5.3%)	120 (7.2%)	Warehouse and harbor transportation	2 (.8%)	19 (1.1%)
Pharmaceutical	4 (1.5%)	36 (2.2%)	Information and communications	18 (6.8%)	100 (6.0%)
Oil and coal products	3 (1.1%)	10 (.6%)	Wholesale trade	30 (11.4%)	144 (8.6%)
Rubber products	3 (1.1%)	11 (.7%)	Retail trade	29 (11.0%)	148 (8.8%)
Glass and ceramics products	4 (1.5%)	29 (1.7%)	Banks	11 (4.2%)	84 (5.0%)
Iron and steel	5 (1.9%)	35 (2.1%)	Securities and commodities futures	4 (1.5%)	21 (1.3%)
Nonferrous metals	2 (.8%)	24 (1.4%)	Insurance	1 (.4%)	6 (.4%)
Metal products	5 (1.9%)	36 (2.2%)	Other financial business	1 (.4%)	20 (1.2%)
Machinery	17 (6.5%)	118 (7.0%)	Real estate	8 (3.0%)	45 (2.7%)
Electrical appliances	23 (8.7%)	154 (9.2%)	Services	9 (3.4%)	95 (5.7%)
Transport equipment	13 (4.9%)	62 (3.7%)	Total	263 (100.0%)	1674 (100.0%)

Note 1: The numbers in parentheses indicate the composition ratio

Note 2: Goodness-of-fit test: $\chi^2 = 25.452$, degrees of freedom = 32, $p = .787$

of sales, ordinary income is used in the banking industry, and operating revenue is used in securities and commodities futures industries.

Table 3.2 Difference in mean values of size of responding and non-responding companies

	Mean value of responding companies (n = 263)	Standard deviation	Mean value of non-responding companies (n = 1411)	Standard deviation	<i>t</i>	<i>p</i>
Sales: million dollars (\$1 = ¥80)	6977.45	22289.70	4176.45	12,498.90	1.981	.049
Number of employees	9982.14	30,561.30	7266.69	21,504.78	1.379	.169

t-test of the differences between the means of the two independent groups showed only the difference in sales was significant. Third, when the response results for those received before and after the deadline were compared, there were no significant differences in mean values or ratios. Therefore, the results of this survey appear to reflect the actual status of relatively large companies, and there is no significant non-response bias.

To improve comparability with previous research, whenever possible, the questions in this survey were prepared by referring to previous research. However, as many of the references used in previous studies come from countries other than Japan, revisions were made to be consistent with the actual situation faced by Japanese companies. In addition, some new concepts were established, and scales were developed in regard to concepts and measurements that were not necessarily clarified in previous studies. During the questionnaire design, the questions were confirmed by two management accounting researchers and one businessperson who did not participate in the survey.

The descriptive statistics of the survey results are shown in tables in this study, which also describe the previous studies referenced. The abbreviations in the table are as follows: “*n*” is the number of valid responses, “Mean” is the mean value, “SD” is the standard deviation, “Median” is the median value, “Min” is the minimum value, and “Max” is the maximum value. Most question items were measured using a seven-point scale. In addition, when measurement scales of previous studies were referenced, Cronbach’s alphas were calculated to examine internal consistency. In the table, “ α ” indicates Cronbach’s alpha coefficient. The questions in the table are not presented in the order in which they were presented in the questionnaire; rather, they are sorted from high to low using the ratio of the number of responses to the total number of valid answers or the mean value. However, the number preceding the question in the table reflects the order of the items in the questionnaire.

First, to clarify the characteristics of the responding companies, Question 1 enquired about the organizational structure. Table 3.3 shows the survey findings regarding the sample firms’ basic organizational structures. These results indicate that many of the responding companies have either a functional or divisional organizational structure.

Table 3.3 Basic organizational structure ($n = 262$) (Q1)

	<i>n</i>	%
1. Functional organization (e.g., manufacturing department (business division), sales department (business division))	114	43.5
2. Product/business divisional organization	83	31.7
3. Regional divisional organization	25	9.5
5. (Pure) holding company system	21	8.0
4. Company system	13	5.0
6. Other	6	2.3

Note: The percentages displayed in the table indicate the ratio of that response to the total number of valid responses

3.3 Budgeting (Question 2)

Budgeting has been central to management control (Hansen et al., 2003, p. 95); however, Hope and Fraser (2003) advocated that firms go “beyond budgeting” and claimed that budgets should be abolished. In recent years, increasingly more studies have been conducted outside Japan to examine the validity of their claims (e.g., Libby & Lindsay, 2010).

