

Survey on Business Sentiment of Japanese Corporations in Thailand For the 1st half of 2017

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JCC Economic Survey Team

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Survey Period

Questionnaire distribution date: 22 May, 2017

Questionnaire submission deadline: 14 June, 2017

Survey Response

The questionnaire was distributed to

1,735 JCC member firms.

(12 governmental organisations were excluded)

Number of firms responding to the questionnaire was
594 firms

The response percentage was
34.2%

No. of firms	
Industry	No.
Manufacturing	Food
	Textile
	Chemical
	Steel/Non-ferrous Metal
	General Machinery
	Electrical/Electronic Machinery
	Transportation Machinery
	Others
	Manufacturing sector total
Non-manufacturing	Trading
	Retail
	Finance/Insurance/Securities
	Construction/Civil Engineering
	Transportation/Communication
	Others
	Non-Manufacturing sector total
Total	

Note

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

Survey Report

Please refer to the following pages.

1. BUSINESS SENTIMENT

(1) Summary

The business sentiment in the second half of 2016, compared to the first half of 2016, improved (9→15) without the effect of the death of King Bhumibol Adulyadej. The business sentiment in the first half of 2017 also showed a wide range of improvement (15→20), and further improvement is forecast for the second half of 2017 (20→26). (*Table 1-1*).

(Table 1-1) Business Sentiment

Unit: %

	Past Surveys								Previous Survey			This Survey		
	Results								Results		Forecast	Results		Forecast
	12/1	12/2	13/1	13/2	14/1	14/2	15/1	15/2	16/1	16/2	17/1	16/2	17/1	17/2
Improving	76	60	46	35	30	32	28	30	38	33	35	38	43	41
No change	11	21	28	28	20	35	35	36	33	38	45	39	34	44
Deteriorating	14	19	25	37	50	33	37	34	29	29	20	23	23	15
(Ref) DI	62	41	21	- 2	-20	▲ 1	▲ 9	▲ 4	9	4	15	15	20	26

*(Note) 1. DI = “Improving” minus “Deteriorating”

2. As the fraction of a percentage is rounded off, the total may not equal 100 percent. This also applies to the tables below.

*(Note) To determine whether business performance is “Improving” or “Deteriorating”, business performance is compared between the six-month term and the corresponding previous term. If DI, the deduction balance of “Improving” answers and “Deteriorating” answers, is positive, it signifies that the business performance of many respondent firms is improving; if negative, it is deteriorating.

(2) The second half of 2016 (July - December)

The percentage of firms reporting that business sentiment was “Improving” remained unchanged at 38% from the previous term (38%), and those reporting “Deteriorating” decreased by 6 points from the previous term (29%) to 23%. As a result, the Diffusion Index (DI), the deduction balance of “Improving” and “Deteriorating”, was +15, 6 points higher than the previous term (+9). (*Table 1-1*).

In the manufacturing sector, the DI increased in all industries except Textiles, which remained unchanged, and as a result the overall DI in the manufacturing sector increased by 4 points to +16 (+12). In the non-manufacturing sector, DI increased significantly in the Trading and Finance/Insurance/Securities sectors, whereas it decreased to -4 in the Transportation/Communication sector. The overall DI in the Non-manufacturing sector increased by 8 points from the previous term (+5) to +13. (*Table 1-2*).

(3) The first half of 2017 (January - June) - Forecast

The percentage of firms reporting that business sentiment is “Improving” increased by 5 points from the previous term (38%) to 43%, whereas those reporting “Deteriorating” remained unchanged at 23%. As a result, the overall DI increased by 5 points from the previous term (+15) to +20. (*Table 1-1*).

In the Manufacturing sector, the DI increased in the Chemical, General Machinery, and Transportation machinery sectors, etc., whereas it decreased in the Food, Steel/Non-ferrous Metal, and Electrical/ Electronic machinery sectors, etc., and range of deterioration changed to negative in the Textile sector. As a result, the overall DI in the Manufacturing sector decreased by 1 point from the previous term (+16) to +15. For the Non-manufacturing sector, the range of improvement decreased in the Finance/Insurance/Securities sector, and the negative range continued in the Transportation/Communication sector, whereas the range of improvement increased in the Trading, Retail, and Construction/Civil Engineering sectors. The overall DI in the Non-manufacturing sector increased by 10 points from the previous term (+13) to +23. (*Table 1-2*).

(4) The second half of 2017 (July - December) - Forecast

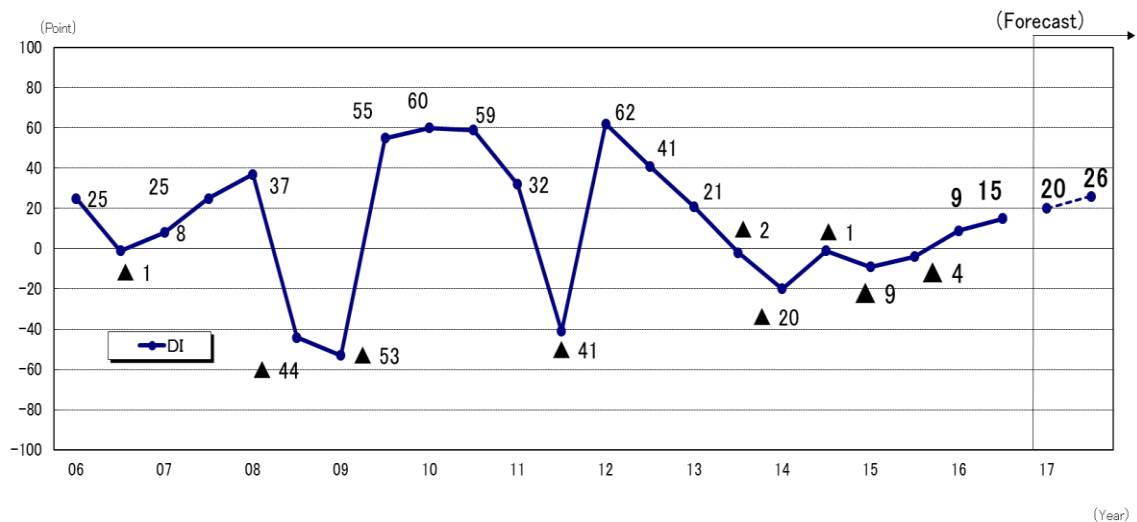
The percentage of firms forecasting “Improving” business sentiment decreased by 2 points from the previous term (43%) to 41%, and the percentage of firms reporting “Deteriorating” decreased by 8 points from the previous term (23%) to 15%. As a result, the overall DI increased by 6 points from the previous term (+20) to +26. (Table 1-1).

In the Manufacturing sector, the DI decreased in the Steel/ Non-ferrous Metal, General Machinery, and Electrical/ Electronic Machinery, etc., whereas it increased in the other industry sectors. The overall DI increased by 6 points from the previous term (+15) to +21. As for the Non-manufacturing sector, the DI increased in all industries except Others, resulting in an increase of 8 points overall (+23→+31). (Table 1-2).

(Table 1-2) Business Sentiments by sector

Industry		Past Surveys								Survey this time		
		Result						Forecast		Result	Forecast	
		13H2	14H1	14H2	15H1	15H2	16H1	16H2	17H1	16H2	17H1	17H2
Manufacture	Food	38	40	-50	38	23	57	71	57	70	30	50
	Textile	37	47	16	-40	41	7	-8	8	0	-5	21
	Chemical	-3	-15	13	2	15	37	15	30	7	11	34
	Steel/Non-ferrous metal	-14	-13	-25	-9	-15	10	-2	21	20	16	15
	General machinery	-23	-24	33	-31	-37	22	26	22	11	36	18
	Electric/Electronics mavinery	13	9	23	4	11	-6	14	16	24	17	11
	Transportation machinery	-51	-62	-23	-18	-16	7	-12	-8	5	16	18
	Others	13	-19	-5	-12	11	10	32	10	9	6	23
Manufacturing sector total		-7	-17	-1	-10	1	12	11	15	16	15	21
Non-manufacture	Trading	9	-16	2	-8	6	19	-2	17	27	34	43
	Retailer	23	-42	11	25	-11	10	-30	40	0	25	50
	Finance/Insurance/Securities	-7	-24	-20	-6	-25	-22	-11	23	22	14	28
	Construction/Civil engineering	16	-56	-15	-54	-50	-39	-11	-4	0	9	27
	Transportation/Communication	-21	-35	-10	-18	-22	18	0	17	-4	-4	11
	Others	13	-7	7	19	11	9	6	16	9	33	22
	Non-Manufacturing sector total		4	-26	-2	-7	-10	5	-3	16	13	23
Total		-2	-20	-1	-9	-4	9	4	15	15	20	26

(Figure 1) Historical change in the DI in the business sentiment surveys of Japanese corporations



*(Note) Diffusion Index (DI) = Improving — Deteriorating (Compared with the previous term)

2. SALES

Regarding total sales results for 2016, the percentage of firms reporting an “increase” rose by 9 points from the previous year (45%) to 54%. The percentage of firms reporting “more than 20% increase” in their total sales rose by 2 points from the previous year (13%) to 15%. (Tables 2-1, 2-2).

Regarding the total sales forecast for 2017, the number of firms anticipating an “increase” rose by 8 points from the previous year (54%) to 62%, and the percentage of firms anticipating “more than 20% increase” decreased by 1 point to 14%, from the previous year’s 15%. (Tables 2-1, 2-3).

(Table 2-1) Change in total sales

Unit: %

	Past result						Previous survey		This survey	
	Result						Result	Forecast	Result	Forecast
Fiscal years	10	11	12	13	14	15	16	17	16	17
Sals increase	82	54	73	52	50	45	52	61	54	62
“More than 20%” Sales increase	46	13	34	17	13	13	15	10	15	14

*(Note) Years are based on the financial year of each corporation

(Table 2-2) Sales result for 2016

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	8 (80)	1 (10)	2 (20)	5 (50)	2 (20)	0 (0)	0 (0)	0 (0)	0 (0)
	Textile	12 (60)	1 (5)	6 (30)	5 (25)	1 (5)	7 (35)	7 (35)	0 (0)	0 (0)
	Chemical	29 (62)	5 (11)	10 (21)	14 (30)	5 (11)	13 (28)	9 (19)	3 (6)	1 (2)
	Steel/Non-ferrous Metal	23 (50)	8 (17)	6 (13)	9 (20)	7 (15)	16 (35)	8 (17)	5 (11)	3 (7)
	General Machinery	16 (57)	4 (14)	6 (21)	6 (21)	4 (14)	8 (29)	4 (14)	4 (14)	0 (0)
	Electrical/Electronics Machinery	28 (48)	6 (10)	4 (7)	18 (31)	13 (22)	17 (29)	8 (14)	7 (12)	2 (3)
	Transportation Machinery	35 (51)	5 (7)	12 (18)	18 (26)	10 (15)	23 (34)	17 (25)	6 (9)	0 (0)
	Others	17 (39)	8 (18)	4 (9)	5 (11)	10 (23)	17 (39)	7 (16)	7 (16)	3 (7)
	Manufacturing sector total	168 (52)	38 (12)	50 (16)	80 (25)	52 (16)	101 (31)	60 (19)	32 (10)	9 (3)
Non-manufacturing	Trading	59 (66)	16 (18)	20 (22)	23 (26)	15 (17)	16 (18)	8 (9)	6 (7)	2 (2)
	Retail	6 (50)	3 (25)	0 (0)	3 (25)	3 (25)	3 (25)	2 (17)	1 (8)	0 (0)
	Finance/Insurance/Securities	11 (55)	3 (15)	2 (10)	6 (30)	9 (45)	0 (0)	0 (0)	0 (0)	0 (0)
	Construction/Civil Engineering	9 (21)	4 (9)	4 (9)	1 (2)	8 (19)	26 (60)	4 (9)	9 (21)	13 (30)
	Transportation/Communication	13 (46)	4 (14)	5 (18)	4 (14)	5 (18)	10 (36)	9 (32)	0 (0)	1 (4)
	Others	37 (84)	16 (36)	14 (32)	7 (16)	7 (16)	0 (0)	0 (0)	0 (0)	0 (0)
	Non-Manufacturing sector total	135 (57)	46 (19)	45 (19)	44 (19)	47 (20)	55 (23)	23 (10)	16 (7)	16 (7)
Total		303 (54)	84 (15)	95 (17)	124 (22)	99 (18)	156 (28)	83 (15)	48 (9)	25 (4)

