

**Survey on Business Sentiment
of Japanese Corporations in Thailand
for the 2nd Half of 2019**

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Survey on Business Sentiment of Japanese Corporations in Thailand for the 2nd Half of 2019

JCC Economic Survey Team

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Record

Survey Period

Questionnaire distribution date: November 1, 2019

Questionnaire submission deadline: December 3, 2019

Survey Response

Number of questionnaires distributed:

1,750 JCC member companies

(excluding 12 governmental organizations)

Number of respondents:

595 firms

Response rate:

34.0%

Remarks

- Due to the small number of firms responding to some questions, it may not be advisable to evaluate the situation by referring only to the response percentage.

Number of Firms		
Industry		No.
Manufacturing	Food	14
	Textile	13
	Chemical	48
	Steel/Non-ferrous metal	46
	General machinery	19
	Electrical/Electronic machinery	50
	Transportation machinery	75
	Others	42
	Manufacturing sector total	307
Non-manufacturing	Trading	100
	Retail	9
	Finance/Insurance/Securities	26
	Construction/Civil engineering	33
	Transportation/Communication	40
	Others	80
	Non-manufacturing sector total	288
Total		595

Survey Result Report

Please refer to the following pages.

1. BUSINESS SENTIMENT

(1) Overview

Business sentiment (DI) was -19 in the first half of 2019, -38 in the second half of 2019, and -18 in the first half of 2020 (forecast). In the second half of 2019, the domestic economy decelerated due to factors such as the adverse impacts of the US-China trade friction and the baht appreciation. As a result, the DI has become negative since the first half of the year. Although the global economic uncertainty and the strong baht remain to be concerns, the respondents appear to be more optimistic as reflected in a DI recovery in the first half of 2020. (Table 1-1)

(Table 1-1) Business Sentiment

Unit: %

	Past Surveys								Previous Survey		Current Survey		
	Results								Result	Forecast	Result	Forecast	
	2014		2015		2016		2017		2018	2019		2019	2020
	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
Improving	32	28	30	38	38	39	50	52	43	28	31	27	19
No Change	35	35	36	33	39	37	34	30	32	36	44	28	24
Deteriorating	33	37	34	29	23	25	16	18	25	36	25	46	57
(Ref.) DI	▲ 1	▲ 9	▲ 4	9	15	14	34	34	18	▲ 8	6	▲ 19	▲ 38

(Note) 1. DI = "Improving" - (minus) "Deteriorating"

2. As the decimals of percentages are rounded off, the total may not equal 100 percent. This also applies to tables below.

(Note) To determine whether business performance is "Improving" or "Deteriorating," business performance in a six-month term is compared with the corresponding previous term. If DI, a deduction balance of "Improving" and "Deteriorating," is positive, it indicates that business performance is improving for the larger number of respondent firms; if DI is negative, business performance is deteriorating for the larger number of firms, in comparison to the previous term.

(2) The first half of 2019 (January - June)

The percentage of firms reporting their business sentiment was "Improving" decreased by 16 points to 27% from the previous term (43%), while the number of those indicating their business sentiment was "Deteriorating" increased by 21 points from the previous term (25%) to 46%. As a result, the Diffusion Index (DI), a deduction balance of "Improving" and "Deteriorating," decreased by 37 points from the previous term (+18) to -19. (Table 1-1)

For the manufacturing sector, the DI not only turned negative in transportation machinery (-48) and electrical/electronic machinery industries (-48), but the DI values in many industries have also fallen negative. The overall DI in the manufacturing sector, therefore, decreased by 44 points from the previous term (+13) to -31. For the non-manufacturing sector, as the DI in transportation/communication (-23) and trading industries (-21) became negative, the overall DI in the non-manufacturing sector decreased by 30 points from the previous term (+24) to -6. (Table 1-2)

(3) The second half of 2019 (July - December) –Forecast

The percentage of firms indicating that their business sentiment is "Improving" decreased by 8 points from the previous term (27%) to 19%, whereas those reporting "Deteriorating" business sentiment increased by 11 points from the previous term (46%) to 57%. As a result, the overall DI is forecasted to decrease by 19 points from the previous term (-19) to -38. (Table 1-1)

For the manufacturing sector, the DI values in many industries have remained negative since the previous term, especially in steel/non-ferrous metal (-63) and transportation machinery (-78) industries, where the DI values became even more negative compared to the previous term. The overall DI forecast for the manufacturing sector, therefore, decreases by 18 points from the previous term (-31) to -49. As for the non-manufacturing sector, the overall DI forecast falls by 22 points from the previous term (-6) to -28 as

the DI in transportation/communication industry further decreased and the DI values in other industries have also turned negative. (Table 1-2)

(4) The first half of 2020 (January – June) –Forecast

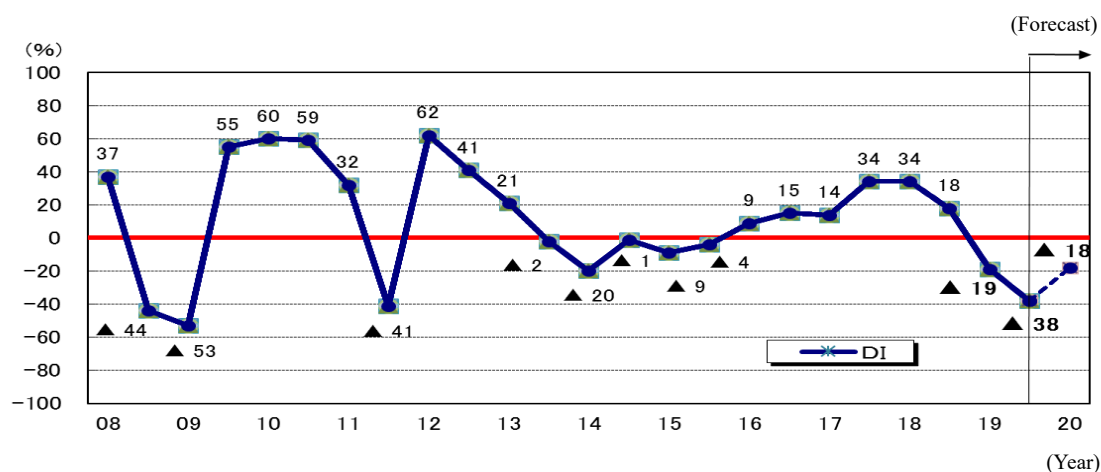
The percentage of firms expecting “Improving” business sentiment increased by 2 points from the previous term (19%) to 21%, while the percentage of firms expecting “Deteriorating” sentiment also decreased by 18 points from the previous term (57%) to 39%. Thus, the overall DI forecast rises by 20 points from the previous term (-38) to -18. (Table 1-1)

For firms in the manufacturing sector, the DI not only turned positive in textile and general machinery industries, but the DI in steel/non-ferrous metal and transportation machinery industries also became significantly less negative. As a result, the overall DI is expected to rise by 26 points from the previous term (-49) to -23. For the non-manufacturing sector, although the DI in retail industry turned negative (-11), the DI values in other industries such as transportation/communication became less negative, resulting in an increase in the overall DI forecast by 17 points from the previous term (-28) to -11. (Table 1-2)

(Table 1-2) Business Sentiment (DI) by Industry ("Improving" - "Deteriorating")

Industry		Past Surveys								Current Survey		
		Results						Forecast		Result	Forecast	
		16H1	16H2	17H1	17H2	18H1	18H2	19H1	19H2		19H2	20H1
Manufacturing	Food	57	70	0	▲ 14	25	29	29	15	42	0	15
	Textile	7	0	▲ 24	0	▲ 69	▲ 40	▲ 20	67	▲ 31	▲ 39	8
	Chemical	37	7	0	43	50	▲ 7	▲ 15	▲ 4	▲ 23	▲ 46	▲ 21
	Steel/Non-ferrous metal	10	20	26	25	30	27	▲ 31	▲ 2	▲ 22	▲ 63	▲ 37
	General machinery	22	11	9	10	22	17	11	39	▲ 5	▲ 32	5
	Electrical/Electronic machinery	▲ 6	24	11	30	20	19	▲ 11	13	▲ 48	▲ 16	▲ 16
	Transportation machinery	7	5	29	50	48	10	▲ 55	▲ 16	▲ 48	▲ 78	▲ 48
	Others	10	9	▲ 4	24	40	28	▲ 24	▲ 10	▲ 33	▲ 52	▲ 7
	Manufacturing sector total	12	16	11	31	31	13	▲ 24	2	▲ 31	▲ 49	▲ 23
Non-manufacturing	Trading	19	27	22	43	45	21	10	14	▲ 21	▲ 43	▲ 13
	Retail	10	0	7	29	▲ 12	0	0	▲ 9	34	0	▲ 11
	Finance/Insurance/Securities	▲ 22	22	26	35	63	42	30	4	7	▲ 19	▲ 8
	Construction/Civil engineering	▲ 39	0	7	34	24	37	3	20	0	3	18
	Transportation/Communication	18	▲ 4	24	51	21	3	14	0	▲ 23	▲ 47	▲ 35
	Others	9	9	14	27	38	30	12	12	10	▲ 18	▲ 12
	Non-manufacturing sector total	5	13	18	38	37	24	11	10	▲ 6	▲ 28	▲ 11
Total		9	15	14	34	34	18	▲ 8	6	▲ 19	▲ 38	▲ 18

(Figure 1) Historical Change of DI According to the Surveys on Business Sentiment of Japanese Corporations



(Note) Diffusion Index (DI) = Business sentiment is “Improving” – “Deteriorating” (compared to the previous term)

2. SALES

Regarding the total sales forecast for fiscal year 2019, the percentage of firms expecting sales “Increase” fell by 31 points from the previous fiscal year (62%) to 31% and the percentage of firms expecting “More than 20% increase” in their total sales decreased by 5 points to 6%, compared to the previous year (11%). (Table 2-1, 2-2)

Regarding the total sales forecast for 2020, the percentage of firms anticipating sales “Increase” rose by 7 points from the previous year (31%) to 38%, while the percentage of firms anticipating “More than 20% increase” fell by 2 points to 4%, compared to the previous year (6%). (Table 2-1, 2-3)

(Table 2-1) Change in Total Sales

Unit: %

	Past Surveys						Previous Survey		Current Survey	
	Results						Result	Forecast	Forecast	
Fiscal year	12	13	14	15	16	17	18	19	19	20
Sales increase	73	52	50	45	54	65	62	46	31	38
More than 20% increase	34	17	13	13	15	14	11	6	6	4

(Note) Fiscal year is based on the financial year of each corporation

(Table 2-2) Total Sales Forecast for Fiscal Year 2019

Unit: No. of firms and (%)

Industry		Increase			No change	Decrease			
		More than 20%	10-20%	Less than 10%		Less than 10%	10-20%	More than 20%	
Manufacturing	Food	6 (46)	0 (0)	1 (8)	5 (38)	2 (15)	5 (38)	0 (0)	0 (0)
	Textile	4 (31)	0 (0)	1 (8)	3 (23)	1 (8)	8 (62)	5 (38)	3 (23)
	Chemical	15 (31)	2 (4)	8 (17)	5 (10)	5 (10)	28 (58)	16 (33)	12 (25)
	Steel/Non-ferrous metal	7 (16)	1 (2)	3 (7)	3 (7)	10 (23)	27 (61)	11 (25)	10 (23)
	General machinery	7 (39)	3 (17)	0 (0)	4 (22)	3 (17)	8 (44)	3 (17)	4 (22)
	Electrical/Electronic machinery	10 (20)	2 (4)	2 (4)	6 (12)	5 (10)	34 (69)	15 (31)	14 (29)
	Transportation machinery	11 (15)	0 (0)	3 (4)	8 (11)	8 (11)	56 (75)	34 (45)	18 (24)
	Others	7 (17)	1 (2)	2 (5)	4 (10)	4 (10)	31 (74)	12 (29)	11 (26)
Manufacturing sector total		67 (22)	9 (3)	20 (7)	38 (13)	38 (13)	197 (65)	101 (33)	72 (24)
Non-manufacturing	Trading	40 (40)	6 (6)	10 (10)	24 (24)	18 (18)	42 (42)	14 (14)	19 (19)
	Retail	3 (38)	1 (13)	1 (13)	1 (13)	2 (25)	3 (38)	3 (38)	0 (0)
	Finance/Insurance/Securities	12 (50)	4 (17)	2 (8)	6 (25)	10 (42)	2 (8)	2 (8)	0 (0)
	Construction/Civil engineering	14 (44)	6 (19)	3 (9)	5 (16)	7 (22)	11 (34)	2 (6)	5 (16)
	Transportation/Communication	9 (24)	2 (5)	3 (8)	4 (11)	5 (13)	24 (63)	12 (32)	9 (24)
	Others	35 (46)	5 (7)	11 (14)	19 (25)	20 (26)	21 (28)	11 (14)	7 (9)
	Non-manufacturing sector total	113 (41)	24 (9)	30 (11)	59 (21)	62 (22)	103 (37)	44 (16)	40 (14)
Total		180 (31)	33 (6)	50 (9)	97 (17)	100 (17)	300 (52)	145 (25)	112 (19)