In Question 2, to clarify the actual state of company-wide budgeting in Japanese companies, budgeting was defined as, “formulation of a budget for a certain period (within one year) in the future from a comprehensive perspective of the company, and the use of this as a means to guide and coordinate daily activities of each department, in addition to a variance analysis between the budget and the actual results; it is a comprehensive management control method based on numbers to take appropriate improvement measures based on the analysis, and is a specific means of corporate profit management.”⁵ The survey was conducted primarily using Miki et al. (2003)⁶ and Libby and Lindsay (2010) as references.

Table 3.4 shows the survey results regarding whether the sample companies use budgeting across the company. The questions were created with reference to Miki et al. (2003 p. 130) and Libby and Lindsay (2010 p. 69).

Table 3.5 presents the results of survey questions regarding how budgets affect purposes. In recent years, an increasing number of studies have analyzed the effect of budgets on purposes (e.g., Hansen & Van der Stede, 2004); however, the questions in this survey were created with reference to Ekholm and Wallin (2011, p. 158). Each item was measured on a seven-point scale, from “1: no effect at all” to “4: neutral” and “7: extremely effective.” However, since the measurement scale has not

⁵The questionnaire describes it as a “budget system.” This definition was created with reference to Miki et al. (2003, p. 130).

⁶Miki et al. (2003) summarized the methods and results of the “Fact-finding Survey of Japan’s Corporate Budgeting System” conducted in November 2002 by the Japanese Association of Management Accounting, Corporate Research Project; and the Budget System Committee, which comprehensively clarified the actual budget management practices in Japanese companies.

Table 3.4 Implementation of company-wide budgeting ($n = 262$) [Q2 (A)]

	<i>n</i>	%
1. Is implemented	259	98.9
2. Is not implemented	3	1.1
3. Is implemented, but abolishment is being considered	0	.0

Note: The percentages displayed in the table indicate the ratio of that response to the total number of valid responses

Table 3.5 Effects of budgeting on purposes [Q2 (B)]

	<i>n</i>	Mean	SD	Median	Min	Max
(9) Operationalization of objectives	257	5.87	.87	6	2	7
(7) Communication of goals and policies	256	5.78	.91	6	2	7
(8) Creating awareness of what is important to achieve	256	5.66	.99	6	2	7
(1) Planning linked to the company's strategies	257	5.59	1.00	6	2	7
(5) Allocation of responsibility	257	5.41	1.18	6	1	7
(3) Allocation of resources to the units	256	5.28	1.05	5	1	7
(10) Motivation of managers and employees	257	5.25	1.09	5	1	7
(2) Coordination of the company's units organizational units	255	5.09	1.12	5	1	7
(6) Follow-up to facilitate rapid corrections	256	4.90	1.23	5	1	7
(11) Functioning as a basis for compensation and bonus systems	257	4.74	1.31	5	1	7
(4) Determination of operational volumes	255	4.48	1.27	5	1	7

Note: Since there are instances where certain questions were not answered, the number of valid answers (*n*) differs for each question

been established in previous studies, Table 3.5 does not include Cronbach's alpha coefficients.

Table 3.6 shows the results of survey questions about whether budgeted financial statements are prepared (multiple answers were allowed). The questions were created with reference to the "Questionnaire Survey on Understanding the Actual Conditions of Management Accounting in Japanese Companies" (FY2011), by the Global Center of Excellence (COE) Program (Management, Accounting, and Commercial Group), a collaboration between Keio University's Graduate School of Economics and Graduate School of Business and Commerce and Kyoto University's Institute of Economic Research.

Table 3.7 shows the results of survey questions about the degree of linkage between budget and strategy. The questions were created with reference to Libby and Lindsay (2010, p. 72). Each item was measured on a seven-point scale from "1: not at all" to "4: neutral" to "7: absolutely agree." Table 3.8 shows the budget period and Table 3.9 shows the budget preparation time.