(Table 2-3) Sales forecast for 2017

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	9 (90)	0 (0)	2 (20)	7 (70)	0 (0)	1 (10)	1 (10)	0 (0)	0 (0)
	Textile	12 (57)	2 (10)	4 (19)	6 (29)	4 (19)	5 (24)	4 (19)	1 (5)	0 (0)
	Chemical	32 (65)	6 (12)	9 (18)	17 (35)	7 (14)	10 (20)	6 (12)	2 (4)	2 (4)
	Steel/Non-ferrous Metal	28 (60)	9 (19)	5 (11)	14 (30)	7 (15)	12 (26)	9 (19)	2 (4)	1 (2)
	General Machinery	18 (64)	4 (14)	5 (18)	9 (32)	7 (25)	3 (11)	1 (4)	1 (4)	1 (4)
	Electrical/Electronics Machinery	31 (54)	8 (14)	11 (19)	12 (21)	13 (23)	13 (23)	11 (19)	1 (2)	1 (2)
	Transportation Machinery	30 (44)	6 (9)	3 (4)	21 (31)	17 (25)	21 (31)	16 (24)	5 (7)	0 (0)
	Others	23 (52)	5 (11)	9 (20)	9 (20)	10 (23)	11 (25)	9 (20)	2 (5)	0 (0)
	Manufacturing sector total	183 (56)	40 (12)	48 (15)	95 (29)	65 (20)	76 (23)	57 (18)	14 (4)	5 (2)
Non-manufacturing	Trading	68 (72)	14 (15)	23 (24)	31 (33)	13 (14)	13 (14)	9 (10)	3 (3)	1 (1)
	Retail	7 (64)	0 (0)	0 (0)	7 (64)	2 (18)	2 (18)	2 (18)	0 (0)	0 (0)
	Finance/Insurance/Securities	15 (71)	2 (10)	5 (24)	8 (38)	6 (29)	0 (0)	0 (0)	0 (0)	0 (0)
	Construction/Civil Engineering	23 (52)	8 (18)	9 (20)	6 (14)	10 (23)	11 (25)	3 (7)	5 (11)	3 (7)
	Transportation/Communication	14 (52)	3 (11)	4 (15)	7 (26)	5 (19)	8 (30)	3 (11)	5 (19)	0 (0)
	Others	35 (92)	14 (37)	17 (45)	4 (11)	3 (8)	0 (0)	0 (0)	0 (0)	0 (0)
	Non-Manufacturing sector total	162 (69)	41 (17)	58 (25)	63 (27)	39 (17)	34 (14)	17 (7)	13 (6)	4 (2)
Total		345 (62)	81 (14)	106 (19)	158 (28)	104 (19)	110 (20)	74 (13)	27 (5)	9 (2)

3. PRE-TAX PROFIT/LOSS

Regarding 2016 pre-tax profit/loss, the ratio of firms reporting “Profit” reached 75%. Firms reporting an “Increase” in their pre-tax profit (including cases that loss will diminish, vanish or balance achieved) accounted for 46% while 33% reported “Decrease”. (Table 3-1).

As for 2017, a high ratio of 78% anticipates “Profit”. Firms anticipating an “Increase” in their pre-tax profit are 39% while 32% anticipate a “Decrease”. (Table 3-2).

(Table 3-1) Pre-tax profit/loss in 2016 (Year-to-year comparison)

		Unit: No. of firms and (%)							
Industry		Profit	Balance	Loss	Total	Increase	No change	Decrease	
Manufacturing	Food	8 (80)	0 (0)	2 (20)	10	10 (100)	0 (0)	0 (0)	
	Textile	16 (84)	0 (0)	3 (16)	19	9 (47)	3 (16)	7 (37)	
	Chemical	36 (77)	4 (9)	7 (15)	47	27 (57)	7 (15)	13 (28)	
	Steel/Non-ferrous Metal	35 (78)	2 (4)	8 (18)	45	33 (73)	5 (11)	7 (16)	
	General Machinery	23 (82)	2 (7)	3 (11)	28	9 (32)	5 (18)	14 (50)	
	Electrical/Electronics Machinery	47 (81)	4 (7)	7 (12)	58	18 (31)	15 (26)	25 (43)	
	Transportation Machinery	64 (93)	1 (1)	4 (6)	69	37 (54)	14 (20)	18 (26)	
	Others	31 (72)	2 (5)	10 (23)	43	16 (37)	11 (26)	16 (37)	
	Manufacturing sector total	260 (82)	15 (5)	44 (14)	319	159 (50)	60 (19)	100 (31)	
Non-manufacturing	Trading	69 (76)	4 (4)	18 (20)	91	46 (51)	17 (19)	28 (31)	
	Retail	8 (73)	1 (9)	2 (18)	11	3 (27)	4 (36)	4 (36)	
	Finance/Insurance/Securities	15 (68)	1 (5)	6 (27)	22	7 (32)	8 (36)	7 (32)	
	Construction/Civil Engineering	21 (49)	4 (9)	18 (42)	43	11 (26)	8 (19)	24 (56)	
	Transportation/Communication	23 (85)	0 (0)	4 (15)	27	13 (48)	5 (19)	9 (33)	
	Others	34 (56)	4 (7)	23 (38)	61	23 (38)	18 (30)	20 (33)	
	Non-Manufacturing sector total	170 (67)	14 (5)	71 (28)	255	103 (40)	60 (24)	92 (36)	
Total		430 (75)	29 (5)	115 (20)	574	262 (46)	120 (21)	192 (33)	

- *(Note) 1. Profit increase indicates either expanding profit, turning to the black, diminishing loss, or moving to the break-even point.
 2. No change indicates either remaining at the same level as before regardless if in the black, at the break-even point, or in the red.
 3. Profit decrease indicates either diminishing profit, falling into the red, expanding loss, or moving down to the break-even point.

(Table 3-2) Forecast of pre-tax profit/loss for 2017 (Year-to-year comparison)

		Unit: No. of firms and (%)							
Industry		Profit	Balance	Loss	Total	Increase	No change	Decrease	
Manufacturing	Food	8 (80)	1 (10)	1 (10)	10	5 (50)	3 (30)	2 (20)	
	Textile	18 (95)	1 (5)	0 (0)	19	9 (47)	2 (11)	8 (42)	
	Chemical	36 (78)	4 (9)	6 (13)	46	14 (30)	14 (30)	18 (39)	
	Steel/Non-ferrous Metal	37 (82)	6 (13)	2 (4)	45	20 (44)	12 (27)	13 (29)	
	General Machinery	25 (86)	2 (7)	2 (7)	29	10 (34)	10 (34)	9 (31)	
	Electrical/Electronics Machinery	47 (82)	4 (7)	6 (11)	57	16 (28)	23 (40)	18 (32)	
	Transportation Machinery	64 (94)	1 (1)	3 (4)	68	20 (29)	19 (28)	29 (43)	
	Others	30 (67)	6 (13)	9 (20)	45	18 (40)	13 (29)	14 (31)	
	Manufacturing sector total	265 (83)	25 (8)	29 (9)	319	112 (35)	96 (30)	111 (35)	
Non-manufacturing	Trading	75 (82)	5 (5)	12 (13)	92	43 (47)	20 (22)	29 (32)	
	Retail	9 (82)	0 (0)	2 (18)	11	5 (45)	5 (45)	1 (9)	
	Finance/Insurance/Securities	14 (67)	2 (10)	5 (24)	21	8 (38)	9 (43)	4 (19)	
	Construction/Civil Engineering	25 (58)	8 (19)	10 (23)	43	19 (44)	11 (26)	13 (30)	
	Transportation/Communication	23 (85)	2 (7)	2 (7)	27	10 (37)	4 (15)	13 (48)	
	Others	41 (65)	10 (16)	12 (19)	63	29 (46)	22 (35)	12 (19)	
	Non-Manufacturing sector total	187 (73)	27 (11)	43 (17)	257	114 (44)	71 (28)	72 (28)	
Total		452 (78)	52 (9)	72 (13)	576	226 (39)	167 (29)	183 (32)	

*(Note) Same as Table 3-1

4. CAPITAL INVESTMENT (MANUFACTURING SECTOR)

The amount of planned capital investment (in the Manufacturing sector) in 2017 is forecast to increase by 18.4% from 2016 (The total number of firms responding is 308). The ratio of firms anticipating an “Increase” in their capital investments in 2017 is 44%, whereas 17% anticipate “Decrease”. (Table 4-1).

“Replacement” is the predominant reason for capital investment in both 2016 and 2017. (Tables 4-2 and 4-3)

(Table 4-1)Planned capital investment for 2016 and 2017 (Manufacturing)

Unit: Million Thai Baht and (%)

Industry	2016	2017		No. of firms					Total
	Amount	Amount	Increase	Increase	No change	Decrease	Undecided		
Food	2,092	2,697	28.9	6 (60)	3 (30)	1 (10)	0 (0)	10	
Textile	3,383	2,538	▲ 25.0	5 (26)	9 (47)	4 (21)	1 (5)	19	
Chemical	4,722	7,880	66.9	20 (44)	16 (36)	6 (13)	3 (7)	45	
Steel/Non-ferrous Metal	3,275	4,626	41.2	24 (56)	16 (37)	3 (7)	0 (0)	43	
General Machinery	544	1,331	144.6	9 (31)	6 (21)	7 (24)	7 (24)	29	
Electrical/Electronics Machinery	18,031	18,714	3.8	22 (42)	17 (33)	8 (15)	5 (10)	52	
Transportation Machinery	26,986	32,841	21.7	32 (46)	21 (30)	15 (22)	1 (1)	69	
Others	7,038	7,624	8.3	19 (46)	13 (32)	7 (17)	2 (5)	41	
Manufacturing sector total	66,070	78,250	18.4	137 (44)	101 (33)	51 (17)	19 (6)	308	

(Note)The figures in the above table show just totaling the data from corporations responding the questionnaire. The capital-investment amount in the above does not equal to that of the Japanese corporations as a whole.

(Table 4-2)Details of actual capital investment in 2016 (Check all that apply)

Unit: No. of firms and (%)

Industry	New	Expansion	Replacement	Streamlining	Other	Total	No. of firms
Food	3 (33)	2 (22)	6 (67)	5 (56)	0 (0)	16	9
Textile	4 (21)	6 (32)	13 (68)	5 (26)	0 (0)	28	19
Chemical	17 (41)	9 (22)	21 (51)	10 (24)	3 (7)	60	41
Steel/Non-ferrous Metal	18 (41)	7 (16)	23 (52)	15 (34)	1 (2)	64	44
General Machinery	6 (27)	1 (5)	13 (59)	6 (27)	1 (5)	27	22
Electrical/Electronics Machinery	23 (45)	11 (22)	27 (53)	21 (41)	1 (2)	83	51
Transportation Machinery	33 (50)	9 (14)	43 (65)	31 (47)	3 (5)	119	66
Others	14 (37)	9 (24)	20 (53)	13 (34)	2 (5)	58	38
Manufacturing sector total	118 (41)	54 (19)	166 (57)	106 (37)	11 (4)	455	290

(Table 4-3)Details of actual capital investment in 2017 (Check all that apply)

Unit: No. of firms and (%)

Industry	New	Expansion	Replacement	Streamlining	Other	Total	No. of firms
Food	5 (50)	4 (40)	6 (60)	4 (40)	0 (0)	19	10
Textile	7 (37)	4 (21)	11 (58)	6 (32)	2 (11)	30	19
Chemical	16 (39)	11 (27)	22 (54)	11 (27)	3 (7)	63	41
Steel/Non-ferrous Metal	18 (41)	13 (30)	21 (48)	15 (34)	4 (9)	71	44
General Machinery	9 (39)	4 (17)	10 (43)	7 (30)	2 (9)	32	23
Electrical/Electronics Machinery	23 (43)	15 (28)	29 (55)	26 (49)	2 (4)	95	53
Transportation Machinery	37 (56)	11 (17)	40 (61)	34 (52)	1 (2)	123	66
Others	17 (43)	9 (23)	20 (50)	13 (33)	3 (8)	62	40
Manufacturing sector total	132 (45)	71 (24)	159 (54)	116 (39)	17 (6)	495	296

5. EXPORT TREND

The percentage of firms reporting an “Increase” in their exports in the first half of 2017 is 33%, and that in the second half of 2017 is 35%, which both significantly exceed “Decrease” of their term. As for the 2017 full-year exports, the number firms anticipating an “Increase” account for 40%, exceeding “Decrease” (17%) by 23 points. (Tables 5-1, 5-2, and 5-3).