(Table 2-3) Total Sales Forecast for Fiscal Year 2020

Unit: No. of firms and (%)

Industry		Increase			No change	Decrease			
		More than 20%	10-20%	Less than 10%		Less than 10%	10-20%	More than 20%	
Manufacturing	Food	7 (54)	0 (0)	1 (8)	6 (46)	4 (31)	2 (15)	2 (15)	0 (0)
	Textile	8 (62)	0 (0)	4 (31)	4 (31)	3 (23)	2 (15)	2 (15)	0 (0)
	Chemical	20 (42)	0 (0)	6 (13)	14 (29)	13 (27)	15 (31)	12 (25)	3 (6)
	Steel/Non-ferrous metal	12 (29)	1 (2)	3 (7)	8 (19)	17 (40)	13 (31)	5 (12)	5 (12)
	General machinery	9 (50)	1 (6)	2 (11)	6 (33)	8 (44)	1 (6)	1 (6)	0 (0)
	Electrical/Electronic machinery	14 (29)	2 (4)	4 (8)	8 (16)	15 (31)	20 (41)	13 (27)	5 (10)
	Transportation machinery	17 (23)	1 (1)	4 (5)	12 (16)	17 (23)	40 (54)	27 (36)	12 (16)
	Others	15 (36)	2 (5)	2 (5)	11 (26)	12 (29)	15 (36)	11 (26)	2 (5)
Manufacturing sector total		102 (34)	7 (2)	26 (9)	69 (23)	89 (30)	108 (36)	73 (24)	27 (9)
Non-manufacturing	Trading	41 (42)	5 (5)	14 (14)	22 (23)	37 (38)	19 (20)	12 (12)	5 (5)
	Retail	3 (38)	0 (0)	0 (0)	3 (38)	4 (50)	1 (13)	1 (13)	0 (0)
	Finance/Insurance/Securities	11 (46)	2 (8)	3 (13)	6 (25)	8 (33)	5 (21)	5 (21)	0 (0)
	Construction/Civil engineering	14 (45)	4 (13)	3 (10)	7 (23)	10 (32)	7 (23)	1 (3)	4 (13)
	Transportation/Communication	12 (32)	2 (5)	3 (8)	7 (18)	11 (29)	15 (39)	12 (32)	3 (8)
	Others	35 (48)	1 (1)	10 (14)	24 (33)	27 (37)	11 (15)	8 (11)	3 (4)
	Non-manufacturing sector total	116 (43)	14 (5)	33 (12)	69 (25)	97 (36)	58 (21)	39 (14)	15 (6)
Total		218 (38)	21 (4)	59 (10)	138 (24)	186 (33)	166 (29)	112 (20)	42 (7)

3. PRE-TAX PROFIT/LOSS

Regarding the pre-tax profit/loss forecast for fiscal year 2019, the percentage of firms anticipating “Profit” is 76%. Additionally, firms expecting an “Increase” in their pre-tax profit (including cases of diminishing loss and account balance due to vanishing loss) accounted for 23%, while 54% anticipated a “Decrease” in profit. (Table 3-1)

As for the projection for 2020, 79% of the respondents anticipated “Profit” and those anticipating an “Increase” in their pre-tax profit amounted to 30%, whereas 35% anticipated a “Decrease” in profit. (Table 3-2)

(Table 3-1) Forecast of Pre-Tax Profit/Loss for 2019 (Year-to-Year Comparison)

Unit: No. of firms and (%)

Industry		Profit	Balance	Loss	Total	Increase in profit	No change in profit	Decrease in profit
Manufacturing	Food	10 (77)	1 (8)	2 (15)	13	4 (31)	2 (15)	7 (54)
	Textile	8 (62)	0 (0)	5 (38)	13	4 (31)	3 (23)	6 (46)
	Chemical	42 (88)	0 (0)	6 (13)	48	11 (23)	14 (29)	23 (48)
	Steel/Non-ferrous metal	33 (77)	6 (14)	4 (9)	43	9 (21)	7 (16)	27 (63)
	General machinery	12 (67)	2 (11)	4 (22)	18	1 (6)	7 (39)	10 (56)
	Electrical/Electronic machinery	34 (68)	4 (8)	12 (24)	50	10 (20)	8 (16)	32 (64)
	Transportation machinery	65 (87)	1 (1)	9 (12)	75	6 (8)	14 (19)	55 (73)
	Others	32 (76)	2 (5)	8 (19)	42	7 (17)	8 (19)	27 (64)
	Manufacturing sector total	236 (78)	16 (5)	50 (17)	302	52 (17)	63 (21)	187 (62)
Non-manufacturing	Trading	77 (77)	6 (6)	17 (17)	100	27 (27)	22 (22)	51 (51)
	Retail	5 (56)	0 (0)	4 (44)	9	6 (67)	2 (22)	1 (11)
	Finance/Insurance/Securities	18 (90)	1 (5)	1 (5)	20	9 (45)	5 (25)	6 (30)
	Construction/Civil engineering	20 (65)	3 (10)	8 (26)	31	14 (45)	5 (16)	12 (39)
	Transportation/Communication	28 (74)	1 (3)	9 (24)	38	9 (24)	8 (21)	21 (55)
	Others	54 (72)	9 (12)	12 (16)	75	18 (24)	27 (36)	30 (40)
	Non-manufacturing sector total	202 (74)	20 (7)	51 (19)	273	83 (30)	69 (25)	121 (44)
Total		438 (76)	36 (6)	101 (18)	575	135 (23)	132 (23)	308 (54)

(Note) 1. "Increase" indicates either expanding profit, turning a profit, diminishing loss, or achieving account balance due to vanishing loss.

2. "No change" indicates that a business remains at the same level whether they were in the black, at the break-even point, or in the red.

3. "Decrease" indicates either diminishing profit, falling into the red, expanding loss, or falling to account balance due to vanishing profit.

(Table 3-2) Forecast of Pre-Tax Profit/Loss for 2020 (Year-to-Year Comparison)

Unit: No. of firms and (%)

Industry		Profit	Balance	Loss	Total	Increase in profit	No change in profit	Decrease in profit
Manufacturing	Food	10 (77)	2 (15)	1 (8)	13	4 (31)	6 (46)	3 (23)
	Textile	10 (77)	2 (15)	1 (8)	13	6 (46)	5 (38)	2 (15)
	Chemical	42 (88)	2 (4)	4 (8)	48	12 (25)	15 (31)	21 (44)
	Steel/Non-ferrous metal	33 (79)	5 (12)	4 (10)	42	9 (21)	14 (33)	19 (45)
	General machinery	12 (67)	2 (11)	4 (22)	18	6 (33)	7 (39)	5 (28)
	Electrical/Electronic machinery	39 (78)	2 (4)	9 (18)	50	16 (32)	17 (34)	17 (34)
	Transportation machinery	65 (88)	4 (5)	5 (7)	74	11 (15)	24 (32)	39 (53)
	Others	31 (74)	6 (14)	5 (12)	42	12 (29)	12 (29)	18 (43)
	Manufacturing sector total	242 (81)	25 (8)	33 (11)	300	76 (25)	100 (33)	124 (41)
Non-manufacturing	Trading	78 (79)	8 (8)	13 (13)	99	28 (28)	42 (42)	29 (29)
	Retail	6 (67)	0 (0)	3 (33)	9	5 (56)	3 (33)	1 (11)
	Finance/Insurance/Securities	17 (85)	0 (0)	3 (15)	20	7 (35)	4 (20)	9 (45)
	Construction/Civil engineering	19 (61)	8 (26)	4 (13)	31	11 (35)	11 (35)	9 (29)
	Transportation/Communication	30 (79)	4 (11)	4 (11)	38	13 (34)	12 (32)	13 (34)
	Others	61 (80)	9 (12)	6 (8)	76	30 (39)	28 (37)	18 (24)
	Non-manufacturing sector total	211 (77)	29 (11)	33 (12)	273	94 (34)	100 (37)	79 (29)
Total		453 (79)	54 (9)	66 (12)	573	170 (30)	200 (35)	203 (35)

(Note) Same as Table 3-1

4. CAPITAL INVESTMENT (MANUFACTURING SECTOR)

The amount of capital investment (manufacturing sector) planned for 2020 is expected to decrease by 10.7%, compared to 2019 (the total number of firms responding was 299). 20% of these firms anticipated an “Increase” in their capital investment, while 33% anticipated a “Decrease”. (Table 4-1)

Regarding the details of the investment, “Replacement” is the predominant form of capital investment in both 2019 and 2020. (Table 4-2, 4-3)

(Table 4-1) Capital Investment Plan for 2019 and 2020 (Manufacturing Sector) Unit: Million Baht, %, No. of firms, and (%)

Industry	2019	2020		No. of firms					Total
	Amount	Amount	Increase rate	Increase	No change	Decrease	Undecided		
Food	3,670	4,448	21.2	3 (23)	7 (54)	2 (15)	1 (8)	13	
Textile	1,909	2,283	19.6	3 (25)	4 (33)	5 (42)	0 (0)	12	
Chemical	10,197	12,550	23.1	17 (35)	20 (42)	10 (21)	1 (2)	48	
Steel/Non-ferrous metal	2,191	2,123	▲ 3.1	4 (9)	23 (53)	14 (33)	2 (5)	43	
General machinery	6,452	6,109	▲ 5.3	2 (11)	10 (56)	5 (28)	1 (6)	18	
Electrical/Electronic machinery	16,696	14,564	▲ 12.8	7 (14)	21 (43)	16 (33)	5 (10)	49	
Transportation machinery	27,210	19,163	▲ 29.6	15 (20)	18 (24)	37 (49)	5 (7)	75	
Others	7,721	6,678	▲ 13.5	10 (24)	15 (37)	9 (22)	7 (17)	41	
Manufacturing sector total	76,046	67,917	▲ 10.7	61 (20)	118 (39)	98 (33)	22 (7)	299	

(Note) Figures above only demonstrate the totals of the data collected from firms that responded to the questionnaire for both 2019 and 2020. Therefore, the amount of capital investment above does not reflect the investment of Japanese firms as a whole.

Figures above also do not include firms that had just expanded to Thailand.