Table 3.6 Whether budgeted financial statements are prepared ($n = 254$) [Q2 (C)]

	<i>n</i>	%
2. Non-consolidated budgeted income statement	226	89.0
5. Consolidated budgeted income statement	208	81.9
4. Consolidated budgeted balance sheet	127	50.0
1. Non-consolidated budgeted balance sheet	124	48.8
6. Consolidated budgeted cash flow statement	114	44.9
3. Non-consolidated budgeted cash flow statement	113	44.5
7. None of the budgeted financial statements listed in 1–6 are prepared	8	3.1
8. Other	4	1.6

Note: Since there are instances where certain questions were not answered, the number of valid answers (*n*) differs for each question

Table 3.7 Link between budget and strategy [Q2 (D)]

	<i>n</i>	Mean	SD	Median	Min	Max
$n = 255, \alpha = .822$ (4) Within the budgeting process, managers are expected to identify tactical initiatives to close the gap between current performance and the desired level of performance	256	5.64	1.13	6	1	7
(1) The budget system is explicitly linked to strategic objectives	257	5.63	1.14	6	2	7
(2) Setting the budget causes us to talk about and reflect upon our strategy	256	5.48	1.12	6	1	7
(3) We sometimes change our strategy/tactics based on the feedback derived from going through the budgeting process	255	5.18	1.26	5	1	7

Table 3.8 Budget period ($n = 255$) [Q2 (E)]

	<i>n</i>	%
1 year	164	64.3
6 months	63	24.7
3 months	14	5.5
1 month	14	5.5
2 months	0	.0

Table 3.10 presents the responses to questions about whether the initial budget was revised and the revision method (multiple answers were allowed). Number 3 in Table 3.10 (Question 2 (G)) is a question regarding “rolling budgets.” The questions

Table 3.9 Budget preparation time ($n = 258$) [Q2 (F)]

	<i>n</i>	%
3 months	78	30.2
2 months	45	17.4
4 months	33	12.8
2.5 months	30	11.6
3.5 months	22	8.5
Over 4 months	17	6.6
1.5 months	17	6.6
1 month	15	5.8
Less than 1 month	1	.4

Table 3.10 Whether revisions are made to the initial budget and revision method ($n = 256$) [Q2 (G)]

	<i>n (%)</i>	<i>n (%)</i>
<i>Whether the initial budget is revised</i>	41	
4. The initial budget is fixed and there are no revisions during the period	(16.0)	
There are revisions	215 (84.0)	
<i>Method of revising initial budget (n = 215)</i>		167 (77.7)
2. The initial budget is reviewed periodically (e.g., monthly, quarterly, etc.) and revisions are made as needed		
3. The budget is periodically (e.g., monthly, quarterly, etc.) updated		37 (17.2)
1. The initial budget is reviewed irregularly, and revisions are made as needed		27 (12.6)

were created with reference to Miki et al. (2003, p. 131, p. 133) and Libby and Lindsay (2010, p. 70, p. 72).⁷

Table 3.11 reports the results of questions on the company-wide performance measures that are most important for budgeting. The question items were created with reference to Miki et al. (2003, p. 132) and Yokota and Senoo (2011, p. 70).

Table 3.12 shows the results of questions about the properties of the company-wide performance measures that are most important for budgeting. In these questions, the focus was placed on the precision and sensitivity of the performance measures. Precision is the degree that performance measures are affected by factors outside the manager's control, and sensitivity is the degree that performance measures are influenced by manager behavior (Moers, 2006, p. 899). The questions were created with reference to Moers (2006, pp. 920–921). Each item in Table 3.12 was measured on a seven-point scale from “1: not at all” to “4: neutral” to “7: absolutely

⁷Libby and Lindsay (2010, p. 70) do not ask for a response regarding the budgeting period when a rolling budget has been implemented. In contrast, since the initial budget preparation time is examined in this chapter, a response is requested even if a rolling budget is implemented.