(Table 5-1)Exports in 2017 (First half)

Unit: No. of firms and (%)

Industry	Increase				No change	Decrease				N o . of firm
		More than 20%	10-20%	L ess than 10%			L ess than 10%	10-20%	More than 20%	
Food	7 (58)	1 (8)	1 (8)	5 (42)	2 (17)	3 (25)	1 (8)	1 (8)	1 (8)	12
Textile	7 (41)	0 (0)	3 (18)	4 (24)	5 (29)	5 (29)	5 (29)	0 (0)	0 (0)	17
Chemical	21 (48)	6 (14)	5 (11)	10 (23)	15 (34)	8 (18)	4 (9)	2 (5)	2 (5)	44
Steel/Non-ferrous Me	12 (31)	3 (8)	4 (10)	5 (13)	20 (51)	7 (18)	2 (5)	1 (3)	4 (10)	39
General Machinery	13 (50)	0 (0)	4 (15)	9 (35)	12 (46)	1 (4)	0 (0)	0 (0)	1 (4)	26
Electrical/Electronics	15 (28)	2 (4)	4 (8)	9 (17)	29 (55)	9 (17)	4 (8)	3 (6)	2 (4)	53
Transportation Mach	17 (26)	3 (5)	1 (2)	13 (20)	30 (46)	18 (28)	7 (11)	5 (8)	6 (9)	65
Others	12 (36)	4 (12)	4 (12)	4 (12)	15 (45)	6 (18)	5 (15)	1 (3)	0 (0)	33
Manufacturing sector	104 (36)	19 (7)	26 (9)	59 (20)	128 (44)	57 (20)	28 (10)	13 (4)	16 (6)	289
Trading	19 (22)	3 (3)	4 (5)	12 (14)	56 (64)	13 (15)	7 (8)	3 (3)	3 (3)	88
Retail	0 (0)	0 (0)	0 (0)	0 (0)	2 (67)	1 (33)	0 (0)	1 (33)	0 (0)	3
Others	2 (100)	1 (50)	0 (0)	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2
Non-Manufacturing s	21 (22)	4 (4)	4 (4)	13 (14)	60 (63)	14 (15)	7 (7)	4 (4)	3 (3)	95
Total	125 (33)	23 (6)	30 (8)	72 (19)	188 (49)	71 (18)	35 (9)	17 (4)	19 (5)	384

(Table 5-2)Exports in 2017 (Second half)

Unit: No. of firms and (%)

Industry	Increase				No change	Decrease				N o . of firm
		More than 20%	10-20%	L ess than 10%			L ess than 10%	10-20%	More than 20%	
Food	7 (70)	0 (0)	1 (10)	6 (60)	2 (20)	1 (10)	1 (10)	0 (0)	0 (0)	10
Textile	11 (65)	1 (6)	6 (35)	4 (24)	5 (29)	1 (6)	1 (6)	0 (0)	0 (0)	17
Chemical	15 (35)	4 (9)	5 (12)	6 (14)	23 (53)	5 (12)	5 (12)	0 (0)	0 (0)	43
Steel/Non-ferrous Me	12 (30)	5 (13)	3 (8)	4 (10)	20 (50)	8 (20)	2 (5)	2 (5)	4 (10)	40
General Machinery	11 (42)	1 (4)	3 (12)	7 (27)	14 (54)	1 (4)	0 (0)	0 (0)	1 (4)	26
Electrical/Electronics	19 (37)	3 (6)	8 (15)	8 (15)	25 (48)	8 (15)	7 (13)	1 (2)	0 (0)	52
Transportation Mach	17 (25)	3 (4)	0 (0)	14 (21)	30 (45)	20 (30)	11 (16)	6 (9)	3 (4)	67
Others	14 (42)	1 (3)	5 (15)	8 (24)	15 (45)	4 (12)	3 (9)	1 (3)	0 (0)	33
Manufacturing sector	106 (37)	18 (6)	31 (11)	57 (20)	134 (47)	48 (17)	30 (10)	10 (3)	8 (3)	288
Trading	25 (28)	3 (3)	6 (7)	16 (18)	53 (60)	10 (11)	6 (7)	1 (1)	3 (3)	88
Retail	1 (33)	1 (33)	0 (0)	0 (0)	1 (33)	1 (33)	0 (0)	1 (33)	0 (0)	3
Others	1 (50)	1 (50)	0 (0)	0 (0)	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)	2
Non-Manufacturing s	28 (29)	5 (5)	7 (7)	16 (17)	56 (59)	11 (12)	6 (6)	2 (2)	3 (3)	95
Total	134 (35)	23 (6)	38 (10)	73 (19)	190 (50)	59 (15)	36 (9)	12 (3)	11 (3)	383

Note: Compared to the same period last year

(Table 5-3)Exports in 2017 (Full year)

Unit: No. of firms and (%)

Industry	Increase				No change	Decrease				N o . of firm
		More than 20%	10-20%	L ess than 10%			L ess than 10%	10-20%	More than 20%	
Food	7 (70)	0 (0)	2 (20)	5 (50)	2 (20)	1 (10)	1 (10)	0 (0)	0 (0)	10
Textile	11 (65)	1 (6)	5 (29)	5 (29)	4 (24)	2 (12)	2 (12)	0 (0)	0 (0)	17
Chemical	23 (53)	7 (16)	6 (14)	10 (23)	10 (23)	10 (23)	8 (19)	0 (0)	2 (5)	43
Steel/Non-ferrous Me	14 (37)	5 (13)	4 (11)	5 (13)	17 (45)	7 (18)	1 (3)	2 (5)	4 (11)	38
General Machinery	14 (52)	1 (4)	4 (15)	9 (33)	11 (41)	2 (7)	0 (0)	1 (4)	1 (4)	27
Electrical/Electronics	19 (37)	2 (4)	9 (17)	8 (15)	24 (46)	9 (17)	8 (15)	1 (2)	0 (0)	52
Transportation Mach	21 (32)	2 (3)	4 (6)	15 (23)	28 (42)	17 (26)	8 (12)	5 (8)	4 (6)	66
Others	16 (50)	3 (9)	6 (19)	7 (22)	11 (34)	5 (16)	3 (9)	2 (6)	0 (0)	32
Manufacturing sector	125 (44)	21 (7)	40 (14)	64 (22)	107 (38)	53 (19)	31 (11)	11 (4)	11 (4)	285
Trading	24 (28)	2 (2)	5 (6)	17 (20)	52 (60)	10 (12)	6 (7)	3 (3)	1 (1)	86
Retail	1 (33)	0 (0)	1 (33)	0 (0)	1 (33)	1 (33)	0 (0)	1 (33)	0 (0)	3
Others	1 (50)	1 (50)	0 (0)	0 (0)	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)	2
Non-Manufacturing s	26 (28)	3 (3)	6 (6)	17 (18)	56 (60)	11 (12)	6 (6)	4 (4)	1 (1)	93
Total	151 (40)	24 (6)	46 (12)	81 (21)	163 (43)	64 (17)	37 (10)	15 (4)	12 (3)	378

6. PROSPECTIVE FUTURE MARKETS

The prospective future markets (check all that apply) are “Vietnam” (45%), “Indonesia” (35%), “India” (32%), “Myanmar” (25%), and “Japan” (18%). (*Table 6*).

(Table 6) Prospective future markets (check-all-that-apply question)

Survey before last Last survey This survey				Manufacturing									Non-manufacturing					Unit No. of firms and (%)	
				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	Grand total	
1	1	1	Vietnam	4 (44)	9 (50)	27 (63)	9 (26)	13 (50)	18 (36)	23 (38)	14 (45)	117 (43)	40 (48)	3 (75)	0 (0)	7 (100)	50 (52)	167 (45)	
2	2	2	Indonesia	3 (33)	4 (22)	14 (33)	14 (41)	12 (46)	12 (24)	30 (50)	9 (29)	98 (36)	27 (32)	0 (0)	0 (0)	2 (29)	29 (30)	127 (35)	
3	3	3	India	1 (11)	3 (17)	15 (35)	13 (38)	7 (27)	13 (26)	25 (42)	13 (42)	90 (33)	28 (33)	1 (25)	0 (0)	0 (0)	29 (30)	119 (32)	
4	4	4	Myanmar	2 (22)	2 (11)	13 (30)	7 (21)	5 (19)	13 (26)	10 (17)	4 (13)	56 (21)	30 (36)	1 (25)	2 (100)	2 (29)	35 (36)	91 (25)	
6	5	5	Japan	4 (44)	5 (28)	5 (12)	6 (18)	3 (12)	13 (26)	10 (17)	6 (19)	52 (19)	16 (19)	0 (0)	0 (0)	0 (0)	16 (16)	68 (18)	
8	7	6	Philippines	1 (11)	1 (6)	6 (14)	6 (18)	3 (12)	7 (14)	18 (30)	6 (19)	48 (18)	9 (11)	0 (0)	0 (0)	1 (14)	10 (10)	58 (16)	
5	6	7	Cambodia	1 (11)	1 (6)	4 (9)	4 (12)	2 (8)	11 (22)	2 (3)	6 (19)	31 (11)	15 (18)	1 (25)	2 (100)	1 (14)	19 (20)	50 (14)	
7	9	8	Malaysia	1 (11)	2 (11)	6 (14)	5 (15)	4 (15)	5 (10)	8 (13)	4 (13)	35 (13)	11 (13)	1 (25)	0 (0)	1 (14)	13 (13)	48 (13)	
11	11	9	China	1 (11)	2 (11)	7 (16)	0 (0)	0 (0)	10 (20)	6 (10)	8 (26)	34 (13)	9 (11)	0 (0)	0 (0)	0 (0)	9 (9)	43 (12)	
10	8	10	USA	2 (22)	3 (17)	3 (7)	5 (15)	3 (12)	8 (16)	5 (8)	10 (32)	39 (14)	3 (4)	1 (25)	0 (0)	0 (0)	4 (4)	43 (12)	
12	12	11	Europe	1 (11)	5 (28)	3 (7)	4 (12)	4 (15)	10 (20)	8 (13)	5 (16)	40 (15)	2 (2)	0 (0)	0 (0)	1 (14)	3 (3)	43 (12)	
9	10	12	Laos	1 (11)	1 (6)	7 (16)	5 (15)	2 (8)	6 (12)	1 (2)	5 (16)	28 (10)	13 (15)	0 (0)	1 (50)	0 (0)	14 (14)	42 (11)	
13	13	13	Middle East	0 (0)	4 (22)	1 (2)	3 (9)	0 (0)	5 (10)	4 (7)	4 (13)	21 (8)	1 (1)	1 (25)	0 (0)	1 (14)	3 (3)	24 (7)	
14	14	14	Latin America	0 (0)	0 (0)	4 (9)	2 (6)	2 (8)	4 (8)	6 (10)	1 (3)	19 (7)	2 (2)	0 (0)	0 (0)	0 (0)	2 (2)	21 (6)	
15	17	15	Bangladesh	1 (11)	3 (17)	3 (7)	1 (3)	1 (4)	1 (2)	1 (2)	0 (0)	11 (4)	6 (7)	0 (0)	1 (50)	0 (0)	7 (7)	18 (5)	
19	16	16	Pakistan	0 (0)	0 (0)	4 (9)	1 (3)	1 (4)	2 (4)	5 (8)	0 (0)	13 (5)	4 (5)	0 (0)	0 (0)	0 (0)	4 (4)	17 (5)	
18	18	17	Singapore	1 (11)	0 (0)	3 (7)	1 (3)	3 (12)	1 (2)	1 (2)	2 (6)	12 (4)	2 (2)	0 (0)	0 (0)	0 (0)	2 (2)	14 (4)	
16	15	18	Africa	0 (0)	0 (0)	1 (2)	1 (3)	0 (0)	5 (10)	2 (3)	0 (0)	9 (3)	2 (2)	0 (0)	0 (0)	0 (0)	2 (2)	11 (3)	
17	18	18	Oceania	1 (11)	1 (6)	0 (0)	0 (0)	0 (0)	1 (2)	5 (8)	2 (6)	10 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	10 (3)	
20	20	20	Sri Lanka	0 (0)	1 (6)	0 (0)	1 (3)	0 (0)	1 (2)	1 (2)	0 (0)	4 (1)	1 (1)	0 (0)	0 (0)	0 (0)	1 (1)	5 (1)	
21	21	21	Russia	0 (0)	0 (0)	0 (0)	0 (0)	1 (4)	0 (0)	0 (0)	1 (3)	2 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (1)	
—	—	—	Others	0 (0)	1 (6)	0 (0)	0 (0)	1 (4)	0 (0)	0 (0)	0 (0)	2 (1)	3 (4)	0 (0)	0 (0)	0 (0)	3 (3)	5 (1)	
Total				25	48	126	88	67	146	171	100	771	224	9	6	16	255	1,026	
No. of firms				9	18	43	34	26	50	60	31	271	84	4	2	7	97	368 (100)	