(Table 4-2) Details of the Capital Investment in 2019 (Multiple Answers) Unit: No. of firms and (%)

Industry	New	Expansion	Replacement	Streamlining	Others	Total	No. of firms
Food	4 (40)	4 (40)	9 (90)	4 (40)	0 (0)	21	10
Textile	1 (8)	3 (23)	12 (92)	7 (54)	1 (8)	24	13
Chemical	11 (24)	12 (26)	31 (67)	14 (30)	0 (0)	68	46
Steel/Non-ferrous metal	12 (33)	4 (11)	25 (69)	10 (28)	0 (0)	51	36
General machinery	6 (38)	5 (31)	8 (50)	4 (25)	1 (6)	24	16
Electrical/Electronic machinery	17 (38)	13 (29)	29 (64)	19 (42)	2 (4)	80	45
Transportation machinery	37 (51)	16 (22)	42 (58)	29 (40)	3 (4)	127	73
Others	13 (33)	14 (36)	17 (44)	12 (31)	1 (3)	57	39
Manufacturing sector total	101 (36)	71 (26)	173 (62)	99 (36)	8 (3)	452	278

(Table 4-3) Details of the Capital Investment in 2020 (Multiple Answers) Unit: No. of firms and (%)

Industry	New	Expansion	Replacement	Streamlining	Others	Total	No. of firms
Food	5 (50)	4 (40)	9 (90)	4 (40)	0 (0)	22	10
Textile	1 (8)	4 (31)	13 (100)	6 (46)	1 (8)	25	13
Chemical	9 (20)	9 (20)	29 (66)	15 (34)	2 (5)	64	44
Steel/Non-ferrous metal	7 (19)	4 (11)	28 (76)	10 (27)	0 (0)	49	37
General machinery	6 (38)	2 (13)	8 (50)	7 (44)	1 (6)	24	16
Electrical/Electronic machinery	14 (32)	12 (27)	33 (75)	21 (48)	1 (2)	81	44
Transportation machinery	28 (39)	13 (18)	46 (64)	36 (50)	3 (4)	126	72
Others	12 (32)	10 (27)	18 (49)	11 (30)	2 (5)	53	37
Manufacturing sector total	82 (30)	58 (21)	184 (67)	110 (40)	10 (4)	444	273

5. EXPORT TREND

The percentage of firms anticipating an “Increase” in exports in the second half of 2019 (in comparison to the same period of the previous year) is 18%, lower than the percentage of firms expecting a “Decrease” (38%) by 20 points. Similar to the 2019 full-year exports, the percentage of firms anticipating an “Increase” (19%) is lower than those anticipating a “Decrease” (41%) by 22 points. Meanwhile, the number of firms expecting an “Increase” in exports in the first half of 2020 accounted for 24%, exceeding those anticipating a “Decrease” (23%) by 1 point. (Table 5-1, 5-2, 5-3)

(Table 5-1) Export Trend in 2019 (Second Half)

Unit: No. of firms and (%)

Industry	Increase				No change	Decrease				No. of firms
		More than 20%	10-20%	Less than 10%			Less than 10%	10-20%	More than 20%	
Food	4 (33)	0 (0)	1 (8)	3 (25)	3 (25)	5 (42)	5 (42)	0 (0)	0 (0)	12
Textile	3 (23)	0 (0)	1 (8)	2 (15)	8 (62)	2 (15)	1 (8)	1 (8)	0 (0)	13
Chemical	6 (15)	2 (5)	2 (5)	2 (5)	13 (33)	21 (53)	12 (30)	6 (15)	3 (8)	40
Steel/Non-ferrous metal	4 (11)	0 (0)	2 (5)	2 (5)	25 (66)	9 (24)	1 (3)	3 (8)	5 (13)	38
General machinery	3 (19)	1 (6)	1 (6)	1 (6)	7 (44)	6 (38)	1 (6)	5 (31)	0 (0)	16
Electrical/Electronic machinery	11 (23)	2 (4)	2 (4)	7 (15)	13 (28)	23 (49)	9 (19)	9 (19)	5 (11)	47
Transportation machinery	8 (13)	1 (2)	4 (7)	3 (5)	21 (34)	32 (52)	9 (15)	15 (25)	8 (13)	61
Others	8 (21)	1 (3)	1 (3)	6 (16)	7 (18)	23 (61)	6 (16)	6 (16)	11 (29)	38
Manufacturing sector total	47 (18)	7 (3)	14 (5)	26 (10)	97 (37)	121 (46)	44 (17)	45 (17)	32 (12)	265
Trading	16 (19)	1 (1)	5 (6)	10 (12)	49 (58)	19 (23)	10 (12)	6 (7)	3 (4)	84
Retail	2 (50)	0 (0)	1 (25)	1 (25)	2 (50)	0 (0)	0 (0)	0 (0)	0 (0)	4
Construction/Civil engineering	1 (17)	0 (0)	0 (0)	1 (17)	5 (83)	0 (0)	0 (0)	0 (0)	0 (0)	6
Others	2 (14)	0 (0)	0 (0)	2 (14)	10 (71)	2 (14)	1 (7)	1 (7)	0 (0)	14
Non-manufacturing sector total	21 (19)	1 (1)	6 (6)	14 (13)	66 (61)	21 (19)	11 (10)	7 (6)	3 (3)	108
Total	68 (18)	8 (2)	20 (5)	40 (11)	163 (44)	142 (38)	55 (15)	52 (14)	35 (9)	373

(Table 5-2) Export Trend in 2019 (Full Year)

Unit: No. of firms and (%)

Industry	Increase				No change	Decrease				No. of firms
		More than 20%	10-20%	Less than 10%			Less than 10%	10-20%	More than 20%	
Food	4 (33)	0 (0)	1 (8)	3 (25)	3 (25)	5 (42)	5 (42)	0 (0)	0 (0)	12
Textile	3 (23)	0 (0)	1 (8)	2 (15)	6 (46)	4 (31)	2 (15)	2 (15)	0 (0)	13
Chemical	10 (24)	2 (5)	4 (10)	4 (10)	10 (24)	21 (51)	12 (29)	7 (17)	2 (5)	41
Steel/Non-ferrous metal	5 (13)	0 (0)	3 (8)	2 (5)	24 (63)	9 (24)	2 (5)	4 (11)	3 (8)	38
General machinery	3 (19)	1 (6)	2 (13)	0 (0)	7 (44)	6 (38)	2 (13)	3 (19)	1 (6)	16
Electrical/Electronic machinery	10 (21)	0 (0)	3 (6)	7 (15)	11 (23)	26 (55)	11 (23)	11 (23)	4 (9)	47
Transportation machinery	7 (11)	1 (2)	4 (7)	2 (3)	19 (31)	35 (57)	12 (20)	18 (30)	5 (8)	61
Others	5 (13)	1 (3)	2 (5)	2 (5)	8 (21)	25 (66)	7 (18)	6 (16)	12 (32)	38
Manufacturing sector total	47 (18)	5 (2)	20 (8)	22 (8)	88 (33)	131 (49)	53 (20)	51 (19)	27 (10)	266
Trading	18 (21)	5 (6)	5 (6)	8 (10)	45 (54)	21 (25)	9 (11)	8 (10)	4 (5)	84
Retail	2 (50)	0 (0)	1 (25)	1 (25)	2 (50)	0 (0)	0 (0)	0 (0)	0 (0)	4
Construction/Civil engineering	1 (17)	0 (0)	0 (0)	1 (17)	5 (83)	0 (0)	0 (0)	0 (0)	0 (0)	6
Others	2 (14)	0 (0)	0 (0)	2 (14)	10 (71)	2 (14)	1 (7)	1 (7)	0 (0)	14
Non-manufacturing sector total	23 (21)	5 (5)	6 (6)	12 (11)	62 (57)	23 (21)	10 (9)	9 (8)	4 (4)	108
Total	70 (19)	10 (3)	26 (7)	34 (9)	150 (40)	154 (41)	63 (17)	60 (16)	31 (8)	374

(Table 5-3) Export Trend in 2020 (First Half)

Unit: No. of firms and (%)

Industry	Increase				No change	Decrease				No. of firms
		More than 20%	10-20%	Less than 10%			Less than 10%	10-20%	More than 20%	
Food	1 (8)	0 (0)	1 (8)	0 (0)	7 (58)	4 (33)	4 (33)	0 (0)	0 (0)	12
Textile	5 (38)	0 (0)	2 (15)	3 (23)	7 (54)	1 (8)	1 (8)	0 (0)	0 (0)	13
Chemical	16 (40)	1 (3)	6 (15)	9 (23)	13 (33)	11 (28)	9 (23)	2 (5)	0 (0)	40
Steel/Non-ferrous metal	4 (11)	0 (0)	3 (9)	1 (3)	25 (71)	6 (17)	0 (0)	1 (3)	5 (14)	35
General machinery	5 (31)	1 (6)	0 (0)	4 (25)	9 (56)	2 (13)	0 (0)	2 (13)	0 (0)	16
Electrical/Electronic machinery	13 (28)	0 (0)	4 (9)	9 (19)	22 (47)	12 (26)	9 (19)	1 (2)	2 (4)	47
Transportation machinery	11 (18)	1 (2)	6 (10)	4 (7)	26 (43)	24 (39)	11 (18)	10 (16)	3 (5)	61
Others	10 (27)	0 (0)	3 (8)	7 (19)	14 (38)	13 (35)	6 (16)	3 (8)	4 (11)	37
Manufacturing sector total	65 (25)	3 (1)	25 (10)	37 (14)	123 (47)	73 (28)	40 (15)	19 (7)	14 (5)	261
Trading	18 (22)	1 (1)	6 (7)	11 (13)	55 (66)	10 (12)	6 (7)	2 (2)	2 (2)	83
Retail	1 (25)	0 (0)	0 (0)	1 (25)	3 (75)	0 (0)	0 (0)	0 (0)	0 (0)	4
Construction/Civil engineering	2 (33)	0 (0)	0 (0)	2 (33)	4 (67)	0 (0)	0 (0)	0 (0)	0 (0)	6
Others	4 (29)	1 (7)	2 (14)	1 (7)	10 (71)	0 (0)	0 (0)	0 (0)	0 (0)	14
Non-manufacturing sector total	25 (23)	2 (2)	8 (7)	15 (14)	72 (67)	10 (9)	6 (6)	2 (2)	2 (2)	107
Total	90 (24)	5 (1)	33 (9)	52 (14)	195 (53)	83 (23)	46 (13)	21 (6)	16 (4)	368

(Note) Compared to the same period of the previous year

6. POTENTIAL EXPORT MARKETS IN THE FUTURE

Regarding potential export markets in the future (multiple answers), “Vietnam” (46%) tops the list of potential export markets from Thailand, followed by “India” (32%), “Indonesia” (29%), and “Myanmar” (24%), respectively. (Table 6)

(Table 6) Potential Export Markets in the Future (Multiple Answers)

Unit: No. of firms and (%)

The survey before last				Manufacturing								Non-manufacturing					Total	
				Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Construction/Civil engineering	Others		Non-manufacturing sector total
1	1	1	Vietnam	5 (38)	7 (54)	20 (49)	14 (45)	9 (56)	13 (30)	20 (32)	23 (58)	111 (43)	45 (52)	3 (60)	2 (40)	9 (64)	59 (53)	170 (46)
2	2	2	India	4 (31)	7 (54)	16 (39)	9 (29)	5 (31)	10 (23)	23 (37)	12 (30)	86 (33)	30 (34)	0 (0)	2 (40)	2 (14)	34 (31)	120 (32)
3	3	3	Indonesia	4 (31)	2 (15)	10 (24)	13 (42)	7 (44)	7 (16)	23 (37)	13 (33)	79 (31)	25 (29)	0 (0)	0 (0)	2 (14)	27 (24)	106 (29)
4	4	4	Myanmar	3 (23)	0 (0)	13 (32)	11 (35)	3 (19)	9 (21)	11 (18)	5 (13)	55 (21)	24 (28)	2 (40)	5 (100)	4 (29)	35 (32)	90 (24)
5	7	5	Japan	1 (8)	2 (15)	6 (15)	2 (6)	2 (13)	16 (37)	9 (15)	6 (15)	44 (17)	20 (23)	0 (0)	0 (0)	3 (21)	23 (21)	67 (18)
7	6	6	Philippines	0 (0)	1 (8)	3 (7)	5 (16)	3 (19)	5 (12)	13 (21)	9 (23)	39 (15)	9 (10)	1 (20)	1 (20)	1 (7)	12 (11)	51 (14)
7	10	7	Malaysia	1 (8)	0 (0)	7 (17)	4 (13)	3 (19)	4 (9)	6 (10)	7 (18)	32 (12)	12 (14)	1 (20)	0 (0)	3 (21)	16 (14)	48 (13)
10	9	8	USA	2 (15)	2 (15)	4 (10)	4 (13)	2 (13)	12 (28)	6 (10)	4 (10)	36 (14)	8 (9)	0 (0)	0 (0)	3 (21)	11 (10)	47 (13)
6	8	9	China	4 (31)	1 (8)	5 (12)	1 (3)	0 (0)	11 (26)	5 (8)	9 (23)	36 (14)	6 (7)	0 (0)	0 (0)	1 (7)	7 (6)	43 (12)
9	5	10	Cambodia	4 (31)	0 (0)	5 (12)	5 (16)	0 (0)	5 (12)	4 (6)	2 (5)	25 (10)	12 (14)	1 (20)	1 (20)	3 (21)	17 (15)	42 (11)
11	11	11	Laos	3 (23)	0 (0)	4 (10)	6 (19)	0 (0)	2 (5)	3 (5)	3 (8)	21 (8)	10 (11)	0 (0)	1 (20)	2 (14)	13 (12)	34 (9)
12	12	12	Europe	2 (15)	3 (23)	3 (7)	2 (6)	3 (19)	8 (19)	7 (11)	3 (8)	31 (12)	3 (3)	0 (0)	0 (0)	0 (0)	3 (3)	34 (9)
14	18	13	Bangladesh	1 (8)	1 (8)	1 (2)	1 (3)	2 (13)	1 (2)	3 (5)	1 (3)	11 (4)	9 (10)	0 (0)	1 (20)	0 (0)	10 (9)	21 (6)
13	13	14	Africa	0 (0)	1 (8)	2 (5)	5 (16)	0 (0)	1 (2)	3 (5)	2 (5)	14 (5)	5 (6)	0 (0)	0 (0)	1 (7)	6 (5)	20 (5)
16	14	15	Pakistan	0 (0)	1 (8)	3 (7)	1 (3)	1 (6)	0 (0)	4 (6)	2 (5)	12 (5)	5 (6)	0 (0)	1 (20)	0 (0)	6 (5)	18 (5)
15	16	16	Singapore	2 (15)	0 (0)	1 (2)	2 (6)	0 (0)	2 (5)	0 (0)	1 (3)	8 (3)	4 (5)	0 (0)	0 (0)	1 (7)	5 (5)	13 (4)
17	15	17	Middle East	2 (15)	0 (0)	1 (2)	0 (0)	0 (0)	2 (5)	2 (3)	0 (0)	7 (3)	3 (3)	0 (0)	0 (0)	0 (0)	3 (3)	10 (3)
21	20	18	Sri Lanka	0 (0)	2 (15)	0 (0)	2 (6)	0 (0)	0 (0)	0 (0)	1 (3)	5 (2)	2 (2)	0 (0)	1 (20)	0 (0)	3 (3)	8 (2)
18	17	19	Latin America	0 (0)	0 (0)	1 (2)	0 (0)	1 (6)	1 (2)	2 (3)	0 (0)	5 (2)	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)	6 (2)
19	19	20	Oceania	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	2 (1)	0 (0)	0 (0)	0 (0)	1 (7)	1 (1)	3 (1)
20	21	21	Russia	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	1 (0)	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)	2 (1)
-	-	-	Others	0 (0)	0 (0)	0 (0)	2 (6)	0 (0)	0 (0)	4 (6)	1 (3)	7 (3)	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)	8 (2)
Total				38	30	106	89	41	110	149	104	667	235	8	15	36	294	961
No. of firms				13	13	41	31	16	43	62	40	259	87	5	5	14	111	370