Table 3.11 Most important company-wide performance measures in budgeting ($n = 247$) [Q2 (H)]

	<i>n</i>	%
2. Operating income	103	41.7
3. Ordinary income	76	30.8
4. Net income	25	10.1
1. Sales	22	8.9
6. Return on sales	10	4.0
9. Other	7	2.8
7. Return on equity	2	.8
8. Residual income (EVA, etc.)	2	.8
5. Comprehensive income	0	.0

Note: EVA: Economic Value Added, developed by Stern Stewart & Co.

Table 3.12 Properties of company-wide performance measures most important for budgeting [Q2 (I)]

	<i>n</i>	Mean	SD	Median	Min	Max
<i>Precision of performance measures</i> ($n = 247$, $\alpha = .706$) (3) The actual value of this performance measure is strongly affected by changes in the behavior or strategies of business partners and suppliers (R)	247	2.99	1.36	3	1	7
(1) The actual value of this performance measure is strongly affected by changes in the economic situation (R)	247	2.28	1.05	2	1	7
(2) The actual value of this performance measure is strongly affected by changes in customer behavior (R)	247	2.26	.97	2	1	6
<i>Sensitivity of performance measures</i> ($n = 247$, $\alpha = .918$) (6) If the manager of the organizational unit performs management tasks well, then the value of the performance measure will immediately and significantly improve	247	4.74	1.28	5	1	7
(5) If the manager properly fulfills their role, then the value of the performance measure will immediately and significantly improve	247	4.38	1.37	5	1	7
(4) If employees are enthusiastic about their work, then the value of the performance measure will immediately and significantly improve	247	4.06	1.40	4	1	7

Note: (R) indicates a reverse-scored item

agree.” All questions related to the precision of performance measures are reverse scored; thus, the numbers in the table have been reversed.

Table 3.13 shows the results of questions about performance evaluation methods and the existence of budget-based performance evaluation for organizational unit

Table 3.13 Performance evaluation methods and existence of budget-based performance evaluations for organizational unit managers ($n = 250$) [Q2 (J)]

	<i>n (%)</i>	<i>n (%)</i>
<i>Existence of budget-based performance evaluations</i>		
5. The budget is not used for the performance evaluation of the organizational unit manager	37 (14.8)	
It is used	213 (85.2)	
<i>Budget-based performance evaluation methods (n = 213)</i>		
4. Performance evaluation is performed by comparing actual results with budget targets. However, the evaluator makes a subjective judgment based on the organizational unit manager’s explanation, who is the person being evaluated, as well as changes in situation.		116 (54.5)
1. Performance evaluation is performed by comparing performance rigidly with the pre-established budget target		41 (19.2)
3. Performance evaluation is performed by comparing actual results with budget targets. However, budget targets may be adjusted using pre-set formulas to consider the effects of unexpected and important factors.		37 (17.4)
2. Organizational unit managers are evaluated based solely on variances between the budget and actual results within their control and are not evaluated on variances beyond their control		19 (8.9)

Table 3.14 Degree of link between results of budget-based performance evaluations for organizational unit managers and reward [Q2 (K)]

	<i>n</i>	Mean	SD	Median	Min	Max
(2) Bonus	220	5.76	1.10	6	1	7
(3) Promotion and advancement	219	4.99	1.04	5	1	7
(1) Basic salary	218	3.87	1.53	4	1	7

managers. Note that Number 1 in Table 3.13 (Question 2 (J)) is a question regarding evaluation based on a “fixed performance contract” (Hope & Fraser, 2003). The questions were created with reference to Libby and Lindsay (2010, p. 73).

Table 3.14 presents the results of questions on the degree of linkage between the results of budget-based performance evaluations for organizational unit managers and reward.⁸ The questions were created with reference to Yokota and Senoo (2011, p. 72) and Bouwens and van Lent (2007, pp. 691–692). The items in Table 3.14 were measured on a seven-point scale, from “1: no influence at all” to “4: neutral” to “7: extremely influential.”

Table 3.15 shows the results of questions about budget culture. Budget culture is a concept developed by Anderson and Lillis (2011) based on Marginson and Ogden (2005) and Van der Stede (2000). It is categorized into four sub-concepts: budget firmness, management attention, target difficulty, and reward link. The questions

⁸In addition to money, incentives include non-monetary items such as promotions and awards; in this chapter, the term ‘reward’ is used as a broad concept that includes these items.