Unit: No. of firms and (%)

7. EXCHANGE RATES USED FOR BUSINESS PLANS

(1) Thai Baht/ US dollar

Regarding the exchange rate used the business plans (Thai Baht/US Dollar), the predominant response is “A range between not less than 35.0 but less than 35.5” (37.5%), followed by “Not less than 34.0 but less than 34.5” (20.2%). The median rate is 35.00 for total. (Table 7-1).

(Table 7-1) Exchange rate used for business plans (Thai Baht/UD Dollar)

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

Industry Baht/US dollar	Manufacturing									Non-manufacturing				Grand 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	
Not less than 29 but less than 29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
Not less than 29.5 but less than 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
Not less than 30 but less than 30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
Not less than 30.5 but less than 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
Not less than 31 but less than 31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
Not less than 31.5 but less than 32	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
Not less than 32 but less than 32.5	0	0	0	1	0	0	1	1	3	0	0	1	1	4 (1.5)
Not less than 32.5 but less than 33	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
Not less than 33 but less than 33.5	0	1	0	1	2	0	1	2	7	4	1	0	5	12 (4.4)
Not less than 33.5 but less than 34	0	0	0	0	0	0	1	0	1	1	0	0	1	2 (0.7)
Not less than 34 but less than 34.5	1	3	7	4	8	6	4	8	41	14	0	0	14	55 (20.2)
Not less than 34.5 but less than 35	2	3	7	5	0	6	3	5	31	8	0	0	8	39 (14.3)
Not less than 35 but less than 35.5	3	5	18	11	5	14	5	9	70	26	2	4	32	102 (37.5)
Not less than 35.5 but less than 36	1	4	2	3	2	9	5	1	27	12	0	1	13	40 (14.7)
Not less than 36 but less than 36.5	0	1	0	0	1	3	2	0	7	5	0	1	6	13 (4.8)
Not less than 36.5 but less than 37	0	0	0	0	0	2	0	0	2	1	0	0	1	3 (1.1)
Not less than 37 but less than 37.5	0	0	1	0	0	0	0	0	1	1	0	0	1	2 (0.7)
Not less than 37.5 but less than 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
Not less than 38 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	17	35	25	18	40	22	26	190	72	3	7	82	272

Average	36.07	34.80	34.83	34.59	34.72	35.13	34.80	34.47	34.86	35.07	34.43	34.76	35.02	34.94
Median	35.00	35.00	35.00	35.00	34.20	35.00	35.00	34.55	35.00	35.00	35.00	35.00	35.00	35.00
Mode	35.00	35.00	35.00	35.00	34.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00

*(Note) The median indicates the value located at the center of the distribution excluding any deviation due to the number of respondents or the lowest/ highest value as much as possible.

At the time of the last survey

Industry Baht/US dollar	Manufacturing									Non-manufacturing				Grand 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	34.78	35.16	35.39	35.21	34.96	35.27	35.09	35.16	35.18	35.39	34.50	36.64	35.55	35.25
Median	35.00	35.00	35.50	35.30	35.00	35.35	35.00	35.00	35.10	35.50	34.50	37.00	35.50	35.10
Mode	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	#N/A	37.00	35.00	35.00

*(Note) The median indicates the value located at the center of distribution excluding any deviation due to the number of respondents or the lowest/ highest value as much as possible.

(2) Japanese Yen/ Thai Baht

Regarding the exchange rate used for business plans (Japanese Yen/ Thai Baht), the predominant response is “Not less than 3.2 but less than 3.3” (42.7%), followed by “Not less than 3.0 but less than 3.1” (23.2%), and “Not less than 3.1 but less than 3.2” (19.9%). The median rate is 3.20 for total. (*Table 7-2*).

(Table 7-2) Exchange rates used in business plans (Japanese Yen/Thai Baht)

Unit: JP Yen/Thai Baht, No. of firms (%)														
Industry Yen /Baht	Manufacturing									Non-manufacturing				Grand 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	
Not 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)
Not less than 2.7 but less than 2.8	0	0	1	0	0	0	1	0	2	0	0	0	0	2 (0.7)
Not less than 2.8 but less than 2.9	0	0	0	1	0	0	3	0	4	1	0	0	1	5 (1.9)
Not less than 2.9 but less than 3	1	3	1	1	1	1	3	0	11	2	0	1	3	14 (5.2)
Not less than 3 but less than 3.1	3	0	10	2	7	13	8	4	47	12	1	2	15	62 (23.2)
Not less than 3.1 but less than 3.2	2	4	4	2	1	8	9	10	40	12	0	1	13	53 (19.9)
Not less than 3.2 but less than 3.3	3	5	16	15	12	12	12	11	86	25	3	0	28	114 (42.7)
Not less than 3.3 but less than 3.4	0	3	2	7	1	3	3	1	20	5	0	1	6	26 (9.7)
Not less than 3.4 but less than 3.5	0	2	1	2	0	1	1	1	8	0	0	0	0	8 (3.0)
Not less than 3.5 but less than 3.6	0	0	1	0	0	0	0	1	2	0	0	1	1	3 (1.1)
Not less than 3.6 but less than 3.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
Not less than 3.7 but less than 3.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
Not less than 3.8 but less than 3.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
Not less than 3.9 but less than 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (0.0)
Not less than 4 but less than 4.1	0	0	0	0	1	0	0	0	1	0	0	0	0	1 (0.4)
No. of firms	8	14	34	28	22	37	33	28	204	54	4	5	63	267

Average	3.09	3.18	3.14	3.20	3.17	3.13	3.10	3.17	3.14	3.14	3.15	3.14	3.14	3.14
Median	3.10	3.20	3.20	3.21	3.20	3.10	3.11	3.18	3.20	3.20	3.20	3.08	3.20	3.20
Mode	3.20	3.20	3.20	3.20	3.20	3.00	3.20	3.20	3.20	3.20	3.20	#N/A	3.20	3.20

*(Note) The median indicates the value located at the center of distribution excluding deviation due to the number of respondents or the lowest/ highest value as much as possible.

At the time of the last survey

Industry Yen /Baht	Manufacturing									Non-manufacturing				Grand 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	3.22	3.17	3.25	3.21	3.22	3.19	3.24	3.24	3.22	3.25	3.22	3.13	3.23	3.22
Median	3.20	3.20	3.30	3.20	3.20	3.20	3.20	3.25	3.20	3.30	3.20	3.10	3.20	3.20
Mode	3.20	3.20	3.30	3.20	3.10	3.20	3.20	3.30	3.20	3.30	3.20	3.10	3.30	3.20

*(Note) The median indicates the value located at the center of distribution excluding any deviation due to the number of respondents or the lowest/ highest value as much as possible.

8. PROCUREMENT SOURCES FOR PARTS/ MATERIALS

Regarding the procurement sources in 2016 (simple average of the respondents), “ASEAN” accounts for 61.1%, of which 54.1% is “Thailand”. (Table 8-1).

As for the planned procurement sources in 2017, “ASEAN” accounts for 61.6%, of which 55.1% is “Thailand”, 1-point increase from the previous term. (Table 8-2)

(Table 8-1) Suppliers of parts and materials in 2016

Unit : %

Industry		ASEAN			Japan	China	Others	Total	No. of firms
			Thailand	ASEAN (Other than Thailand)					
Manufacturing	Food	82.2	81.4	0.8	13.1	3.2	1.5	100.0	8
	Textile	63.6	56.1	7.5	15.3	9.5	11.6	100.0	16
	Chemical	54.3	43.6	10.6	30.9	6.2	8.6	100.0	43
	Steel/Non-ferrous Metal	51.1	46.0	5.1	36.5	4.7	7.7	100.0	41
	General Machinery	51.7	48.3	3.5	43.7	4.2	0.4	100.0	26
	Electrical/Electronics Machinery	55.8	45.8	10.0	30.6	11.2	2.5	100.0	49
	Transportation Machinery	67.8	62.4	5.3	26.9	2.7	2.6	100.0	63
	Others	63.3	57.6	5.7	23.4	2.6	10.7	100.0	33
	Manufacturing sector total	61.2	55.2	6.1	27.5	5.5	5.7	100.0	279
Non-manufacturing	Trading	47.0	35.3	11.7	35.9	10.5	6.7	100.0	91
	Retail	50.0	34.0	16.0	49.0	1.0	0.0	100.0	5
	Construction/Civil Engineering	97.0	92.5	4.5	3.0	0.0	0.0	100.0	2
	Others	50.0	50.0	0.0	50.0	0.0	0.0	100.0	2
	Non-Manufacturing sector total	61.0	52.9	8.0	34.5	2.9	1.7	100.0	100
Total		61.1	54.1	7.1	31.0	4.2	3.7	100.0	379

*(Note) The ratio indicates the simple average of the respondents.