7. EXCHANGE RATES USED IN BUSINESS PLANNING

(1) Thai Baht/US Dollar

Regarding the exchange rates used in business planning (Thai Baht/US Dollar), the predominant rate used is “A range between no less than 30.5 but less than 31.0” (19.6%), followed by “No less than 31.0 but less than 31.5” (18.5%), with the median rate at 31.30 baht/US dollar. (Table 7-1)

(Table 7-1) Exchange Rates Used in Business Planning (Thai Baht/US Dollar)

Unit: Thai Baht/US Dollar, No. of firms, and (%)

Baht/US dollar \ Industry	Manufacturing									Non-manufacturing				Total
	Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Others	Non-manufacturing sector total	
No less than 29.0 but less than 29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
No less than 29.5 but less than 30.0	0	0	1	0	0	0	0	2	3	0	0	0	0	3 (1.1)
No less than 30.0 but less than 30.5	0	1	2	3	1	10	4	1	22	10	2	2	14	36 (13.0)
No less than 30.5 but less than 31.0	2	2	7	7	3	6	8	4	39	12	0	3	15	54 (19.6)
No less than 31.0 but less than 31.5	0	7	5	5	2	9	5	6	39	11	0	1	12	51 (18.5)
No less than 31.5 but less than 32.0	2	0	1	3	1	1	2	3	13	5	0	1	6	19 (6.9)
No less than 32.0 but less than 32.5	1	1	6	3	2	3	8	5	29	11	1	3	15	44 (15.9)
No less than 32.5 but less than 33.0	1	0	6	3	2	7	5	6	30	9	1	5	15	45 (16.3)
No less than 33.0 but less than 33.5	0	1	3	0	0	3	1	2	10	1	0	2	3	13 (4.7)
No less than 33.5 but less than 34.0	1	0	0	0	1	1	0	0	3	3	0	0	3	6 (2.2)
No less than 34.0 but less than 34.5	0	0	0	0	1	0	1	0	2	2	0	0	2	4 (1.4)
No less than 34.5 but less than 35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
No less than 35.0 but less than 35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
No less than 35.5 but less than 36.0	0	0	0	0	0	0	0	0	0	1	0	0	1	1 (0.4)
No less than 36.0 but less than 36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
No less than 36.5 but less than 37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
No less than 37.0 but less than 37.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
No less than 37.5 but less than 38.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
No less than 38.0 but less than 38.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
No. of firms	7	12	31	24	13	40	34	29	190	65	4	17	86	276

Average	31.77	31.10	31.58	31.14	31.73	31.40	31.73	31.57	31.46	31.10	31.13	31.76	31.23	31.35
Median	31.50	31.00	31.80	31.00	31.70	31.10	31.70	31.50	31.15	31.30	31.00	32.00	31.50	31.30
Mode	30.50	31.00	32.50	31.00	30.50	30.00	30.50	32.50	31.00	31.00	30.00	32.50	32.50	31.00

(Note) Median is the value located at the center of the data distribution, which would exclude any deviation resulting from the number of respondents or the irregular low/high values as much as possible. Mode is the value most cited by the respondents and #N/A (Not Applicable) indicates that all respondents' values differ.

(Previous survey)

Baht/US dollar Industry		Manufacturing								Non-manufacturing				Total	
		Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Others		Non-manufacturing sector total
Average		32.97	32.11	32.35	32.44	32.68	32.36	32.20	32.24	32.37	32.19	32.45	32.30	32.22	32.30
Median		32.45	32.00	32.40	32.50	32.55	32.50	32.40	32.45	32.40	32.00	32.50	32.50	32.25	32.40
Mode		32.10	32.50	32.00	32.00	32.00	32.50	31.50	32.50	32.50	32.00	32.50	32.50	32.50	32.50

(Note) Median is the value located at the center of the data distribution, which would exclude any deviation resulting from the number of respondents or the irregular low/high values as much as possible. Mode is the value most cited by the respondents and #N/A (Not Applicable) indicates that all respondents' values differ.

(2) Japanese Yen/Thai Baht

Regarding the exchange rates used in business planning (Japanese Yen/Thai Baht), the predominant rate used is “A range between no less than 3.5 but less than 3.6” (49.7%), followed by “No less than 3.4 but less than 3.5” (26.4%), with the median rate at 3.50 yen/baht. (Table 7-2)

(Table 7-2) Exchange Rates Used in Business Planning (Japanese Yen/Thai Baht) Unit: Japanese Yen/Thai Baht, No. of firms, and (%)

Yen/Baht \ Industry	Manufacturing									Non-manufacturing				Total
	Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Others	Non-manufacturing sector total	
No less than 2.6 but less than 2.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
No less than 2.7 but less than 2.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
No less than 2.8 but less than 2.9	0	0	1	0	0	0	1	0	2	1	0	0	1	3 (0.8)
No less than 2.9 but less than 3.0	0	0	0	0	0	0	1	0	1	0	0	0	0	1 (0.3)
No less than 3.0 but less than 3.1	0	2	0	0	0	1	1	0	4	2	0	1	3	7 (1.9)
No less than 3.1 but less than 3.2	0	0	0	0	0	0	1	0	1	0	0	0	0	1 (0.3)
No less than 3.2 but less than 3.3	0	0	1	0	1	2	3	1	8	4	0	0	4	12 (3.3)
No less than 3.3 but less than 3.4	0	0	4	3	5	5	2	6	25	9	0	4	13	38 (10.4)
No less than 3.4 but less than 3.5	4	6	12	7	2	12	21	7	71	18	3	4	25	96 (26.4)
No less than 3.5 but less than 3.6	5	4	16	18	5	19	24	21	112	51	5	13	69	181 (49.7)
No less than 3.6 but less than 3.7	0	1	2	3	2	3	2	2	15	5	0	2	7	22 (6.0)
No less than 3.7 but less than 3.8	0	0	0	0	0	0	0	0	0	2	0	0	2	2 (0.5)
No less than 3.8 but less than 3.9	0	0	0	0	0	0	0	0	0	1	0	0	1	1 (0.3)
No less than 3.9 but less than 4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
No less than 4.0 but less than 4.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
No. of firms	9	13	36	31	15	42	56	37	239	93	8	24	125	364

Average	3.46	3.38	3.42	3.47	3.41	3.43	3.40	3.45	3.43	3.44	3.46	3.44	3.44	3.44
Median	3.50	3.40	3.45	3.50	3.40	3.50	3.40	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Mode	3.50	3.40	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50

(Note) Median is the value located at the center of the data distribution, which would exclude any deviation resulting from the number of respondents or the irregular low/high values as much as possible. Mode is the value most cited by the respondents and #N/A (Not Applicable) indicates that all respondents' values differ.

(Previous survey)

Yen/Baht \ Industry	Manufacturing									Non-manufacturing				Total
	Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Others	Non-manufacturing sector total	
Average	3.45	3.39	3.39	3.39	3.24	3.37	3.37	3.39	3.37	3.84	3.43	3.26	3.72	3.56
Median	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.45	3.50	3.40	3.40
Mode	3.40	3.40	3.40	3.50	3.50	3.50	3.40	3.40	3.40	3.50	3.50	3.50	3.50	3.40

(Note) Median is the value located at the center of the data distribution, which would exclude any deviation resulting from the number of respondents or the irregular low/high values as much as possible. Mode is the value most cited by the respondents and #N/A (Not Applicable) indicates that all respondents' values differ.

8. PROCUREMENT SOURCES FOR PARTS/MATERIALS

Regarding the ratios of procurement sources for parts/materials in 2019 (a simple arithmetic average of the respondents' answers), "ASEAN" accounted for 59.3% of parts/material supply, of which 53.3% was sourced from "Thailand". (Table 8-1)

As for procurement plans in 2020, procurement from "ASEAN" accounts for 59.3%, of which 53.2% will be sourced domestically in "Thailand", a 0.1-point decrease from the previous year. (Table 8-2)

(Table 8-1) Procurement Sources for Parts/Materials in 2019

Unit: %

Industry		ASEAN			Japan	China	Others	Total	No. of firms
			Thailand	ASEAN (Except Thailand)					
Manufacturing	Food	72.3	66.8	5.5	12.7	10.4	4.6	100.0	11
	Textile	59.8	51.6	8.2	12.2	17.9	10.1	100.0	13
	Chemical	62.9	54.4	8.5	27.9	4.4	4.8	100.0	41
	Steel/Non-ferrous metal	52.9	47.7	5.2	36.1	5.8	5.2	100.0	38
	General machinery	64.9	62.1	2.8	23.7	9.3	2.1	100.0	16
	Electrical/Electronic machinery	53.1	44.6	8.5	32.1	9.7	5.1	100.0	44
	Transportation machinery	65.1	60.6	4.5	30.6	2.0	2.3	100.0	61
	Others	58.1	53.7	4.4	34.3	2.6	5.0	100.0	38
	Manufacturing sector average	61.1	55.2	5.9	26.2	7.8	4.9	100.0	262
Non-manufacturing	Trading	46.1	35.2	10.9	33.4	12.8	7.7	100.0	86
	Retail	38.3	36.7	1.7	58.3	3.3	0.1	100.0	6
	Construction/Civil engineering	86.3	84.4	1.9	7.5	3.8	2.4	100.0	8
	Others	59.2	49.6	9.6	30.4	4.2	6.2	100.0	13
	Non-manufacturing sector average	57.5	51.5	6.0	32.4	6.0	4.1	100.0	113
Total		59.3	53.3	6.0	29.3	6.9	4.5	100.0	375

(Note) The ratios indicate the simple average of the respondents' answers.

(Table 8-2) Procurement Sources for Parts/Materials in 2020

Unit: %

Industry		ASEAN			Japan	China	Others	Total	No. of firms
			Thailand	ASEAN (Except Thailand)					
Manufacturing	Food	72.3	66.8	5.5	12.7	10.4	4.6	100.0	11
	Textile	56.8	50.1	6.8	13.1	19.8	10.3	100.0	12
	Chemical	63.0	54.9	8.1	27.3	5.1	4.6	100.0	41
	Steel/Non-ferrous metal	52.8	46.9	5.8	35.4	5.9	5.9	100.0	37
	General machinery	65.7	62.4	3.3	22.5	9.5	2.3	100.0	15
	Electrical/Electronic machinery	53.8	45.1	8.7	31.5	9.7	5.0	100.0	44
	Transportation machinery	65.9	61.3	4.6	29.7	2.1	2.3	100.0	60
	Others	59.6	54.8	4.8	32.5	2.5	5.4	100.0	37
	Manufacturing sector average	61.2	55.3	5.9	25.6	8.1	5.1	100.0	257
Non-manufacturing	Trading	47.8	35.9	11.9	31.7	12.3	8.2	100.0	86
	Retail	38.3	36.7	1.7	56.7	5.0	0.0	100.0	6
	Construction/Civil engineering	87.5	85.6	1.9	6.3	3.8	2.5	100.0	8
	Others	55.8	46.0	9.8	30.4	7.7	6.2	100.0	13
	Non-manufacturing sector average	57.3	51.0	6.3	31.3	7.2	4.2	100.0	113
Total		59.3	53.2	6.1	28.4	7.7	4.6	100.0	370

(Note) The ratios indicate the simple average of the respondents' answers.