Table 3.15 Budget culture [Q2 (L)]

	<i>n</i>	Mean	SD	Median	Min	Max
<i>Budget firmness</i> (<i>n</i> = 254, α = .452) (2) Managers are always expected to take corrective action to reduce budget variances	255	5.87	.85	6	2	7
(1) Managers are always expected to meet short-term budgets even if budget variances are caused by events outside their control	254	4.64	1.27	5	1	7
(3) Budget targets are firm commitments that are never revised	256	4.43	1.43	5	1	7
<i>Management attention</i> (<i>n</i> = 255, α = .815) (4) Unfavorable budget variances receive the greatest deal of attention from top managers.	256	5.82	1.05	6	2	7
(5) Top managers keep a close eye on budget achievement of the company’s business units	255	5.64	1.07	6	1	7
<i>Target difficulty</i> (<i>n</i> = 256, α = .740) (7) Stretch budgets are the norm	256	5.00	1.27	5	1	7
(6) Budget targets are generally set to be extremely demanding	256	4.87	1.14	5	1	7
(8) Targets incorporated in the budget are typically extremely difficult to reach	256	3.46	1.30	4	1	7
<i>Reward link</i> (<i>n</i> = 256, α = .875) (12) Achieving budget goals is an extremely important indication of performance of managers and employees	256	5.22	1.07	5	1	7
(10) Financial rewards for managers and employees greatly increase as performance exceeds budget targets	256	4.70	1.29	5	1	7
(9) Compensation for managers and employees is strongly linked to meeting budgets	256	4.63	1.32	5	1	7
(11) The probability of job promotion and advancement increases for managers and employees when performance exceeds budget targets	256	4.51	1.10	5	1	7

Note: Although α is low, the questions for each concepts were created with reference to this in Anderson and Lillis (2011, p. 1370)

were created with reference to this in Anderson and Lillis (2011, p. 1370). Each item was measured on a seven-point scale from “1: not at all” to “4: neutral” to “7: absolutely agree.”

Table 3.16 Relationship between company-wide budgeting and budgeting in major organizational units [Q3 (A)]

	<i>n</i>	%
1. Budget systems for major organizational units are implemented based on the company-wide budget system	251	97.3
2. The budget system for major organizational units is implemented completely independently of the company-wide budget system	6	2.3
4. Neither a company-wide budget system nor a budget system for major organizational units is implemented	1	.4
3. A company-wide budget system is not implemented, but a budget system for major organizational units is independently implemented	0	.0

3.4 Business Environment of Major Organizational Units (Question 3)

Many studies have revealed that the business environment affects MCS (Chenhall, 2007). However, since modern Japanese companies have various organizational units, the business environment may differ for each organizational unit. Therefore, respondents to this survey were asked to identify the company's major organizational units.

Then, as shown in Table 3.16, the relationship between company-wide budgeting and budgeting for each major organizational unit was explored. The results show that in almost all companies, each major organizational unit's system is implemented based on the company-wide system for budgeting.

In Question 3, to clarify how the business environment impacts MCS, perceived environmental uncertainty as the external business environment and the importance of a strategy to differentiate the internal business environment was investigated for each major organizational unit.

Table 3.17 shows the results of survey questions on perceived environmental uncertainty. The questions were created with reference to Ekholm and Wallin (2011, p. 158) and Hoque (2004, p. 499). Each item was measured on a seven-point scale of "1: very unpredictable" to "4: neutral" to "7: very predictable." Note that as these questions are reverse scored, the numbers in the table have been reversed.

Table 3.18 reports the results of questions on the importance of differentiation strategies. The questions were created with reference to Anderson and Lillis (2011, p. 1366).⁹ The items were measured on a seven-point scale, from "1: not important at all" to "4: neutral" to "7: extremely important."

⁹ Anderson and Lillis (2011) conducted an exploratory factor analysis of 11 questions regarding business strategy, from which four factors were extracted. However, this survey only refers to the five-question items that showed high factor loading for the second factor—"innovative products"—which is a subordinate concept of the differentiation strategy (Anderson & Lillis, pp. 1365–1366).