(Table 8-2) Suppliers of parts and materials in 2017

Unit : %

Industry		ASEAN			Japan	China	Others	Total	No. of firms
			Thailand	ASEAN (Other than Thailand)					
Manufacturing	Food	82.8	82.1	0.8	12.5	3.2	1.5	100.0	8
	Textile	64.3	56.3	7.9	13.5	10.8	11.4	100.0	16
	Chemical	55.8	45.0	10.8	29.2	6.4	8.6	100.0	43
	Steel/Non-ferrous Metal	52.0	48.0	4.0	33.3	5.8	8.9	100.0	41
	General Machinery	53.0	49.6	3.5	42.0	4.3	0.6	100.0	26
	Electrical/Electronics Machinery	56.4	47.0	9.5	29.5	11.3	2.7	100.0	47
	Transportation Machinery	68.0	63.2	4.8	26.8	2.5	2.7	100.0	60
	Others	60.8	55.8	5.0	26.4	2.5	10.3	100.0	34
	Manufacturing sector total	61.6	55.9	5.8	26.7	5.9	5.8	100.0	275
Non-manufacturing	Trading	47.9	35.0	12.9	35.0	10.8	6.3	100.0	91
	Retail	51.0	35.0	16.0	48.0	1.0	0.0	100.0	5
	Construction/Civil Engineering	97.0	97.0	0.0	3.0	0.0	0.0	100.0	2
	Others	50.0	50.0	0.0	50.0	0.0	0.0	100.0	2
	Non-Manufacturing sector total	61.5	54.3	7.2	34.0	2.9	1.6	100.0	100
Total		61.6	55.1	6.5	30.3	4.4	3.7	100.0	375

*(Note) Same as Table 8-1.

9. CHALLENGES FOR CORPORATE MANAGEMENT

Regarding the challenges for corporate management (check all that apply), the predominant response is “Severe competition by competitors” (71%), followed by “Increase in total labour cost” (37%), “Lack of human resources at engineer level” (29%), “Sluggish domestic demand” (26%), and “Surge in material prices” (26%).

By industry, the other major response by the Manufacturing sector is “Quality management” (33%), and by in the Non-manufacturing sector “Job hopping by employees” (27%) and “Lack of human resources at manager level” (23%). (Table 9).

(Table 9) Challenges for corporate management (check all that apply)

Last survey		This survey	Manufacturing									Non-manufacturing							Unit: No. of firms and (%)	
			Food	Textile	Chemical	Steel/ Non-ferrous Metal	General Machinery	Electrical/ Electronic Machinery	Transportation Machinery	Others	Manufacturing sector total	Trading	Retail	Finance/ Insurance	Construction/ Civil Engineering	Transportation/ Communication	Others	Non-manufacturing sector total	Grand total	
1	1	Excessive competition with competitors	6 (60)	14 (74)	34 (74)	29 (63)	22 (79)	46 (79)	52 (75)	26 (58)	229 (71)	71 (76)	8 (67)	20 (71)	38 (84)	21 (78)	32 (48)	190 (70)	419 (71)	
2	2	Increased in total labor cost	5 (50)	7 (37)	15 (33)	20 (43)	13 (46)	30 (52)	36 (52)	19 (42)	145 (45)	19 (20)	4 (33)	8 (29)	16 (36)	12 (44)	14 (21)	73 (27)	218 (37)	
5	3	Lack of human resources at engineer-level	1 (10)	8 (42)	17 (37)	15 (33)	17 (61)	25 (43)	33 (48)	18 (40)	134 (42)	9 (10)	0 (0)	0 (0)	22 (49)	1 (4)	4 (6)	36 (13)	170 (29)	
3	4	Sluggish domestic demand	2 (20)	8 (42)	9 (20)	14 (30)	15 (54)	13 (22)	27 (39)	1 (2)	89 (28)	33 (35)	1 (8)	4 (14)	19 (42)	6 (22)	5 (7)	68 (25)	157 (26)	
10	5	Surge in material prices	6 (60)	14 (74)	21 (46)	15 (33)	5 (18)	24 (41)	22 (32)	15 (33)	122 (38)	19 (20)	1 (8)	1 (4)	3 (7)	3 (11)	4 (6)	31 (11)	153 (26)	
9	6	Job hopping of employee	2 (20)	4 (21)	9 (20)	7 (15)	8 (29)	10 (17)	13 (19)	14 (31)	67 (21)	24 (26)	4 (33)	14 (50)	8 (18)	11 (41)	12 (18)	73 (27)	140 (24)	
4	7	Foreign exchange fluctuation	2 (20)	6 (32)	10 (22)	10 (22)	6 (21)	21 (36)	22 (32)	10 (22)	87 (27)	37 (39)	6 (50)	0 (0)	1 (2)	1 (4)	6 (9)	51 (19)	138 (23)	
7	8	Quality management	3 (30)	9 (47)	7 (15)	16 (35)	12 (43)	19 (33)	20 (29)	20 (44)	106 (33)	8 (9)	0 (0)	1 (4)	10 (22)	6 (22)	5 (7)	30 (11)	136 (23)	
6	9	Lack of human resources of manager-level	3 (30)	2 (11)	4 (9)	8 (17)	5 (18)	9 (16)	22 (32)	10 (22)	63 (20)	22 (23)	2 (17)	5 (18)	6 (13)	12 (44)	15 (22)	62 (23)	125 (21)	
8	10	Changes in products/ users' needs	3 (30)	7 (37)	8 (17)	7 (15)	5 (18)	15 (26)	14 (20)	8 (18)	67 (21)	22 (23)	1 (8)	5 (18)	3 (7)	2 (7)	10 (15)	43 (16)	110 (19)	
11	11	Lack of human resources of workers/ staffs-level	2 (20)	4 (21)	3 (7)	4 (9)	3 (11)	3 (5)	6 (9)	7 (16)	32 (10)	7 (7)	4 (33)	4 (14)	11 (24)	3 (11)	3 (4)	32 (12)	64 (11)	
12	12	Excessive employment	0 (0)	0 (0)	6 (13)	3 (7)	2 (7)	5 (9)	8 (12)	3 (7)	27 (8)	6 (6)	2 (17)	0 (0)	2 (4)	3 (11)	3 (4)	16 (6)	43 (7)	
13	13	Difficulty in collecting money from customers	0 (0)	1 (5)	2 (4)	0 (0)	0 (0)	3 (5)	1 (1)	2 (4)	9 (3)	8 (9)	0 (0)	1 (4)	5 (11)	0 (0)	1 (1)	15 (5)	24 (4)	
17	14	Employment condition in relation with in obtaining Visas and Work permits	1 (10)	0 (0)	2 (4)	1 (2)	1 (4)	0 (0)	0 (0)	0 (0)	5 (2)	7 (7)	1 (8)	0 (0)	2 (4)	0 (0)	3 (4)	13 (5)	18 (3)	
14	15	Excessive capital investment	0 (0)	1 (5)	0 (0)	5 (11)	0 (0)	1 (2)	5 (7)	2 (4)	14 (4)	1 (1)	0 (0)	0 (0)	0 (0)	1 (4)	1 (1)	3 (1)	17 (3)	
14	16	Increase in energy cost	1 (10)	1 (5)	4 (9)	4 (9)	1 (4)	2 (3)	3 (4)	0 (0)	16 (5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	16 (3)	
19	16	Environment protection measures	2 (20)	1 (5)	4 (9)	3 (7)	1 (4)	1 (2)	4 (6)	0 (0)	16 (5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	16 (3)	
16	18	Rent hike	1 (10)	0 (0)	2 (4)	0 (0)	1 (4)	0 (0)	0 (0)	0 (0)	4 (1)	4 (4)	1 (8)	3 (11)	1 (2)	0 (0)	0 (0)	9 (3)	13 (2)	
18	19	Difficulty in obtaining financial support	0 (0)	1 (5)	0 (0)	1 (2)	1 (4)	0 (0)	1 (1)	1 (2)	5 (2)	1 (1)	0 (0)	0 (0)	2 (4)	0 (0)	1 (1)	4 (1)	9 (2)	
19	20	Infringement of intellectual property rights	1 (10)	1 (5)	1 (2)	1 (2)	1 (4)	1 (2)	1 (1)	0 (0)	7 (2)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)	8 (1)	
19	21	Waste disposal	0 (0)	0 (0)	2 (4)	2 (4)	1 (4)	1 (2)	1 (1)	0 (0)	7 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	7 (1)	
22	22	Stable supply of electricity	0 (0)	2 (11)	1 (2)	0 (0)	0 (0)	1 (2)	0 (0)	1 (2)	5 (2)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)	6 (1)	
-	-	Others	1 (10)	2 (11)	2 (4)	3 (7)	0 (0)	1 (2)	3 (4)	0 (0)	12 (4)	2 (2)	0 (0)	1 (4)	3 (7)	4 (15)	4 (6)	14 (5)	26 (4)	
Total			42	93	163	168	120	231	294	157	1268	302	35	67	152	86	123	765	2,033	
No. of firms			10	19	46	46	28	58	69	45	321	94	12	28	45	27	67	273	594 (100)	

10. REQUESTS TO THE THAI GOVERNMENT

(1) Request to the Thai government

Regarding requests to the Thai Government (check all that apply), the predominant response is “Customs-related systems and their implementation” (51%), followed by, “Promotion of economic measures (Development of public infrastructure)” (50%), “Development of infrastructure in the Bangkok metropolitan area” (36%), “Maintenance of social security and safety” (35%), and “implementation of tax related-system” (29%), etc.

By industry, the other major responses by the Manufacturing sector are “Implementation of flood prevention measures” (31%), “Improvement of education/human resource development” (28%), and by the Non-manufacturing sector “Relaxation of the Foreign Business Act” (32%) and “Work permit/visa-related issues” (30%). (Table 10-1).

(Table 10-1) Requests to the Thai government (check all that apply)