9. CHALLENGES FOR CORPORATE MANAGEMENT

Regarding challenges for corporate management (multiple answers), the predominant response is “Severe competition with competitors” (76%), followed by “Increase of total labor cost” (51%), “Sluggish domestic demand” (38%), and “Changes in products/users’ needs” (29%).

Other major responses in the manufacturing sector are “Shortage of engineers” (41%) and “Fluctuation of foreign exchange rates” (34%), while many in the non-manufacturing sector cited “Employee's job hopping” (23%) and “Shortage of manager-level administrative staff” (20%). (Table 9)

(Table 9) Challenges for Corporate Management (Multiple Answers)

Unit: No. of firms and (%)

Previous survey	Current survey		Manufacturing									Non-manufacturing							Total
			Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Finance/Insurance/Securities	Construction/Civil engineering	Transportation/Communication	Others	Non-manufacturing sector total	
1	1	Severe competition with competitors	9 (69)	11 (85)	40 (83)	31 (69)	12 (67)	38 (79)	56 (75)	28 (67)	225 (75)	79 (80)	5 (56)	17 (77)	27 (82)	34 (87)	54 (70)	216 (77)	441 (76)
2	2	Increase of total labor cost	10 (77)	5 (38)	25 (52)	25 (56)	9 (50)	33 (69)	47 (63)	27 (64)	181 (60)	28 (28)	1 (11)	14 (64)	15 (45)	19 (49)	36 (47)	113 (41)	294 (51)
10	3	Sluggish domestic demand	2 (15)	5 (38)	14 (29)	23 (51)	6 (33)	10 (21)	45 (60)	18 (43)	123 (41)	41 (41)	1 (11)	6 (27)	11 (33)	14 (36)	22 (29)	95 (34)	218 (38)
5	4	Changes in products/users' needs	5 (38)	5 (38)	14 (29)	8 (18)	7 (39)	16 (33)	18 (24)	8 (19)	81 (27)	39 (39)	6 (67)	6 (27)	3 (9)	9 (23)	23 (30)	86 (31)	167 (29)
3	5	Shortage of engineers	2 (15)	3 (23)	21 (44)	9 (20)	10 (56)	27 (56)	30 (40)	21 (50)	123 (41)	9 (9)	0 (0)	0 (0)	17 (52)	2 (5)	12 (16)	40 (14)	163 (28)
8	6	Fluctuation of foreign exchange rates	7 (54)	8 (62)	17 (35)	12 (27)	4 (22)	19 (40)	25 (33)	12 (29)	104 (34)	26 (26)	1 (11)	3 (14)	0 (0)	4 (10)	9 (12)	43 (15)	147 (25)
7	7	Quality management	1 (8)	6 (46)	13 (27)	13 (29)	8 (44)	17 (35)	28 (37)	16 (38)	102 (34)	10 (10)	2 (22)	0 (0)	6 (18)	7 (18)	11 (14)	36 (13)	138 (24)
6	8	Shortage of manager-level administrative staff	4 (31)	3 (23)	10 (21)	7 (16)	4 (22)	12 (25)	13 (17)	10 (24)	63 (21)	19 (19)	4 (44)	2 (9)	7 (21)	11 (28)	13 (17)	56 (20)	119 (20)
4	9	Surge in material prices	6 (46)	2 (15)	18 (38)	13 (29)	6 (33)	13 (27)	18 (24)	5 (12)	81 (27)	12 (12)	1 (11)	1 (5)	3 (9)	3 (8)	12 (16)	32 (11)	113 (19)
9	10	Employee's job hopping	2 (15)	1 (8)	12 (25)	5 (11)	3 (17)	9 (19)	7 (9)	5 (12)	44 (15)	23 (23)	1 (11)	6 (27)	7 (21)	7 (18)	21 (27)	65 (23)	109 (19)
-	11	Enhancement of business efficiency through digitalization	1 (8)	2 (15)	2 (4)	3 (7)	3 (17)	7 (15)	11 (15)	5 (12)	34 (11)	13 (13)	2 (22)	5 (23)	2 (6)	6 (15)	14 (18)	42 (15)	76 (13)
12	12	Excessive employment	1 (8)	1 (8)	5 (10)	8 (18)	2 (11)	7 (15)	20 (27)	5 (12)	49 (16)	3 (3)	1 (11)	0 (0)	1 (3)	7 (18)	4 (5)	16 (6)	65 (11)
11	13	Shortage of workers/staff	4 (31)	1 (8)	5 (10)	1 (2)	1 (6)	2 (4)	4 (5)	4 (10)	22 (7)	2 (2)	4 (44)	0 (0)	7 (21)	4 (10)	7 (9)	24 (9)	46 (8)
15	14	Hike in rental cost	0 (0)	0 (0)	3 (6)	2 (4)	0 (0)	0 (0)	1 (1)	0 (0)	6 (2)	1 (1)	2 (22)	6 (27)	2 (6)	4 (10)	11 (14)	26 (9)	32 (6)
14	15	Difficulty in collecting payments from customers	0 (0)	0 (0)	1 (2)	5 (11)	0 (0)	1 (2)	1 (1)	1 (2)	9 (3)	6 (6)	0 (0)	3 (14)	2 (6)	2 (5)	3 (4)	16 (6)	25 (4)
13	16	Environment protection measures	3 (23)	0 (0)	3 (6)	2 (4)	1 (6)	0 (0)	6 (8)	2 (5)	17 (6)	2 (2)	0 (0)	0 (0)	1 (3)	1 (3)	0 (0)	4 (1)	21 (4)
16	17	Hike in energy cost	2 (15)	0 (0)	5 (10)	1 (2)	0 (0)	2 (4)	4 (5)	1 (2)	15 (5)	0 (0)	1 (11)	0 (0)	0 (0)	1 (3)	1 (1)	3 (1)	18 (3)
18	18	Excessive capital investment	1 (8)	0 (0)	1 (2)	4 (9)	1 (6)	3 (6)	6 (8)	1 (2)	17 (6)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	17 (3)
19	19	Condition concerning an employment of Thai nationals in order to obtain visa or work permit	0 (0)	0 (0)	0 (0)	0 (0)	1 (6)	0 (0)	0 (0)	0 (0)	1 (0)	5 (5)	0 (0)	1 (5)	3 (9)	0 (0)	5 (6)	14 (5)	15 (3)
20	20	Difficulty in obtaining financial funding	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	1 (2)	1 (1)	0 (0)	4 (1)	3 (3)	1 (11)	2 (9)	2 (6)	0 (0)	2 (3)	10 (4)	14 (2)
17	21	Waste disposal	2 (15)	0 (0)	5 (10)	2 (4)	0 (0)	0 (0)	1 (1)	1 (2)	11 (4)	1 (1)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	2 (1)	13 (2)
21	22	Infringement of intellectual property rights	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	1 (2)	1 (1)	1 (2)	4 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (1)
22	23	Stable electricity supply	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)
-	-	Others	2 (15)	0 (0)	1 (2)	0 (0)	1 (6)	0 (0)	6 (8)	0 (0)	10 (3)	3 (3)	0 (0)	3 (14)	1 (3)	2 (5)	3 (4)	12 (4)	22 (4)
Total			64	53	217	176	79	218	349	171	1,327	325	33	75	118	137	263	951	2,278
No. of firms			13	13	48	45	18	48	75	42	302	99	9	22	33	39	77	279	581

10. REQUESTS TO THE THAI GOVERNMENT

(1) Requests to the Thai government

Concerning requests to the Thai government (multiple answers), most of the firms cited “Promotion of economic stimulus measures (e.g. public infrastructure development)” (53%), followed by “Development of transportation infrastructure in the Bangkok metropolitan area” (45%), “Customs-related systems and their implementation” (43%), and “Stabilization of foreign exchange rates” (41%).

Looking at each sector, “Implementation of tax-related systems (e.g. Corporate Income Tax)” (34%) and “Improvement of education/human resource development” (26%) are predominant for companies in the manufacturing sector, while “Work permit/visa-related issues” (35%) is predominant among companies in the non-manufacturing sector. (Table 10-1)

(Table 10-1) Requests to the Thai Government (Multiple Answers)

Unit: No. of firms and (%)

Previous survey Current survey			Manufacturing									Non-manufacturing							Total
			Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Finance/Insurance/Securities	Construction/Civil engineering	Transportation/Communication	Others	Non-manufacturing sector total	
3	1	Promotion of economic stimulus measures (e.g. public infrastructure development)	5 (38)	5 (38)	25 (54)	27 (63)	10 (53)	20 (43)	51 (70)	18 (43)	161 (54)	50 (51)	7 (78)	8 (33)	20 (61)	25 (64)	35 (45)	145 (52)	306 (53)
1	2	Development of transportation infrastructure in the Bangkok metropolitan area	4 (31)	4 (31)	18 (39)	20 (47)	13 (68)	22 (47)	28 (38)	22 (52)	131 (44)	44 (44)	3 (33)	12 (50)	12 (36)	19 (49)	40 (52)	130 (46)	261 (45)
2	3	Customs-related systems and their implementation	6 (46)	4 (31)	25 (54)	20 (47)	8 (42)	25 (53)	32 (44)	18 (43)	138 (47)	52 (53)	7 (78)	3 (13)	4 (12)	23 (59)	21 (27)	110 (39)	248 (43)
5	4	Stabilization of foreign exchange rates	8 (62)	12 (92)	25 (54)	22 (51)	8 (42)	27 (57)	30 (41)	15 (36)	147 (50)	48 (48)	3 (33)	6 (25)	5 (15)	9 (23)	16 (21)	87 (31)	234 (41)
4	5	Implementation of tax-related systems (e.g. Corporate Income Tax)	6 (46)	1 (8)	17 (37)	14 (33)	5 (26)	20 (43)	22 (30)	17 (40)	102 (34)	31 (31)	2 (22)	4 (17)	12 (36)	15 (38)	25 (32)	89 (32)	191 (33)
11	6	Work permit/visa-related issues	1 (8)	0 (0)	8 (17)	6 (14)	6 (32)	8 (17)	11 (15)	8 (19)	48 (16)	35 (35)	0 (0)	8 (33)	16 (48)	9 (23)	30 (39)	98 (35)	146 (25)
7	7	Relaxation of the Foreign Business Act	2 (15)	2 (15)	4 (9)	3 (7)	4 (21)	11 (23)	12 (16)	7 (17)	45 (15)	29 (29)	0 (0)	9 (38)	14 (42)	11 (28)	25 (32)	88 (31)	133 (23)
8	8	Promotion of economic ties (e.g. FTA, EPA)	4 (31)	2 (15)	11 (24)	8 (19)	3 (16)	10 (21)	24 (33)	10 (24)	72 (24)	24 (24)	1 (11)	0 (0)	1 (3)	14 (36)	6 (8)	46 (16)	118 (20)
6	9	Improvement of education/human resource development	0 (0)	2 (15)	12 (26)	8 (19)	1 (5)	19 (40)	20 (27)	14 (33)	76 (26)	12 (12)	3 (33)	2 (8)	4 (12)	2 (5)	14 (18)	37 (13)	113 (20)
13	10	Formulation of laws/regulations based on feasibility	3 (23)	4 (31)	7 (15)	3 (7)	1 (5)	7 (15)	16 (22)	7 (17)	48 (16)	15 (15)	2 (22)	5 (21)	4 (12)	4 (10)	8 (10)	38 (14)	86 (15)
9	11	Maintenance of public security and safety	0 (0)	2 (15)	5 (11)	6 (14)	5 (26)	7 (15)	11 (15)	7 (17)	43 (15)	14 (14)	2 (22)	4 (17)	6 (18)	4 (10)	10 (13)	40 (14)	83 (14)
10	12	Continuity of the government's policies	2 (15)	2 (15)	10 (22)	5 (12)	5 (26)	9 (19)	15 (21)	5 (12)	53 (18)	9 (9)	1 (11)	4 (17)	2 (6)	2 (5)	7 (9)	25 (9)	78 (14)
12	13	Implementation of flood prevention measures	1 (8)	1 (8)	7 (15)	7 (16)	4 (21)	7 (15)	12 (16)	6 (14)	45 (15)	12 (12)	1 (11)	1 (4)	3 (9)	2 (5)	6 (8)	25 (9)	70 (12)
16	14	Prevention of labor disputes	1 (8)	0 (0)	3 (7)	4 (9)	2 (11)	13 (28)	17 (23)	10 (24)	50 (17)	3 (3)	0 (0)	1 (4)	0 (0)	3 (8)	8 (10)	15 (5)	65 (11)
15	15	Development of logistics infrastructure connecting Thailand and the neighboring countries (e.g. CLMV and India)	3 (23)	1 (8)	6 (13)	3 (7)	2 (11)	4 (9)	6 (8)	3 (7)	28 (9)	15 (15)	1 (11)	1 (4)	2 (6)	14 (36)	3 (4)	36 (13)	64 (11)
14	16	Development of communication infrastructure	0 (0)	1 (8)	6 (13)	2 (5)	2 (11)	4 (9)	6 (8)	3 (7)	24 (8)	8 (8)	0 (0)	0 (0)	5 (15)	3 (8)	12 (16)	28 (10)	52 (9)
17	17	Promotion of foreign labor	2 (15)	0 (0)	0 (0)	1 (2)	2 (11)	1 (2)	2 (3)	3 (7)	11 (4)	5 (5)	1 (11)	2 (8)	7 (21)	2 (5)	5 (6)	22 (8)	33 (6)
18	18	Promotion of regional operating headquarter function (e.g. IHQ, ITC)	1 (8)	0 (0)	2 (4)	1 (2)	0 (0)	0 (0)	3 (4)	0 (0)	7 (2)	7 (7)	0 (0)	2 (8)	2 (6)	2 (5)	8 (10)	21 (7)	28 (5)
19	19	Implementation of drought prevention measures	1 (8)	0 (0)	7 (15)	1 (2)	1 (5)	2 (4)	1 (1)	2 (5)	15 (5)	3 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (1)	18 (3)
20	20	Protection of intellectual property rights	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	1 (2)	0 (0)	3 (7)	5 (2)	1 (1)	0 (0)	1 (4)	2 (6)	0 (0)	1 (1)	5 (2)	10 (2)
-	-	Others	0 (0)	0 (0)	1 (2)	1 (2)	1 (5)	2 (4)	5 (7)	1 (2)	11 (4)	1 (1)	1 (11)	3 (13)	2 (6)	1 (3)	3 (4)	11 (4)	22 (4)
Total			50	43	200	162	83	219	324	179	1,260	418	35	76	123	164	283	1,099	2,359
No. of firms			13	13	46	43	19	47	73	42	296	99	9	24	33	39	77	281	577