Table 3.17 Perceived environmental uncertainty [Q3 (C)]

	<i>n</i>	Mean	SD	Median	Min	Max
<i>n</i> = 258, α = .791	260	3.61	1.08	4	1	7
(3) Deregulation and globalization (R)						
(6) Government regulations and policies (R)	261	3.43	1.09	3	1	7
(7) Economic environment (R)	261	3.25	1.09	3	1	7
(2) Customer demands, tastes, and preferences (R)	261	3.17	1.01	3	1	7
(1) Action of business partners and suppliers (R)	260	3.09	1.00	3	1	6
(8) Industrial relations (R)	261	3.09	1.17	3	1	7
(4) Market activities of competitors (R)	261	2.95	.93	3	1	6
(5) Products, services, and information technology	260	2.91	.94	3	1	7

Note: (R) indicates a reverse-scored item

Table 3.18 Importance of differentiation strategies

	<i>n</i>	Mean	SD	Median	Min	Max
<i>n</i> = 259, α = .764	260	5.52	1.04	6	2	7
(1) Low cost-in-use						
(2) Advanced product and services features	260	5.36	1.13	5	1	7
(3) Innovation of products and services	260	5.30	1.16	5	1	7
(4) After-sales service	259	4.98	1.16	5	2	7
(5) Technical support	259	4.88	1.23	5	1	7

3.5 Characteristics of Major Organizational Units (Question 4)

Importance has been placed on the relationship between organizational characteristics and MCS (Ferreira & Otle, 2009; Malmi & Brown, 2008). In addition, new concepts and measurement scales have been proposed to capture the characteristics of advanced organizations (Anderson & Lillis, 2011; Simons, 2005).

To clarify the relationship between organizational characteristics and MCS, Question 4 investigates the levers of organizational design and corporate frugality, which are newly proposed concepts, as features of major organizational units.

Table 3.19 presents the results of questions on corporate frugality. Corporate frugality is a concept developed by Anderson and Lillis (2011) to an enduring corporate trait of consistent, disciplined management of spending to achieve long-term strategic objectives and sustainable profits (Anderson & Lillis, p. 1350). This concept is categorized into three sub-concepts: spending discipline, resourceful reuse, and deferred gratification. The questions were created with reference to Anderson and Lillis (2011, p. 1358). Each item was measured on a seven-point scale from “1: not at all” to “4: neutral” to “7: absolutely agree.”

Table 3.20 shows the results of survey questions on the levers of organizational design (organizational mechanisms). The questions were created with reference to the description of an interactive network, which was proposed by Simons (2005) as

Table 3.19 Corporate frugality [Q4 (A)]

	<i>n</i>	Mean	SD	Median	Min	Max
<i>Spending discipline (n = 258, $\alpha = .853$)</i> <i>Employees and managers of this company. . .</i> (3) Are disciplined in their use of company resources	258	5.18	1.13	5	2	7
(2) Try to get the most from company money	258	5.14	1.15	5	2	7
(4) Work hard to contain costs	258	5.04	1.17	5	1	7
(1) Are careful in how they spend company money	258	4.91	1.21	5	2	7
(5) Plan carefully before spending	258	4.86	1.16	5	2	7
<i>Resourceful reuse (n = 256, $\alpha = .836$)</i> <i>Employees and managers of this company. . .</i> (7) Emphasize waste reduction	258	5.19	1.14	5	2	7
(8) Try to reuse or redeploy existing resources rather than buying new resources	258	4.92	1.06	5	1	7
(6) Understand that maintaining company assets saves money in the long run	257	4.75	1.15	5	1	7
(9) In this company there is significant emphasis on recycling and reuse	257	4.55	1.21	5	1	7
<i>Deferred gratification (n = 257, $\alpha = .698$)</i> <i>Employees and managers of this company. . .</i> (10) Spend money in the short run to save money in the long run	257	4.47	1.18	5	1	7
(11) Manage costs for the long run, not the short run	258	4.40	1.20	4	1	7

one of the levers of organizational design. Each item was measured on a seven-point scale from “1: not at all” to “4: neutral” to “7: absolutely agree.” However, since this concept and measurement scale are not clarified in Simons (2005), Cronbach’s alpha coefficient is not reported in Table 3.20.