Last survey	This survey		Manufacturing									Non-manufacturing							Grand total
			Food	Textile	Chemical	Steel/Non-ferrous Metal	General Machinery	Electrical/Electronic Machinery	Transportation Machinery	Others	Manufacturing sector total	Trading	Retail	Finance/Insurance	Construction/Civil Engineering	Transportation/Communication	Others	Non-manufacturing sector total	
2	1	Customs-related systems and their implementation	5 (50)	11 (58)	21 (46)	35 (76)	17 (61)	34 (59)	41 (59)	18 (40)	182 (57)	62 (66)	4 (33)	5 (18)	10 (22)	17 (63)	21 (31)	119 (44)	301 (51)
1	2	Promotion of economic measures (public infrastructure development etc.)	4 (40)	11 (58)	24 (52)	24 (52)	13 (46)	31 (53)	47 (68)	21 (47)	175 (55)	44 (47)	7 (58)	14 (50)	23 (51)	13 (48)	22 (33)	123 (45)	298 (50)
3	3	Development of transport infrastructure	6 (60)	10 (53)	14 (30)	16 (35)	11 (39)	17 (29)	21 (30)	16 (36)	111 (35)	30 (32)	5 (42)	11 (39)	16 (36)	12 (44)	27 (40)	101 (37)	212 (36)
4	4	Maintenance of social security and safety	4 (40)	7 (37)	10 (22)	14 (30)	12 (43)	22 (38)	34 (49)	12 (27)	115 (36)	32 (34)	5 (42)	11 (39)	15 (33)	8 (30)	20 (30)	91 (33)	206 (35)
5	5	Implementation of tax-related systems	2 (20)	1 (5)	10 (22)	10 (22)	13 (46)	17 (29)	27 (39)	13 (29)	93 (29)	27 (29)	3 (25)	10 (36)	14 (31)	9 (33)	14 (21)	77 (28)	170 (29)
9	5	Implementation of flood prevention measures	5 (50)	3 (16)	11 (24)	14 (30)	8 (29)	16 (28)	26 (38)	15 (33)	98 (31)	17 (18)	2 (17)	7 (25)	6 (13)	5 (19)	9 (13)	46 (17)	144 (24)
6	7	Improvement of education/human resource development	2 (20)	5 (26)	10 (22)	10 (22)	9 (32)	17 (29)	24 (35)	13 (29)	90 (28)	13 (14)	1 (8)	7 (25)	6 (13)	3 (11)	22 (33)	52 (19)	142 (24)
7	8	Promotion of economic ties e.g. FTA, EPA etc.	1 (10)	7 (37)	11 (24)	15 (33)	6 (21)	17 (29)	20 (29)	7 (16)	84 (26)	26 (28)	2 (17)	2 (7)	4 (9)	9 (33)	6 (9)	49 (18)	133 (22)
8	9	Relaxation of the Foreign Business Act	3 (30)	1 (5)	7 (15)	2 (4)	6 (21)	8 (14)	7 (10)	8 (18)	42 (13)	31 (33)	3 (25)	15 (54)	14 (31)	7 (26)	16 (24)	86 (32)	128 (22)
11	10	Work permit/visa-related issues	2 (20)	1 (5)	6 (13)	6 (13)	4 (14)	8 (14)	2 (3)	4 (9)	33 (10)	20 (21)	4 (33)	13 (46)	11 (24)	7 (26)	26 (39)	81 (30)	114 (19)
9	11	Logistical infrastructure development linking Thailand with neighboring countries (CLMV and India etc.)	2 (20)	6 (32)	15 (33)	4 (9)	3 (11)	13 (22)	7 (10)	7 (16)	57 (18)	21 (22)	1 (8)	1 (4)	4 (9)	8 (30)	7 (10)	42 (15)	99 (17)
14	12	Development of the communication infrastructure	0 (0)	3 (16)	5 (11)	7 (15)	7 (25)	11 (19)	6 (9)	5 (11)	44 (14)	11 (12)	2 (17)	4 (14)	12 (27)	5 (19)	13 (19)	47 (17)	91 (15)
12	13	Stability in foreign exchange rates	2 (20)	4 (21)	8 (17)	6 (13)	3 (11)	16 (28)	11 (16)	7 (16)	57 (18)	21 (22)	2 (17)	1 (4)	2 (4)	0 (0)	5 (7)	31 (11)	88 (15)
13	14	Continuity of government policies	0 (0)	1 (5)	8 (17)	10 (22)	5 (18)	11 (19)	12 (17)	6 (13)	53 (17)	9 (10)	2 (17)	2 (7)	9 (20)	0 (0)	6 (9)	28 (10)	81 (14)
15	15	Prevention of labor disputes	1 (10)	2 (11)	5 (11)	9 (20)	4 (14)	5 (9)	19 (28)	3 (7)	48 (15)	3 (3)	0 (0)	1 (4)	1 (2)	5 (19)	3 (4)	13 (5)	61 (10)
18	16	Promotion of employment of foreign labour	1 (10)	1 (5)	1 (2)	4 (9)	1 (4)	9 (16)	3 (4)	2 (4)	22 (7)	3 (3)	2 (17)	1 (4)	12 (27)	1 (4)	9 (13)	28 (10)	50 (8)
17	17	Protection of intellectual property rights	1 (10)	0 (0)	3 (7)	2 (4)	2 (7)	4 (7)	3 (4)	5 (11)	20 (6)	7 (7)	0 (0)	3 (11)	1 (2)	4 (15)	7 (10)	22 (8)	42 (7)
16	18	Implementation of drought control measures	2 (20)	0 (0)	5 (11)	2 (4)	2 (7)	3 (5)	4 (6)	6 (13)	24 (7)	8 (9)	0 (0)	1 (4)	0 (0)	0 (0)	2 (3)	11 (4)	35 (6)
19	19	Promotion of regional operating headquarters function (e.g. IHQ, ITC)	0 (0)	2 (11)	0 (0)	0 (0)	0 (0)	5 (9)	4 (6)	2 (4)	13 (4)	4 (4)	2 (17)	1 (4)	0 (0)	0 (0)	5 (7)	12 (4)	25 (4)
-	-	Others	1 (10)	0 (0)	4 (9)	2 (4)	0 (0)	1 (2)	4 (6)	1 (2)	13 (4)	3 (3)	0 (0)	2 (7)	0 (0)	0 (0)	2 (3)	7 (3)	20 (3)
Total			44	76	178	192	126	265	322	171	1374	392	47	112	160	113	242	1066	2,440
No. of firms			10	19	46	46	28	58	69	45	321	94	12	28	45	27	67	273	594 (100)

Unit: No. of firms and (%)

(2) Recent improvement in policy on Corporate Investment environment (Policy evaluation)

Regarding the recent improvement of the Government's policies, the predominant responses are “Promotion of economic measures (public infrastructure development etc.)” (27%), followed by “Maintenance of social security and safety” (20%), “Promotion of regional operating headquarters function (e.g. IHQ, ITC)” (17%), “Stability in foreign exchange rates” (16%) and “Development of the communication infrastructure” (14%). (*Table 10-2*).

(Table 10-2) Recent improvement of the Government's policies (check all that apply)

This Survey		Unit: No. of firms and (%)																	
		Manufacturing									Non-manufacturing								Grand total
		Food	Textile	Chemical	Steel/ Non-ferrous Metal	General Machinery	Electrical/ Electronic Machinery	Transportation Machinery	Others	Manufacturing sector total	Trading	Retail	Finance/ Insurance	Construction/ Civil Engineering	Transportation/ Communication	Others	Non-manufacturing sector total		
1	Promotion of economic measures (public infrastructure development etc.)	1 (14)	3 (20)	12 (36)	9 (32)	5 (31)	11 (24)	18 (32)	5 (18)	64 (28)	23 (32)	0 (0)	8 (40)	9 (26)	5 (24)	7 (14)	52 (25)	116 (27)	
2	Maintenance of social security and safety	3 (43)	3 (20)	6 (18)	5 (18)	7 (44)	13 (28)	10 (18)	4 (14)	51 (22)	11 (15)	0 (0)	5 (25)	8 (23)	3 (14)	9 (18)	36 (17)	87 (20)	
3	Promotion of regional operating headquarters function (e.g. IHQ, ITC)	1 (14)	2 (13)	6 (18)	3 (11)	0 (0)	15 (33)	7 (12)	5 (18)	39 (17)	19 (26)	0 (0)	4 (20)	1 (3)	2 (10)	9 (18)	35 (17)	74 (17)	
4	Stability in foreign exchange rates	3 (43)	2 (13)	10 (30)	5 (18)	3 (19)	9 (20)	4 (7)	6 (21)	42 (18)	11 (15)	0 (0)	3 (15)	4 (11)	2 (10)	6 (12)	26 (13)	68 (16)	
5	Development of the communication infrastructure	1 (14)	4 (27)	5 (15)	3 (11)	3 (19)	10 (22)	7 (12)	3 (11)	36 (16)	9 (12)	2 (25)	1 (5)	4 (11)	3 (14)	6 (12)	25 (12)	61 (14)	
5	Development of transport infrastructure in the Bangkok metropolitan area	0 (0)	4 (27)	6 (18)	4 (14)	1 (6)	4 (9)	7 (12)	5 (18)	31 (13)	7 (10)	1 (13)	1 (5)	3 (9)	1 (5)	5 (10)	18 (9)	49 (11)	
7	Work permit/visa-related issues	0 (0)	2 (13)	6 (18)	2 (7)	2 (13)	6 (13)	9 (16)	3 (11)	30 (13)	7 (10)	0 (0)	0 (0)	2 (6)	3 (14)	3 (6)	15 (7)	45 (10)	
8	Customs-related systems and their implementation	0 (0)	0 (0)	1 (3)	3 (11)	4 (25)	5 (11)	9 (16)	1 (4)	23 (10)	9 (12)	1 (13)	1 (5)	2 (6)	3 (14)	3 (6)	19 (9)	42 (10)	
9	Promotion of economic ties e.g. FTA, EPA etc.	2 (29)	1 (7)	6 (18)	3 (11)	0 (0)	6 (13)	7 (12)	1 (4)	26 (11)	8 (11)	1 (13)	1 (5)	1 (3)	1 (5)	3 (6)	15 (7)	41 (9)	
10	Continuity of government policies	1 (14)	1 (7)	3 (9)	3 (11)	2 (13)	1 (2)	4 (7)	4 (14)	19 (8)	9 (12)	1 (13)	0 (0)	5 (14)	2 (10)	4 (8)	21 (10)	40 (9)	
11	Logistical infrastructure development linking Thailand with neighboring countries(CLMV and India etc.)	0 (0)	1 (7)	4 (12)	2 (7)	1 (6)	3 (7)	4 (7)	4 (14)	19 (8)	4 (5)	3 (38)	3 (15)	3 (9)	2 (10)	5 (10)	20 (10)	39 (9)	
12	Implementation of tax-related systems	0 (0)	1 (7)	4 (12)	0 (0)	4 (25)	4 (9)	5 (9)	1 (4)	19 (8)	7 (10)	1 (13)	1 (5)	3 (9)	0 (0)	6 (12)	18 (9)	37 (8)	
13	Implementation of flood prevention measures	0 (0)	0 (0)	2 (6)	2 (7)	0 (0)	7 (15)	8 (14)	4 (14)	23 (10)	3 (4)	0 (0)	1 (5)	3 (9)	2 (10)	1 (2)	10 (5)	33 (8)	
14	Improvement of education/human resource development	1 (14)	0 (0)	2 (6)	2 (7)	1 (6)	4 (9)	5 (9)	1 (4)	16 (7)	2 (3)	0 (0)	0 (0)	0 (0)	1 (5)	3 (6)	6 (3)	22 (5)	
15	Prevention of labor disputes	0 (0)	0 (0)	2 (6)	0 (0)	3 (19)	4 (9)	3 (5)	1 (4)	13 (6)	2 (3)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	3 (1)	16 (4)	
16	Promotion of employment of foreign labour	0 (0)	0 (0)	1 (3)	0 (0)	1 (6)	3 (7)	1 (2)	1 (4)	7 (3)	2 (3)	1 (13)	0 (0)	1 (3)	0 (0)	3 (6)	7 (3)	14 (3)	
17	Implementation of drought control measures	0 (0)	0 (0)	1 (3)	2 (7)	1 (6)	0 (0)	4 (7)	0 (0)	8 (3)	1 (1)	0 (0)	1 (5)	1 (3)	2 (10)	1 (2)	6 (3)	14 (3)	
18	Relaxation of the Foreign Business Act	0 (0)	0 (0)	4 (12)	0 (0)	1 (6)	1 (2)	1 (2)	0 (0)	7 (3)	1 (1)	1 (13)	1 (5)	0 (0)	0 (0)	0 (0)	3 (1)	10 (2)	
19	Protection of intellectual property rights	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	3 (5)	0 (0)	4 (2)	0 (0)	0 (0)	0 (0)	1 (3)	1 (5)	0 (0)	2 (1)	6 (1)	
-	Others	0 (0)	1 (7)	1 (3)	6 (21)	0 (0)	1 (2)	3 (5)	0 (0)	12 (5)	3 (4)	0 (0)	3 (15)	3 (9)	2 (10)	2 (4)	13 (6)	25 (6)	
TotalqI		13	25	82	54	39	108	119	49	489	138	12	34	55	35	76	350	839	
No. of firms		7	15	33	28	16	46	57	28	230	73	8	20	35	21	49	206	436 (100)	

11. EASTERN ECONOMIC CORRIDOR (EEC)

(1) Additional investment plan in EEC

Regarding additional investment plan, “We have a specific plan (to make additional investments)” responded for 5%, “We have a great interest in additional investment etc. (although there is no specific plan to do so) is 9%”, “We have a certain degree of additional investment” is 25% and “Not sure” is 34%. While “We have no interest in additional investment” responded 26%. (Table 11-1).