(2) Recent improvement in investment environment (policy evaluation)

Regarding the government's policies that Japanese firms saw some improvement recently (multiple answers), the predominant response is "Development of transportation infrastructure in the Bangkok metropolitan area" (28%), followed by "Work permit/visa-related issues" (19%), "Promotion of economic stimulus measures (e.g. public infrastructure development)" (19%), "Development of communication infrastructure" (17%), and "Maintenance of public security and safety" (16%). (Table 10-2)

(Table 10-2) Recent Policy Improvement (Multiple Answers)

Unit: No. of firms and (%)

Previous survey	Current survey		Manufacturing									Non-manufacturing							Total
			Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Finance/Insurance/Securities	Construction/Civil engineering	Transportation/Communication	Others	Non-manufacturing sector total	
2	1	Development of transportation infrastructure in the Bangkok metropolitan area	3 (27)	4 (40)	6 (17)	11 (31)	4 (29)	11 (28)	9 (15)	4 (12)	52 (22)	24 (29)	4 (80)	8 (47)	11 (42)	9 (30)	18 (33)	74 (35)	126 (28)
5	2	Work permit/visa-related issues	2 (18)	3 (30)	8 (22)	9 (25)	4 (29)	10 (25)	15 (25)	6 (18)	57 (24)	14 (17)	0 (0)	2 (12)	1 (4)	6 (20)	8 (15)	31 (14)	88 (19)
1	3	Promotion of economic stimulus measures (e.g. public infrastructure development)	0 (0)	3 (30)	7 (19)	13 (36)	3 (21)	3 (8)	10 (17)	4 (12)	43 (18)	16 (20)	1 (20)	1 (6)	9 (35)	6 (20)	9 (17)	42 (20)	85 (19)
6	4	Development of communication infrastructure	2 (18)	1 (10)	5 (14)	4 (11)	3 (21)	9 (23)	10 (17)	5 (15)	39 (16)	15 (18)	1 (20)	3 (18)	2 (8)	7 (23)	10 (19)	38 (18)	77 (17)
4	5	Maintenance of public security and safety	4 (36)	3 (30)	5 (14)	8 (22)	2 (14)	7 (18)	5 (8)	6 (18)	40 (17)	12 (15)	1 (20)	3 (18)	5 (19)	3 (10)	8 (15)	32 (15)	72 (16)
10	6	Continuity of the government's policies	2 (18)	0 (0)	5 (14)	7 (19)	2 (14)	8 (20)	8 (13)	6 (18)	38 (16)	10 (12)	1 (20)	2 (12)	7 (27)	1 (3)	5 (9)	26 (12)	64 (14)
8	7	Promotion of economic ties (e.g. FTA, EPA)	1 (9)	2 (20)	5 (14)	4 (11)	2 (14)	3 (8)	9 (15)	2 (6)	28 (12)	18 (22)	0 (0)	1 (6)	5 (19)	5 (17)	1 (2)	30 (14)	58 (13)
9	8	Implementation of flood prevention measures	2 (18)	3 (30)	6 (17)	3 (8)	2 (14)	10 (25)	10 (17)	0 (0)	36 (15)	5 (6)	1 (20)	3 (18)	1 (4)	2 (7)	4 (7)	16 (7)	52 (11)
7	9	Customs-related systems and their implementation	0 (0)	0 (0)	3 (8)	2 (6)	1 (7)	3 (8)	14 (23)	3 (9)	26 (11)	10 (12)	0 (0)	0 (0)	0 (0)	3 (10)	4 (7)	17 (8)	43 (9)
3	10	Stabilization of foreign exchange rates	1 (9)	0 (0)	1 (3)	4 (11)	3 (21)	1 (3)	0 (0)	7 (21)	17 (7)	9 (11)	0 (0)	2 (12)	3 (12)	1 (3)	7 (13)	22 (10)	39 (9)
15	11	Relaxation of the Foreign Business Act	2 (18)	0 (0)	0 (0)	4 (11)	0 (0)	1 (3)	3 (5)	1 (3)	11 (5)	9 (11)	0 (0)	1 (6)	0 (0)	3 (10)	2 (4)	15 (7)	26 (6)
13	12	Promotion of regional operating headquarter function (e.g. IHQ, ITC)	0 (0)	2 (20)	4 (11)	1 (3)	0 (0)	0 (0)	4 (7)	0 (0)	11 (5)	7 (9)	0 (0)	1 (6)	0 (0)	1 (3)	5 (9)	14 (7)	25 (6)
11	13	Development of logistics infrastructure connecting Thailand and the neighboring countries (e.g. CLMV and India)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	3 (8)	4 (7)	0 (0)	8 (3)	2 (2)	1 (20)	3 (18)	2 (8)	4 (13)	4 (7)	16 (7)	24 (5)
12	14	Implementation of tax-related systems (e.g. Corporate Income Tax)	1 (9)	0 (0)	2 (6)	1 (3)	1 (7)	0 (0)	5 (8)	2 (6)	12 (5)	6 (7)	0 (0)	0 (0)	0 (0)	0 (0)	5 (9)	11 (5)	23 (5)
14	15	Prevention of labor disputes	2 (18)	1 (10)	1 (3)	1 (3)	2 (14)	0 (0)	7 (12)	1 (3)	15 (6)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	3 (1)	18 (4)
16	16	Improvement of education/human resource development	0 (0)	0 (0)	1 (3)	2 (6)	0 (0)	0 (0)	2 (3)	2 (6)	7 (3)	3 (4)	0 (0)	0 (0)	0 (0)	1 (3)	2 (4)	6 (3)	13 (3)
18	17	Implementation of drought prevention measures	0 (0)	0 (0)	1 (3)	1 (3)	0 (0)	2 (5)	2 (3)	0 (0)	6 (3)	0 (0)	0 (0)	0 (0)	0 (0)	2 (7)	1 (2)	3 (1)	9 (2)
17	18	Promotion of foreign labor	2 (18)	0 (0)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	1 (3)	5 (2)	2 (2)	0 (0)	0 (0)	1 (4)	0 (0)	0 (0)	3 (1)	8 (2)
20	19	Protection of intellectual property rights	1 (9)	0 (0)	2 (6)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (1)	0 (0)	0 (0)	0 (0)	1 (4)	1 (3)	1 (2)	3 (1)	6 (1)
19	20	Formulation of laws/regulations based on feasibility	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	1 (3)	1 (2)	1 (3)	4 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (1)
-	-	Others	1 (9)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	3 (9)	5 (2)	3 (4)	0 (0)	2 (12)	1 (4)	1 (3)	5 (9)	12 (6)	17 (4)
Total			26	22	64	76	29	74	118	54	463	166	10	32	49	56	101	414	877
No. of firms			11	10	36	36	14	40	60	33	240	82	5	17	26	30	54	214	454

11. US-CHINA TRADE WAR

(1) Effect of the US-China Trade War

Regarding the effect of the US-China Trade War, the percentage of the companies citing “Positive effect” totaled 11%, while those indicating “Negative effect” amounted to 56%. On the other hand, 21% reported “No effect” and 12% “Uncertain”. Compared with the previous survey (the first half of 2019), there were fewer companies indicating that they either received or expect “Positive effect”, whereas more companies reported that they either received or expect “Negative effect”. (Table 11-1)

(Table 11-1) Effect of the US-China Trade War

Unit: No. of firms and (%)

Industry		Positive effect		Negative effect		No effect	Uncertain	No. of firms
		Received positive effect	Expect positive effect	Received negative effect	Expect negative effect			
Manufacturing	Food	0 (0)	1 (8)	2 (17)	4 (33)	2 (17)	3 (25)	12
	Textile	1 (8)	0 (0)	5 (42)	3 (25)	2 (17)	1 (8)	12
	Chemical	2 (4)	2 (4)	19 (41)	10 (22)	8 (17)	5 (11)	46
	Steel/Non-ferrous metal	1 (2)	2 (4)	22 (49)	12 (27)	6 (13)	2 (4)	45
	General machinery	2 (11)	1 (6)	4 (22)	5 (28)	5 (28)	1 (6)	18
	Electrical/Electronic machinery	3 (6)	5 (10)	17 (35)	11 (22)	10 (20)	3 (6)	49
	Transportation machinery	0 (0)	2 (3)	38 (52)	18 (25)	2 (3)	13 (18)	73
	Others	1 (2)	4 (10)	17 (40)	8 (19)	7 (17)	5 (12)	42
Manufacturing sector total		10 (3)	17 (6)	124 (42)	71 (24)	42 (14)	33 (11)	297
Non-manufacturing	Trading	4 (4)	12 (12)	26 (26)	25 (25)	24 (24)	8 (8)	99
	Retail	0 (0)	2 (22)	1 (11)	2 (22)	2 (22)	2 (22)	9
	Finance/Insurance/Securities	0 (0)	2 (8)	2 (8)	8 (33)	8 (33)	4 (17)	24
	Construction/Civil engineering	0 (0)	4 (12)	5 (15)	4 (12)	11 (33)	9 (27)	33
	Transportation/Communication	1 (3)	0 (0)	18 (46)	9 (23)	7 (18)	4 (10)	39
	Others	2 (3)	8 (11)	14 (18)	16 (21)	26 (34)	10 (13)	76
	Non-manufacturing sector total	7 (3)	28 (10)	66 (24)	64 (23)	78 (28)	37 (13)	280
Total		17 (3)	45 (8)	190 (33)	135 (23)	120 (21)	70 (12)	577
(Previous survey)		11 (2)	77 (14)	61 (11)	188 (35)	121 (22)	79 (15)	539
		62	(11)	325	(56)			

(2) Specific effects of the US-China Trade War (multiple answers)

Regarding some specific effects of the US-China Trade War (multiple answers) for respondents who received/expect “Positive effect” or those who received/expect “Negative effect” in item 11(1), “Decrease in domestic sales volume” (52%) is most cited by the respondents, followed by “Decrease in export volume” (35%) and “Decrease in sales price” (18%), which are all negative impacts. As for positive impacts, “Production facility transfer from China to Thailand” is cited most at 15%. (Table 11-2)