3.6 Leadership of Managers [Question 5 (A)]

In recent years, several studies have analyzed the relationship between leadership and MCS (e.g., Abernethy et al., 2010). In addition, managers of Japanese companies have adopted various leadership styles (Yokota et al., 2012).

In Question 5 (A), leadership styles of consideration and initiating structure, and transformational leadership were studied to clarify the relationship between leadership and MCS concerning the leadership of organizational unit managers.

Table 3.21 shows the results of survey questions about leadership styles of consideration and initiating structure of managers of major organizational units. The questions were created with reference to Abernethy et al. (2010, p. 14). Table 3.22 shows the results of survey questions about transformational leadership of managers of major organizational units. The questions were created with

Table 3.20 Levers of organizational design (organizational mechanisms) [Q4 (B)]

	<i>n</i>	Mean	SD	Median	Min	Max
(11) Top managers demand a very high standard of organizational objectives from major organizational units	258	5.38	1.05	6	1	7
(10) Actively promoting information sharing with other organizational units within the company will lead to improved business performance of major organizational units	258	5.33	1.08	5	1	7
(7) Even if there is a failure, the next success will lead to recovery in the next internal evaluation	258	5.19	1.01	5	1	7
(2) There is a high level of work-related interdependency with other organizational units in the company	258	4.93	1.32	5	1	7
(5) The success of departments, managers, or employees within major organizational units is evenly distributed	258	4.90	1.04	5	1	7
(8) There is an atmosphere of wanting to implement good ideas in the organization	258	4.84	1.17	5	1	7
(9) There is a high level of self-sufficiency in the management activities of major organizational units	258	4.77	1.30	5	1	7
(6) Rather than acting in the interest of profits for a major organizational unit, actions that take company-wide profits into consideration are valued	258	4.76	1.22	5	1	7
(4) When another organizational unit in the company is having difficulties, value is placed on helping that unit when it is possible to do so	258	4.67	1.20	5	1	7
(3) The transfer of managers and employees to other organizational units is actively promoted	258	4.35	1.34	5	1	7
(1) Transfer prices are set after negotiations with other organizational units in the company and transactions are performed	258	3.72	1.87	4	1	7

reference to Yokota et al. (2012, p. 128). Transformational leadership can be categorized into four sub-concepts: idealized influence, inspirational motivation, intellectual stimulation, and individual consideration. In Tables 3.21 and 3.22, each item was measured on a seven-point scale from “1: not at all” to “4: neutral” to “7: absolutely agree.”¹⁰

¹⁰Whereas Yokota et al. (2012) and Abernethy et al. (2010) question the subordinates’ awareness of the leadership of their superiors, this survey enquired about the awareness of the person in charge of management control regarding the leadership of the managers of major organizational units.

Table 3.21 Leadership styles of consideration and initiating structure of managers of major organizational units [Question 5 (A) First part]

	<i>n</i>	Mean	SD	Median	Min	Max
<i>Consideration</i> ($n = 253$, $\alpha = .874$)	254	5.35	1.01	5	1	7
(3) I clearly show my attitude to subordinates						
(2) Suggestions from subordinates are incorporated	253	5.21	.96	5	1	7
(4) Subordinates are notified of changes in circumstances in advance	254	5.13	1.01	5	1	7
(1) I try out my ideas with my subordinates	253	5.02	1.00	5	1	7
<i>Initiating structure</i> ($n = 253$, $\alpha = .752$)	254	5.35	1.04	5	1	7
(8) Subordinates are required to follow standard rules and regulations						
(5) I make sure subordinates understand what is expected of them	254	5.29	.99	5	1	7
(7) Definite performance standards are always indicated	253	5.11	1.14	5	1	7
(6) Subordinates are encouraged to follow the uniform procedures	254	4.92	1.18	5	1	7

3.7 Managerial Behavior [Question 5 (B)]

Managers are central to the concept of MCS, and it is thought that there are various interactions between managerial behavior and MCS (Ferreira & Otley, 2009; Merchant & Otley, 2007). The discussion of the levers of organizational design in Simons (2005) assumes that managerial behaviors play an important role in network construction.