(Table 11-1) Investment plan for the EEC

Unit: No. of firms and (%)												
Industry		We have a specific plan (to make an additional investments etc.)		We have a great interest in additional investment etc. (although there is no specific plan to do so)		We have a certain degree of in an additional investment etc.		Not sure		We have no interest in an additional investment etc.		No. of firms
Manufacturing	Food	0	(0)	0	(0)	0	(0)	5	(50)	5	(50)	10
	Textile	0	(0)	0	(0)	3	(16)	10	(53)	6	(32)	19
	Chemical	4	(8)	4	(8)	8	(17)	21	(44)	11	(23)	48
	Steel/Non-ferrous Metal	2	(4)	2	(4)	14	(30)	14	(30)	14	(30)	46
	General Machinery	1	(4)	1	(4)	9	(33)	6	(22)	10	(37)	27
	Electrical/Electronics Machinery	2	(3)	3	(5)	6	(10)	27	(47)	20	(34)	58
	Transportation Machinery	5	(7)	2	(3)	19	(27)	22	(31)	22	(31)	70
	Others	4	(18)	1	(5)	13	(59)	0	(0)	4	(18)	22
	Manufacturing sector total	18	(6)	13	(4)	72	(24)	105	(35)	92	(31)	300
Non-manufacturing	Trading	2	(2)	10	(11)	27	(29)	33	(35)	21	(23)	93
	Retail	1	(8)	0	(0)	2	(17)	5	(42)	4	(33)	12
	Finance/Insurance/Securities	1	(5)	3	(14)	7	(32)	5	(23)	6	(27)	22
	Construction/Civil Engineering	2	(6)	6	(18)	7	(21)	11	(32)	8	(24)	34
	Transportation/ Communication	2	(5)	5	(12)	9	(21)	20	(47)	7	(16)	43
	Others	2	(7)	9	(30)	11	(37)	5	(17)	3	(10)	30
	Non-Manufacturing sector total	10	(4)	33	(14)	63	(27)	79	(34)	49	(21)	234
	Total	28	(5)	46	(9)	135	(25)	184	(34)	141	(26)	534

(2) EEC policies' effectiveness (check all that apply)

Regarding effective EEC measures, the predominant responses were “Improvement of the transport infrastructure at an early stage (construction of a high-speed railway and highway between Bangkok and the EEC)” is 26%, followed by , “Relaxation of regulations concerning authorisation procedures (deregulation, introduction of fast-track administrative procedures, etc.)” is 18% and “Improvement of airports and seaports (such as expansion of U-Tapao Airport and Laem Chabang Port)” is 17%. (Table 11-2).

(Table 11-2) Effective EEC measures

		Unit: No. of firms and (%)															
This Survey		Manufacturing									Non-manufacturing						Grand 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	Improvement of the transport infrastructure at an early stage (construction of a high-speed railway and highway between Bangkok and the EEC)	0 (0)	2 (29)	12 (27)	12 (25)	8 (25)	7 (22)	18 (22)	15 (39)	74 (26)	26 (24)	3 (17)	12 (27)	14 (39)	23 (26)	78 (27)	152 (26)
2	Relaxation of regulations concerning authorization procedures (deregulation, introduction of fast track in administrative procedures, etc.)	0 (0)	2 (29)	8 (18)	10 (21)	3 (9)	6 (19)	12 (15)	7 (18)	48 (17)	23 (21)	3 (17)	9 (20)	4 (11)	16 (18)	55 (19)	103 (18)
3	Improvement of an airport and seaport (expansion of U-tapao Airport and Laem Chabang Port)	0 (0)	1 (14)	8 (18)	11 (23)	5 (16)	3 (9)	14 (17)	7 (18)	49 (17)	14 (13)	2 (11)	9 (20)	10 (28)	12 (13)	47 (16)	96 (17)
4	Tax incentive for high-skilled workers	0 (0)	0 (0)	4 (9)	5 (10)	6 (19)	2 (6)	10 (12)	4 (11)	31 (11)	8 (7)	2 (11)	2 (5)	1 (3)	8 (9)	21 (7)	52 (9)
5	Provision of opportunities to introduce and demonstrate various target advanced technology and business models (IOT, robots, automated driving, etc.)	0 (0)	0 (0)	1 (2)	2 (4)	3 (9)	4 (13)	7 (9)	0 (0)	17 (6)	14 (13)	2 (11)	3 (7)	2 (6)	12 (13)	33 (11)	50 (9)
6	Provision of subsidies for state-of-art technology (R&D)	0 (0)	1 (14)	5 (11)	0 (0)	2 (6)	5 (16)	8 (10)	2 (5)	23 (8)	10 (9)	3 (17)	4 (9)	1 (3)	5 (6)	23 (8)	46 (8)
7	Centralization of administrative functions (administrative functions (delegation of authority from the existing authority to the EEC office, One-stop service center, etc.)	0 (0)	0 (0)	4 (9)	5 (10)	3 (9)	3 (9)	7 (9)	2 (5)	24 (9)	9 (8)	2 (11)	1 (2)	2 (6)	7 (8)	21 (7)	45 (8)
8	Implementation of projects to develop academic research facilities, tourist facilities, etc. run by the government as a main organizer	0 (0)	1 (14)	2 (5)	2 (4)	2 (6)	2 (6)	4 (5)	1 (3)	14 (5)	3 (3)	1 (6)	3 (7)	1 (3)	5 (6)	13 (4)	27 (5)
Total		0	9	55	55	39	42	100	38	343	129	24	52	40	106	351	694
No. of firms		0	7	44	48	32	32	81	38	282	107	18	44	36	89	294	576 (100)

12. R&D SITES and TECHNICAL CENTRES

(1) Establishment of R&D sites and Technical Centres (check all that apply)

Regarding establishment of R&D and Technical Centres in Thailand, 9% of the firms responded as “Already established”, 4% “Under consideration”, and the rest of 86% “Not being considered”. (Table 12-1).

(Table 12-1) Establishment of R&D and Technical Centres

Unit: No. of firms and (%)

Industry		Already established	Under consideration	Not being considered	Others	No. of firms
Manufacturing	Food	4 (40)	0 (0)	6 (60)	0 (0)	10
	Textile	2 (11)	2 (11)	13 (72)	1 (6)	18
	Chemical	12 (26)	0 (0)	33 (72)	1 (2)	46
	Steel/Non-ferrous Metal	2 (4)	0 (0)	43 (96)	0 (0)	45
	General Machinery	0 (0)	0 (0)	27 (96)	1 (4)	28
	Electrical/Electronics Machinery	5 (9)	7 (12)	43 (75)	2 (4)	57
	Transportation Machinery	17 (26)	7 (11)	42 (64)	0 (0)	66
	Others	6 (14)	2 (5)	35 (81)	0 (0)	43
Manufacturing sector total		48 (15)	18 (6)	242 (77)	5 (2)	313
Non-manufacturing	Trading	1 (1)	3 (3)	88 (95)	1 (1)	93
	Retail	0 (0)	0 (0)	12 (100)	0 (0)	12
	Finance/Insurance/Securities	0 (0)	0 (0)	23 (100)	0 (0)	23
	Construction/Civil Engineering	2 (5)	0 (0)	42 (95)	0 (0)	44
	Transportation/ Communication	0 (0)	0 (0)	26 (100)	0 (0)	26
	Others	0 (0)	0 (0)	61 (97)	2 (3)	63
	Non-Manufacturing sector total	3 (1)	3 (1)	252 (97)	3 (1)	261
Total		51 (9)	21 (4)	494 (86)	8 (1)	574

Regarding the purpose of such establishments (check-all-that-apply question), predominant responses are “Development of products suitable for the ASEAN market” is 54% followed by, “Development of products suitable for the Thai market” is 49% and, “Training of engineers” is 47%. (Table 12-2).

By the Manufacturing sector, the predominant response is “Improvement of production technology (efficiency)” which responded as 45%.

Note) Responses are only from firms that responded “Already established” and “Under consideration” to Question 12-1.

(Table 12-2) Purpose for establishment of R&D/ Technical Centres

Unit: No. of firms and (%)

This Survey		Manufacturing									Non-manufacturing			Grand total
		Food	Textile	Chemical	Steel/Non-ferrous Metal	General Machinery	Electrical/Electronic Machinery	Transportation Machinery	Others	Manufacturing sector total	Trading	Construction/Civil Engineering	Non-manufacturing sector total	
1	Development of products suitable to ASEAN markets	0 (0)	4 (100)	6 (50)	1 (50)	0 (0)	7 (58)	15 (63)	0 (0)	37 (56)	1 (25)	1 (50)	2 (33)	39 (54)
2	Development of products suitable to Thai markets	2 (50)	2 (50)	6 (50)	3 (150)	0 (0)	6 (50)	12 (50)	0 (0)	34 (52)	1 (25)	0 (0)	1 (17)	35 (49)
3	Training of engineers	1 (25)	2 (50)	4 (33)	1 (50)	0 (0)	9 (75)	9 (38)	0 (0)	29 (44)	3 (75)	2 (100)	5 (83)	34 (47)
4	Improvement of production technology (efficiency)	2 (50)	3 (75)	6 (50)	1 (50)	0 (0)	7 (58)	7 (29)	0 (0)	30 (45)	0 (0)	1 (50)	1 (17)	31 (43)
5	Technology transfer	0 (0)	3 (75)	3 (25)	0 (0)	0 (0)	3 (25)	4 (17)	0 (0)	15 (23)	0 (0)	0 (0)	0 (0)	15 (21)
6	Joint development with business partners	0 (0)	2 (50)	2 (17)	0 (0)	0 (0)	1 (8)	7 (29)	0 (0)	12 (18)	2 (50)	0 (0)	2 (33)	14 (19)
7	Information gathering	0 (0)	0 (0)	0 (0)	1 (50)	0 (0)	1 (8)	6 (25)	0 (0)	8 (12)	0 (0)	0 (0)	0 (0)	8 (11)
8	Applied research	1 (25)	2 (50)	2 (17)	0 (0)	0 (0)	1 (8)	0 (0)	0 (0)	6 (9)	1 (25)	0 (0)	1 (17)	7 (10)
9	Basic research	0 (0)	1 (25)	0 (0)	1 (50)	0 (0)	1 (8)	0 (0)	0 (0)	5 (8)	1 (25)	0 (0)	1 (17)	6 (8)
10	Innovative product development	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
-	Others	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (8)	5 (21)	0 (0)	6 (9)	1 (25)	1 (50)	2 (33)	8 (11)
Total		6	19	29	8	0	36	60	0	176	9	4	13	189
No. of firms		4	4	12	2	0	12	24	8	66	4	2	6	72 (100)

(2) Important factors for establishment/ operation of R&D and Technical Centres (check all that apply)

Regarding important factors for establishment/ operation of the R&D and Technical Centres, the predominant response is “Extensive development of Thai human resources through provision of basic education, vocational training, etc.” (43%), followed by “Development of Thai researchers in terms of quality and quantity, through expansion of masters and doctors programmes, support for overseas education, personnel exchange among researchers,” (25%), and “Increase in public awareness regarding the importance of craftsmanship, science, and technology” (20%). (Table 12-3).