(Table 11-2) Specific Effects of the US-China Trade War (Multiple Answers)

Unit: No. of firms and (%)

Ranking		Manufacturing								Non-manufacturing						Total	
		Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Construction/Civil engineering	Transportation/Communication	Others		Non-manufacturing sector total
1	Decrease in domestic sales volume	2 (29)	4 (44)	18 (55)	26 (74)	5 (42)	13 (39)	36 (64)	18 (60)	122 (57)	36 (53)	2 (40)	7 (64)	7 (26)	23 (45)	75 (46)	197 (52)
2	Decrease in export volume	3 (43)	1 (11)	16 (48)	6 (17)	3 (25)	13 (39)	32 (57)	17 (57)	91 (42)	20 (29)	0 (0)	0 (0)	18 (67)	4 (8)	42 (26)	133 (35)
3	Decrease in sales price	0 (0)	5 (56)	8 (24)	17 (49)	1 (8)	5 (15)	6 (11)	6 (20)	48 (22)	11 (16)	0 (0)	2 (18)	1 (4)	7 (14)	21 (13)	69 (18)
4	Production facility transfer from China to Thailand	0 (0)	1 (11)	4 (12)	4 (11)	4 (33)	9 (27)	5 (9)	3 (10)	30 (14)	13 (19)	1 (20)	3 (27)	1 (4)	10 (20)	28 (17)	58 (15)
5	Increase in purchase price	3 (43)	0 (0)	1 (3)	2 (6)	2 (17)	2 (6)	5 (9)	1 (3)	16 (7)	5 (7)	1 (20)	2 (18)	1 (4)	2 (4)	11 (7)	27 (7)
6	Changes in other production plan (e.g. production item/volume)	0 (0)	0 (0)	2 (6)	3 (9)	0 (0)	3 (9)	5 (9)	3 (10)	16 (7)	2 (3)	0 (0)	0 (0)	1 (4)	6 (12)	9 (6)	25 (7)
7	Increase in domestic sales volume	0 (0)	0 (0)	0 (0)	1 (3)	1 (8)	1 (3)	0 (0)	3 (10)	6 (3)	9 (13)	0 (0)	0 (0)	0 (0)	5 (10)	14 (9)	20 (5)
8	Increase in export volume	0 (0)	1 (11)	1 (3)	1 (3)	2 (17)	3 (9)	2 (4)	1 (3)	11 (5)	3 (4)	1 (20)	0 (0)	3 (11)	0 (0)	7 (4)	18 (5)
9	Increase in transportation cost and transportation delay	0 (0)	0 (0)	1 (3)	1 (3)	1 (8)	1 (3)	3 (5)	1 (3)	8 (4)	3 (4)	0 (0)	0 (0)	1 (4)	0 (0)	4 (2)	12 (3)
10	Decrease in purchase price	0 (0)	3 (33)	0 (0)	1 (3)	0 (0)	0 (0)	1 (2)	0 (0)	5 (2)	3 (4)	0 (0)	0 (0)	0 (0)	2 (4)	5 (3)	10 (3)
11	Increase in sales price	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	1 (2)	2 (1)	2 (1)
12	Others	1 (14)	1 (11)	0 (0)	2 (6)	0 (0)	0 (0)	0 (0)	0 (0)	4 (2)	0 (0)	1 (20)	1 (9)	4 (15)	8 (16)	14 (9)	18 (5)
Total		9	16	51	64	19	50	95	53	357	106	6	15	37	68	232	589
No. of firms		7	9	33	35	12	33	56	30	215	68	5	11	27	51	162	377

(3) Specific impacts resulting from prolonged US-China Trade War (multiple answers)

Regarding some specific impacts affecting firms in case that the US-China Trade War is prolonged (multiple answers), “Sales contraction due to Thailand’s economic downturn” (63%) is most cited by the respondents, followed by “Decrease in exports (sales) to countries/territories other than North America and China due to the global economic downturn” (41%) and “Decrease in exports (sales) to North America and China” (20%). (Table 11-3)

(Table 11-3) Specific Impacts Resulting from Prolonged US-China Trade War (Multiple Answers) Unit: No. of firms and (%)

Ranking		Manufacturing									Non-manufacturing						Total
		Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Construction/Civil engineering	Transportation/Communication	Others	Non-manufacturing sector total	
1	Sales contraction due to Thailand's economic downturn	6 (50)	9 (75)	28 (64)	30 (67)	10 (56)	19 (40)	53 (76)	23 (55)	178 (61)	56 (57)	7 (78)	27 (82)	21 (54)	68 (72)	179 (65)	357 (63)
2	Decrease in exports (sales) to countries/territories other than North America and China due to the global economic downturn	5 (42)	7 (58)	17 (39)	20 (44)	7 (39)	26 (55)	51 (73)	24 (57)	157 (54)	36 (37)	0 (0)	2 (6)	17 (44)	21 (22)	76 (28)	233 (41)
3	Decrease in exports (sales) to North America and China	1 (8)	2 (17)	12 (27)	7 (16)	3 (17)	17 (36)	18 (26)	13 (31)	73 (25)	15 (15)	0 (0)	1 (3)	12 (31)	10 (11)	38 (14)	111 (20)
4	Decrease in sales prices due to inflow of products from other countries (e.g. China)	3 (25)	6 (50)	15 (34)	22 (49)	6 (33)	8 (17)	8 (11)	10 (24)	78 (27)	17 (17)	1 (11)	2 (6)	2 (5)	9 (9)	31 (11)	109 (19)
5	The need to readjust the supply chain	3 (25)	0 (0)	1 (2)	7 (16)	2 (11)	5 (11)	11 (16)	6 (14)	35 (12)	6 (6)	1 (11)	4 (12)	6 (15)	16 (17)	33 (12)	68 (12)
6	The need to revise the business strategy	2 (17)	0 (0)	6 (14)	5 (11)	2 (11)	6 (13)	11 (16)	9 (21)	41 (14)	9 (9)	0 (0)	1 (3)	3 (8)	8 (8)	21 (8)	62 (11)
7	Nothing in particular	2 (17)	0 (0)	2 (5)	3 (7)	3 (17)	0 (0)	1 (1)	2 (5)	13 (4)	15 (15)	1 (11)	6 (18)	3 (8)	17 (18)	42 (15)	55 (10)
-	Others	0 (0)	1 (8)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	2 (1)	1 (1)	0 (0)	0 (0)	2 (5)	1 (1)	4 (1)	6 (1)
Total		22	25	81	94	33	82	153	87	577	155	10	43	66	150	424	1,001
No. of firms		12	12	44	45	18	47	70	42	290	98	9	33	39	95	274	564

12. THAILAND’S INDUSTRIAL ADVANCEMENT POLICY

(1) Interest in investing in the EEC

Regarding the respondents’ interest in investing in the EEC, 129 companies (23%) said they are “Interested in investing in the EEC”, while 219 companies (38%) are “Not interested in investing in the EEC” and 222 companies (39%) responded “Neither”. (Table 12-1)

(Table 12-1) Interest in Investing in the EEC

Unit: No. of firms and (%)

Industry		Interested in investing in the EEC		Not interested in investing in the EEC		Neither		No. of firms
Manufacturing	Food	2	(17)	6	(50)	4	(33)	12
	Textile	2	(17)	7	(58)	3	(25)	12
	Chemical	11	(24)	18	(40)	16	(36)	45
	Steel/Non-ferrous metal	9	(20)	16	(36)	20	(44)	45
	General machinery	3	(17)	7	(39)	8	(44)	18
	Electrical/Electronic machinery	5	(10)	24	(50)	19	(40)	48
	Transportation machinery	12	(17)	33	(46)	26	(37)	71
	Others	10	(24)	17	(40)	15	(36)	42
	Manufacturing sector total	54	(18)	128	(44)	111	(38)	293
Non-manufacturing	Trading	16	(16)	39	(40)	43	(44)	98
	Retail	2	(22)	3	(33)	4	(44)	9
	Finance/Insurance/Securities	5	(23)	6	(27)	11	(50)	22
	Construction/Civil engineering	15	(45)	10	(30)	8	(24)	33
	Transportation/Communication	16	(42)	9	(24)	13	(34)	38
	Others	21	(27)	24	(31)	32	(42)	77
	Non-manufacturing sector total	75	(27)	91	(33)	111	(40)	277
Total		129	(23)	219	(38)	222	(39)	570

(2) Thailand Plus Package

Regarding the Thailand Plus Package, most of the respondents expressed their interest in “Partial amendment to the Foreign Business Act and relaxation of the conditions for an issuance of visas and work permits” (46%), followed by “Revival of the Thai-EU FTA negotiation and pushing Thailand’s participation in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP or TPP11)” (30%). (Table 12-2)

Ranking		Manufacturing									Non-manufacturing						Total
		Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Construction/Civil engineering	Transportation/Communication	Others	Non-manufacturing sector total	
1	Partial amendment to the Foreign Business Act and relaxation of the conditions for issuance of visas and work permits	3 (43)	1 (13)	16 (40)	16 (46)	7 (44)	13 (32)	19 (34)	12 (38)	87 (37)	39 (52)	4 (57)	15 (50)	19 (54)	49 (60)	126 (55)	213 (46)
2	Revival of the Thai-EU FTA negotiation and pushing Thailand's participation in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP or TPP11)	2 (29)	4 (50)	16 (40)	9 (26)	1 (6)	13 (32)	20 (36)	7 (22)	72 (31)	28 (37)	1 (14)	4 (13)	18 (51)	16 (20)	67 (29)	139 (30)
3	Additional corporate income tax deduction for investment in automation systems (2019-2020)	2 (29)	2 (25)	7 (18)	12 (34)	6 (38)	17 (41)	19 (34)	13 (41)	78 (33)	17 (23)	0 (0)	6 (20)	5 (14)	15 (19)	43 (19)	121 (26)
4	50% Corporate income tax reduction for additional five years for firms investing at least one billion baht in BOI investment projects by the end of 2021	2 (29)	3 (38)	8 (20)	8 (23)	4 (25)	7 (17)	15 (27)	4 (13)	51 (22)	6 (8)	0 (0)	3 (10)	4 (11)	7 (9)	20 (9)	71 (15)
5	Development of investment zones tailored for companies from individual countries/regions within industrial estates	0 (0)	0 (0)	6 (15)	5 (14)	2 (13)	2 (5)	10 (18)	2 (6)	27 (11)	9 (12)	2 (29)	14 (47)	7 (20)	12 (15)	44 (19)	71 (15)
6	Additional corporate income tax deduction for investment related to the development of human resource in the fields of advanced technology	0 (0)	0 (0)	3 (8)	4 (11)	4 (25)	10 (24)	14 (25)	6 (19)	41 (17)	9 (12)	0 (0)	2 (7)	3 (9)	9 (11)	23 (10)	64 (14)
7	Establishment of an investment steering committee to speedily tackle issues obstructing investment	1 (14)	0 (0)	2 (5)	3 (9)	0 (0)	2 (5)	4 (7)	3 (9)	15 (6)	6 (8)	0 (0)	1 (3)	2 (6)	2 (2)	11 (5)	26 (6)
8	Others	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	2 (5)	0 (0)	1 (3)	4 (2)	3 (4)	0 (0)	0 (0)	0 (0)	6 (7)	9 (4)	13 (3)
Total		10	10	59	57	24	66	101	48	375	117	7	45	58	116	343	718
No. of firms		7	8	40	35	16	41	56	32	235	75	7	30	35	81	228	463

(3) Requests to the Thai government concerning the EEC policy

In addition to item 12(2), “Tax benefits” (59%) is the measure most requested by the respondents, followed by “Expediting import/export procedures” (33%), “Deregulation” (32%), and “Simplification of procedures such as examination and application” (32%). (Table 12-3)