In Question 5 (B), to clarify the relationship between managerial behavior and MCS, behaviors of managers of major organizational units that contribute to network construction were examined.

Table 3.23 shows the results of questions about the degree that managers of major organizational units encourage subordinates to construct personal networks. The questions were created with reference to Takada and Yokota (2010). Table 3.24 shows the results of survey questions on the levers of organizational design (behavior of managers of major organizational units). The questions were created with reference to Simons (2005). Each item in Tables 3.23 and 3.24 was measured on a seven-point scale from “1: not at all” to “4: neutral” to “7: absolutely agree.” Since these concepts and measurement scales have not been clarified in previous studies, Cronbach’s alpha coefficient was not calculated in either Table 3.23 or Table 3.24.

Table 3.22 Transformational leadership of managers of major organizational units [Question 5 (A) Second part]

	<i>n</i>	Mean	SD	Median	Min	Max
<i>Idealized influence</i> ($n = 253, \alpha = .843$)	254	5.23	1.05	5	1	7
(10) Specifies the importance of having a strong sense of purpose						
(12) Emphasizes the importance of having a collective sense of mission	254	5.14	1.05	5	1	7
(11) Considers the moral and ethical consequences of decisions	253	5.12	1.11	5	1	7
(9) Talks about his/her most important values and beliefs	254	4.69	1.09	5	1	7
<i>Inspirational motivation</i> ($n = 253, \alpha = .798$)	253	5.02	1.02	5	1	7
(14) Talks enthusiastically about what needs to be accomplished						
(16) Expresses confidence that goals will be achieved	254	4.96	1.01	5	1	7
(15) Articulates a compelling vision of the future	254	4.91	1.16	5	1	7
(13) Talks optimistically about the future	254	4.02	1.10	4	1	7
<i>Intellectual stimulation</i> ($n = 254, \alpha = .916$)	254	4.90	1.14	5	1	7
(19) Gets me to look at problems from many different angles						
(18) Seeks different perspectives when solving problems	254	4.87	1.10	5	1	7
(17) Re-examines critical assumptions to question whether they are appropriate	254	4.83	1.06	5	1	7
(20) Suggests new ways of looking at how to complete assignments	254	4.76	1.06	5	1	7
<i>Individual consideration</i> ($n = 253, \alpha = .889$)	253	5.17	1.02	5	1	7
(24) Helps me to develop my strengths						
(22) Treats me as an individual rather than just as a member of a group	253	5.02	1.06	5	1	7
(23) Considers me as having different needs, abilities, and aspirations from others	253	4.83	1.09	5	1	7
(21) Spends time teaching and coaching	254	4.64	1.10	5	1	7

3.8 Conclusion

This study reports the results of a mail-based questionnaire survey conducted to clarify the status of MCS in Japanese companies concerning budgeting, business environment, organizational characteristics, and managerial leadership and behaviors. In the future, the plan is to conduct empirical research to analyze these results in detail.

Table 3.23 Degree that managers of major organizational units encourage subordinates to construct personal networks [Question 5 (B) First part]

	<i>n</i>	Mean	SD	Median	Min	Max
(5) Managers and employees of major organizational units are actively involved in company-wide projects	258	5.23	1.04	5	1	7
(4) Encouraging subordinates to actively share information with other organizational units within the company will lead to improved business performance of major organizational units	258	5.09	.99	5	1	7
(1) Creating personal networks outside the company is encouraged	258	5.04	1.22	5	1	7
(2) People who have broad personal networks outside the company are highly valued	258	4.74	1.20	5	1	7
(3) Mechanisms are created so that subordinates are able to actively create external networks	257	4.32	1.12	4	1	7

Table 3.24 Levers of organizational design (behavior of managers of major organizational units) [Question 5 (B) Second part]

	<i>n</i>	Mean	SD	Median	Min	Max
(8) The level of individual objectives required by the top managers for major organizational unit managers is extremely high	258	5.23	1.02	5	2	7
(7) Managers of major organizational units have a keen interest in the expenses allocated by the head office	258	4.88	1.23	5	1	7
(6) The responsibility held by managers of major organizational units exceeds their authority	257	4.57	1.16	4	1	7

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