Ranking		Manufacturing									Non-manufacturing						Total
		Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Construction/Civil engineering	Transportation/Communication	Others	Non-manu- facturing sector total	
1	Taxbenefits	8 (73)	6 (67)	31 (72)	24 (69)	10 (67)	24 (59)	45 (79)	22 (65)	170 (69)	42 (53)	3 (38)	12 (40)	10 (29)	44 (57)	111 (48)	281 (59)
2	Expediting import/export procedures	6 (55)	2 (22)	18 (42)	6 (17)	4 (27)	10 (24)	22 (39)	10 (29)	78 (32)	31 (39)	3 (38)	4 (13)	21 (60)	19 (25)	78 (34)	156 (33)
3	Deregulation	4 (36)	0 (0)	11 (26)	15 (43)	4 (27)	10 (24)	19 (33)	5 (15)	68 (28)	31 (39)	3 (38)	9 (30)	17 (49)	26 (34)	86 (38)	154 (32)
4	Simplification of procedures such as examination and application	4 (36)	4 (44)	16 (37)	11 (31)	5 (33)	12 (29)	21 (37)	12 (35)	85 (35)	24 (30)	2 (25)	9 (30)	6 (17)	26 (34)	67 (29)	152 (32)
5	Subsidy	2 (18)	0 (0)	9 (21)	8 (23)	4 (27)	12 (29)	21 (37)	7 (21)	63 (26)	18 (23)	2 (25)	11 (37)	6 (17)	24 (31)	61 (27)	124 (26)
6	Human resource development (e.g. vocational training system)	1 (9)	0 (0)	6 (14)	5 (14)	2 (13)	10 (24)	12 (21)	11 (32)	47 (19)	10 (13)	1 (13)	6 (20)	6 (17)	16 (21)	39 (17)	86 (18)
7	Low-interest financing	0 (0)	0 (0)	4 (9)	4 (11)	1 (7)	4 (10)	8 (14)	3 (9)	24 (10)	4 (5)	0 (0)	1 (3)	3 (9)	7 (9)	15 (7)	39 (8)
8	Others	0 (0)	1 (11)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	2 (6)	5 (2)	2 (3)	1 (13)	0 (0)	1 (3)	4 (5)	8 (3)	13 (3)
Total		25	13	95	73	30	84	148	72	540	162	15	52	70	166	465	1,005
No. of firms		11	9	43	35	15	41	57	34	245	79	8	30	35	77	229	474

13. PERSONNEL SHORTAGE AND HUMAN RESOURCE DEVELOPMENT

(1) Personnel shortage

Regarding personnel shortage, most of the firms stated that “There is personnel shortage in terms of quality” (56%), followed by “There is no personnel shortage both in terms of quality and quantity” (22%), and “There is personnel shortage both in terms of quality and quantity” (18%), respectively. (Table 13-1)

(Table 13-1) Personnel Shortage Unit: No. of firms and (%)

Ranking		Manufacturing									Non-manufacturing						Total
		Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Construction/Civil engineering	Transportation/Communication	Others	Non-manufacturing sector total	
1	There is personnel shortage in terms of quality	5 (42)	9 (69)	25 (54)	27 (60)	12 (71)	33 (67)	54 (76)	26 (62)	191 (65)	49 (50)	5 (56)	17 (52)	22 (58)	38 (38)	131 (47)	322 (56)
2	There is no personnel shortage both in terms of quality and quantity	2 (17)	2 (15)	9 (20)	14 (31)	1 (6)	3 (6)	10 (14)	4 (10)	45 (15)	33 (34)	1 (11)	7 (21)	7 (18)	31 (31)	79 (28)	124 (22)
3	There is personnel shortage both in terms of quality and quantity	4 (33)	2 (15)	7 (15)	3 (7)	3 (18)	12 (24)	7 (10)	10 (24)	48 (16)	13 (13)	1 (11)	7 (21)	7 (18)	26 (26)	54 (19)	102 (18)
4	There is personnel shortage in terms of quantity	1 (8)	0 (0)	5 (11)	1 (2)	1 (6)	1 (2)	0 (0)	2 (5)	11 (4)	3 (3)	2 (22)	2 (6)	2 (5)	6 (6)	15 (5)	26 (5)
Total		12	13	46	45	17	49	71	42	295	98	9	33	38	101	279	574

(2) Types of job facing personnel shortage

Regarding types of personnel which are in short supply according to firms in item 13(1), the predominant response is “Engineer (including R&D personnel)” (55%), followed by “General office manager” (32%) and “Sales (general)” (26%). (Table 13-2)

(Table 13-2) Types of Job Facing Personnel Shortage (Multiple Answers) Unit: No. of firms and (%)

Ranking		Manufacturing									Non-manufacturing						Total
		Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Construction/Civil engineering	Transportation/Communication	Others	Non-manufacturing sector total	
1	Engineer (including R&D personnel)	6 (55)	11 (85)	27 (66)	21 (58)	14 (88)	42 (89)	49 (78)	33 (80)	203 (76)	20 (26)	0 (0)	26 (87)	6 (17)	23 (28)	75 (32)	278 (55)
2	General office manager	5 (45)	0 (0)	12 (29)	13 (36)	3 (19)	16 (34)	21 (33)	11 (27)	81 (30)	26 (33)	0 (0)	9 (30)	18 (51)	27 (33)	80 (34)	161 (32)
3	Sales (general)	3 (27)	4 (31)	7 (17)	7 (19)	2 (13)	6 (13)	13 (21)	9 (22)	51 (19)	34 (44)	2 (25)	2 (7)	19 (54)	21 (26)	78 (33)	129 (26)
4	Sales (technical)	2 (18)	2 (15)	19 (46)	10 (28)	2 (13)	7 (15)	11 (17)	10 (24)	63 (24)	26 (33)	0 (0)	12 (40)	3 (9)	12 (15)	53 (23)	116 (23)
5	Staff (accounting/administrative)	1 (9)	1 (8)	4 (10)	3 (8)	1 (6)	8 (17)	11 (17)	8 (20)	37 (14)	9 (12)	2 (25)	5 (17)	4 (11)	19 (23)	39 (17)	76 (15)
6	Personnel with Japanese language skills	0 (0)	3 (23)	7 (17)	8 (22)	3 (19)	9 (19)	9 (14)	7 (17)	46 (17)	10 (13)	0 (0)	2 (7)	5 (14)	9 (11)	26 (11)	72 (14)
7	Worker	3 (27)	2 (15)	5 (12)	4 (11)	2 (13)	2 (4)	5 (8)	4 (10)	27 (10)	2 (3)	2 (25)	3 (10)	5 (14)	7 (9)	19 (8)	46 (9)
8	Staff (general office personnel (other than accounting/administrative staff))	0 (0)	0 (0)	1 (2)	2 (6)	3 (19)	5 (11)	7 (11)	4 (10)	22 (8)	6 (8)	2 (25)	1 (3)	6 (17)	7 (9)	22 (9)	44 (9)
9	Import/export and purchasing staff	0 (0)	0 (0)	3 (7)	3 (8)	2 (13)	5 (11)	11 (17)	3 (7)	27 (10)	9 (12)	1 (13)	0 (0)	5 (14)	0 (0)	15 (6)	42 (8)
10	Driver	1 (9)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	1 (2)	3 (1)	3 (4)	0 (0)	0 (0)	2 (6)	3 (4)	8 (3)	11 (2)
-	Others	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (6)	3 (5)	0 (0)	6 (2)	1 (1)	1 (13)	0 (0)	0 (0)	7 (9)	9 (4)	15 (3)
Total		21	23	85	72	32	103	140	90	566	146	10	60	73	135	424	990
No. of firms		11	13	41	36	16	47	63	41	268	78	8	30	35	82	233	501

(3) Personnel development

Regarding personnel development activities conducted by the respondents' companies, most of the firms employ measures such as "In-house training" (72%), followed by "Participation in training organized by outsourcing contractor" (47%) and "Training in Japan" (41%). (Table 13-3)

(Table 13-3) Personnel Development (Multiple Answers)

Unit: No. of firms and (%)

Ranking		Manufacturing									Non-manufacturing						Total
		Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Construction/Civil engineering	Transportation/Communication	Others	Non-manufacturing sector total	
1	In-house training	8 (67)	9 (69)	34 (76)	27 (66)	13 (72)	44 (92)	55 (81)	26 (63)	216 (76)	58 (65)	5 (56)	17 (53)	29 (78)	67 (74)	176 (68)	392 (72)
2	Participation in training organized by outsourcing contractor	2 (17)	5 (38)	25 (56)	25 (61)	10 (56)	20 (42)	40 (59)	19 (46)	146 (51)	43 (48)	3 (33)	14 (44)	13 (35)	34 (38)	107 (42)	253 (47)
3	Training in Japan	4 (33)	9 (69)	18 (40)	14 (34)	8 (44)	21 (44)	34 (50)	13 (32)	121 (42)	32 (36)	3 (33)	14 (44)	9 (24)	41 (46)	99 (39)	220 (41)
4	Assistance in acquiring qualifications	0 (0)	3 (23)	6 (13)	7 (17)	2 (11)	5 (10)	11 (16)	4 (10)	38 (13)	19 (21)	2 (22)	12 (38)	11 (30)	19 (21)	63 (25)	101 (19)
5	Accreditation by in-house qualification system	2 (17)	0 (0)	7 (16)	3 (7)	3 (17)	9 (19)	10 (15)	6 (15)	40 (14)	3 (3)	0 (0)	1 (3)	9 (24)	11 (12)	24 (9)	64 (12)
6	Training outside Japan	1 (8)	0 (0)	4 (9)	0 (0)	1 (6)	1 (2)	6 (9)	1 (2)	14 (5)	9 (10)	0 (0)	0 (0)	0 (0)	13 (14)	22 (9)	36 (7)
-	Others	1 (8)	0 (0)	1 (2)	2 (5)	0 (0)	0 (0)	5 (7)	3 (7)	12 (4)	3 (3)	1 (11)	1 (3)	1 (3)	1 (1)	7 (3)	19 (3)
Total		18	26	95	78	37	100	161	72	587	167	14	59	72	186	498	1,085
No. of firms		12	13	45	41	18	48	68	41	286	89	9	32	37	90	257	543

(4) Requests to the Thai government concerning human resource development policy

Regarding requests to the Thai government concerning human resource development policy, the policy measure most requested by the respondents is "Upgrading high-school/university level education and institutions" (47%), followed by "Providing assistance in organizing internship and training outside the company" (35%) and "Providing support for vocational training during the school years through measures such as the enhancement of the internship system" (27%). (Table 13-4)

(Table 13-4) Requests to the Thai Government Concerning Human Resource Development Policy (Multiple Answers)

Unit: No. of firms and (%)

Ranking		Manufacturing									Non-manufacturing						Total
		Food	Textile	Chemical	Steel/Non-ferrous metal	General machinery	Electrical/Electronic machinery	Transportation machinery	Others	Manufacturing sector total	Trading	Retail	Construction/Civil engineering	Transportation/Communication	Others	Non-manufacturing sector total	
1	Upgrading high-school/university level education and institutions	6 (55)	5 (56)	25 (61)	19 (51)	6 (35)	22 (47)	36 (58)	21 (54)	140 (53)	35 (41)	4 (57)	13 (46)	8 (25)	34 (42)	94 (40)	234 (47)
2	Providing assistance in organizing internship and training outside the company	5 (45)	1 (11)	15 (37)	14 (38)	5 (29)	22 (47)	15 (24)	14 (36)	91 (35)	32 (38)	1 (14)	7 (25)	13 (41)	29 (36)	82 (35)	173 (35)
3	Providing support for vocational training during the school years through measures such as the enhancement of the internship system	0 (0)	2 (22)	8 (20)	7 (19)	8 (47)	11 (23)	21 (34)	12 (31)	69 (26)	13 (15)	3 (43)	8 (29)	11 (34)	29 (36)	64 (27)	133 (27)
4	Upgrading primary/secondary level education and institutions	4 (36)	3 (33)	11 (27)	14 (38)	3 (18)	11 (23)	14 (23)	6 (15)	66 (25)	26 (31)	2 (29)	8 (29)	4 (13)	16 (20)	56 (24)	122 (25)
5	Providing assistance in organizing in-house training	1 (9)	0 (0)	4 (10)	7 (19)	2 (12)	10 (21)	13 (21)	8 (21)	45 (17)	17 (20)	1 (14)	5 (18)	8 (25)	12 (15)	43 (18)	88 (18)
6	Providing support for the establishment of internal qualification system and the acquisition of qualifications	0 (0)	0 (0)	3 (7)	3 (8)	1 (6)	6 (13)	9 (15)	3 (8)	25 (10)	6 (7)	1 (14)	5 (18)	7 (22)	15 (19)	34 (15)	59 (12)
-	Others	0 (0)	1 (11)	1 (2)	0 (0)	0 (0)	0 (0)	4 (6)	1 (3)	7 (3)	4 (5)	0 (0)	1 (4)	2 (6)	2 (2)	9 (4)	16 (3)
Total		16	12	67	64	25	82	112	65	443	133	12	47	53	137	382	825
No. of firms		11	9	41	37	17	47	62	39	263	85	7	28	32	81	233	496