(Table 12-3)) Important factors for establishment/ operation of R&D and Technical Centres (check all that apply)

Unit: No. of firms and (%)

This survey		Manufacturing									Non-manufacturing						Grand 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	Extensive development of Thai human resources through provision of basic education, vocational training, etc.	4 (40)	9 (50)	21 (46)	16 (36)	16 (57)	33 (58)	35 (53)	0 (0)	155 (50)	26 (28)	5 (42)	20 (45)	9 (35)	31 (36)	91 (35)	246 (43)
2	Development of Thai researchers in terms of quality and quantity, through expansion of the master's and doctor's programs, support for overseas education, personnel exchange among researchers, etc.	1 (10)	5 (28)	12 (26)	14 (31)	5 (18)	24 (42)	18 (27)	0 (0)	90 (29)	14 (15)	3 (25)	8 (18)	4 (15)	22 (26)	51 (20)	141 (25)
3	Increase in public awareness regarding the importance of craftsmanship, science and technology	1 (10)	5 (28)	14 (30)	10 (22)	6 (21)	20 (35)	20 (30)	0 (0)	86 (27)	13 (14)	2 (17)	4 (9)	1 (4)	9 (10)	29 (11)	115 (20)
4	Encouragement of foreign researchers to flow into Thailand through relaxation of visa application requirements, personal income tax incentives, etc.	1 (10)	2 (11)	8 (17)	6 (13)	8 (29)	14 (25)	9 (14)	0 (0)	55 (18)	17 (18)	3 (25)	11 (25)	0 (0)	12 (14)	43 (16)	98 (17)
5	Enhancement of cooperation between industrial enterprises and universities through joint research projects	2 (20)	3 (17)	6 (13)	5 (11)	9 (32)	13 (23)	12 (18)	0 (0)	56 (18)	12 (13)	2 (17)	9 (20)	1 (4)	14 (16)	38 (15)	94 (16)
6	Institutional improvement through deregulation etc. in order to facilitate R&D and experimentation.	0 (0)	2 (11)	8 (17)	2 (4)	4 (14)	11 (19)	10 (15)	0 (0)	42 (13)	15 (16)	3 (25)	2 (5)	2 (8)	8 (9)	30 (11)	72 (13)
7	Expansion of basic research and increase in research investment at Thai universities and research institutes	2 (20)	2 (11)	8 (17)	3 (7)	5 (18)	7 (12)	15 (23)	0 (0)	48 (15)	8 (9)	2 (17)	2 (5)	0 (0)	9 (10)	21 (8)	69 (12)
8	Tighter protection of intellectual property rights through speedy patent examination and law enforcement against violators	1 (10)	0 (0)	5 (11)	7 (16)	6 (21)	5 (9)	9 (14)	0 (0)	38 (12)	13 (14)	3 (25)	4 (9)	1 (4)	6 (7)	27 (10)	65 (11)
8	Improvement of access (transportation) to mass-production sites, related companies etc.	0 (0)	2 (11)	7 (15)	5 (11)	5 (18)	7 (12)	12 (18)	0 (0)	46 (15)	4 (4)	2 (17)	2 (5)	2 (8)	3 (3)	13 (5)	59 (10)
10	Encouragement of overseas universities to open in Thailand	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	4 (7)	1 (2)	0 (0)	6 (2)	0 (0)	1 (8)	2 (5)	0 (0)	0 (0)	3 (1)	9 (2)
11	Others	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	3 (5)	0 (0)	4 (1)	1 (1)	0 (0)	0 (0)	1 (4)	1 (1)	3 (1)	7 (1)
Total		12	30	90	69	64	138	144	0	626	123	26	64	21	115	349	975
No. of firms		10	18	46	45	28	57	66	43	313	93	12	44	26	86	261	574 (100)

13. BUSINESS DEVELOPMENT TO NEIGHBOURING COUNTRIES FROM THAILAND

(1) Expansion to neighbouring countries from Thailand

Regarding business expansion into countries neighbouring Thailand, the response is “Already established” (20%) and “Plan to establish” (10%). 54% of the firms responded as “No plan to establish” and 16% “Not sure”. (Table 13-1).

(Table 13-1) Business expansion into neighbouring countries

Unit: No. of firms and (%)

Industry		Already established	Have a plan to establish	No plan to establish	Not sure	No. of firms
Manufacturing	Food	2 (20)	0 (0)	6 (60)	2 (20)	10
	Textile	3 (16)	2 (11)	10 (53)	4 (21)	19
	Chemical	8 (18)	4 (9)	29 (64)	4 (9)	45
	Steel/Non-ferrous Metal	8 (18)	2 (5)	29 (66)	5 (11)	44
	General Machinery	4 (15)	4 (15)	15 (56)	4 (15)	27
	Electrical/Electronics Machinery	10 (18)	3 (5)	35 (61)	9 (16)	57
	Transportation Machinery	17 (25)	3 (4)	43 (62)	6 (9)	69
	Others	9 (20)	8 (18)	20 (45)	7 (16)	44
Manufacturing sector total		61 (19)	26 (8)	187 (59)	41 (13)	315
Non-manufacturing	Trading	19 (21)	10 (11)	44 (48)	19 (21)	92
	Retail	0 (0)	1 (9)	8 (73)	2 (18)	11
	Finance/Insurance/Securities	4 (15)	2 (8)	14 (54)	6 (23)	26
	Construction/Civil Engineering	13 (30)	6 (14)	22 (50)	3 (7)	44
	Transportation/ Communication	11 (44)	3 (12)	5 (20)	6 (24)	25
	Others	8 (12)	12 (18)	32 (49)	13 (20)	65
	Non-Manufacturing sector total	55 (21)	34 (13)	125 (48)	49 (19)	263
Total		116 (20)	60 (10)	312 (54)	90 (16)	578

(2) In what countries to establish or plan to establish the business site (check all that apply)

Regarding countries that have already expanded into or have targeted countries for future business expansion (check all that apply), the predominant response is “Vietnam” (52%), followed by “Indonesia” (45%) and “Myanmar” (40%). (Table 13-2).

Note) Responses are only from firms responded “Already established” and “Have a plan to establish” in Question 13-1.

(Table 13-2) Target countries for business expansion (check all that apply)

Unit: No. of firms and (%)

This Survey		Manufacturing									Non-manufacturing						Grand 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	Vietnam	1 (50)	2 (40)	9 (75)	5 (50)	3 (38)	7 (54)	9 (45)	6 (35)	42 (48)	15 (52)	1 (100)	7 (37)	12 (86)	15 (58)	50 (56)	92 (52)
2	Indonesia	1 (50)	1 (20)	5 (42)	6 (60)	3 (38)	3 (23)	18 (90)	5 (29)	42 (48)	14 (48)	0 (0)	7 (37)	9 (64)	7 (27)	37 (42)	79 (45)
3	Myanmar	1 (50)	0 (0)	1 (8)	2 (20)	2 (25)	6 (46)	3 (15)	6 (35)	21 (24)	8 (28)	1 (100)	15 (79)	10 (71)	15 (58)	49 (55)	70 (40)
4	China	0 (0)	0 (0)	3 (25)	3 (30)	3 (38)	3 (23)	11 (55)	4 (24)	27 (31)	11 (38)	0 (0)	3 (16)	8 (57)	10 (38)	32 (36)	59 (34)
5	India	0 (0)	1 (20)	4 (33)	3 (30)	4 (50)	3 (23)	10 (50)	3 (18)	28 (32)	11 (38)	0 (0)	3 (16)	5 (36)	6 (23)	25 (28)	53 (30)
6	Cambodia	1 (50)	2 (40)	0 (0)	0 (0)	0 (0)	3 (23)	4 (20)	3 (18)	13 (15)	7 (24)	1 (100)	5 (26)	8 (57)	9 (35)	30 (34)	43 (24)
7	Malaysia	0 (0)	0 (0)	3 (25)	3 (30)	0 (0)	3 (23)	3 (15)	4 (24)	16 (18)	9 (31)	0 (0)	4 (21)	6 (43)	6 (23)	25 (28)	41 (23)
8	Singapore	0 (0)	0 (0)	3 (25)	0 (0)	0 (0)	3 (23)	2 (10)	2 (12)	10 (11)	9 (31)	0 (0)	5 (26)	6 (43)	6 (23)	26 (29)	36 (20)
9	Philippines	0 (0)	0 (0)	1 (8)	1 (10)	1 (13)	1 (8)	5 (25)	2 (12)	11 (13)	7 (24)	0 (0)	3 (16)	7 (50)	3 (12)	20 (22)	31 (18)
10	Laos	1 (50)	1 (20)	0 (0)	2 (20)	1 (13)	3 (23)	1 (5)	3 (18)	12 (14)	3 (10)	0 (0)	4 (21)	3 (21)	4 (15)	14 (16)	26 (15)
11	Bangladesh	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	3 (10)	0 (0)	0 (0)	2 (14)	0 (0)	5 (6)	6 (3)
12	Others	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (7)	0 (0)	1 (1)	1 (1)
Total		4	6	29	23	16	32	65	35	210	91	3	52	71	77	294	504
No. of firms		2	5	12	10	8	13	20	17	87	29	1	19	14	26	89	176 (100)

(3) Reasons to expand to the neighbouring countries (check all that apply)

Regarding the reasons for business expansion into neighbouring countries, the predominant responses are “Slowdown in growth of the domestic market in Thailand” (30%), followed by “None” (25%) and “Increase in labour cost” (24%). (Table 13-3①).

Regarding the reasons for choosing the country for expansion (check all that apply), the predominant responses are “Growth of the domestic market in the relevant neighbouring country” (63%), followed by “Lower labor cost” (30%) and “Easy access from Thailand” (27%). (Table 13-3②).

Note) Responses are only from the firms responding as “Already established” and “Have a plan to establish” to Question 14-1.

(Table 13-3①) Reasons for business expansion into neighbouring countries (check all that apply)

Unit: No. of firms and (%)

This Survey		Manufacturing									Non-manufacturing						Grand 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	Slowdown in the growth of the domestic market in Thailand	1 (50)	2 (40)	6 (50)	5 (50)	3 (38)	4 (31)	8 (38)	5 (28)	34 (38)	3 (10)	0 (0)	6 (30)	2 (14)	8 (38)	19 (22)	53 (30)
2	None	0 (0)	1 (20)	3 (25)	2 (20)	1 (13)	0 (0)	2 (10)	5 (28)	14 (16)	9 (31)	1 (100)	5 (25)	8 (57)	6 (29)	29 (34)	43 (25)
3	Increase in labor cost	1 (50)	4 (80)	3 (25)	4 (40)	1 (13)	5 (38)	7 (33)	4 (22)	29 (33)	4 (14)	0 (0)	5 (25)	1 (7)	3 (14)	13 (15)	42 (24)
4	Shortage of labor force	1 (50)	1 (20)	0 (0)	2 (20)	0 (0)	1 (8)	2 (10)	2 (11)	9 (10)	0 (0)	0 (0)	1 (5)	0 (0)	2 (10)	3 (4)	12 (7)
5	Risk diversification (flooding)	0 (0)	0 (0)	1 (8)	3 (30)	1 (13)	0 (0)	2 (10)	2 (11)	9 (10)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	9 (5)
6	Fluctuation in the foreign exchange rate	1 (50)	0 (0)	0 (0)	0 (0)	1 (13)	0 (0)	2 (10)	0 (0)	4 (4)	0 (0)	0 (0)	1 (5)	0 (0)	0 (0)	1 (1)	5 (3)
7	Risk diversification (security)	1 (50)	0 (0)	0 (0)	1 (10)	0 (0)	1 (8)	2 (10)	0 (0)	5 (6)	0 (0)	0 (0)	1 (5)	0 (0)	0 (0)	1 (1)	6 (3)
-	Others	0 (0)	1 (20)	1 (8)	1 (10)	2 (25)	2 (15)	3 (14)	1 (6)	11 (12)	4 (14)	0 (0)	3 (15)	3 (21)	2 (10)	12 (14)	23 (13)
Total		5	8	13	17	7	11	25	18	104	16	1	19	11	19	66	170
No. of firms		2	5	12	10	8	13	21	18	89	29	1	20	14	21	85	174 (100)

(Table 13-3②) Reasons for choosing a country for expansion (check all that apply)

Unit: No. of firms and (%)

This Survey		Manufacturing								Non-manufacturing					Grand total
		Food	Textile	Chemical	Steel/ Non-ferrous Metal	General Machinery	Electrical/Electronic Machinery	Transportation Machinery	Others	Manufacturing sector total	Trading	Construction/ Civil Engineering	Others	Non-manufacturing sector total	
1	Growth of the domestic market in the relevant neighbouring country	1 (50)	1 (20)	11 (92)	7 (70)	7 (88)	9 (69)	12 (57)	8 (44)	56 (63)	15 (52)	12 (60)	17 (81)	53 (62)	109 (63)
2	Lower labor cost	1 (50)	3 (60)	2 (17)	6 (60)	2 (25)	6 (46)	9 (43)	5 (28)	34 (38)	8 (28)	5 (25)	5 (24)	19 (22)	53 (30)
3	Easy access from Thailand	0 (0)	2 (40)	4 (33)	3 (30)	2 (25)	3 (23)	5 (24)	5 (28)	24 (27)	7 (24)	5 (25)	7 (33)	23 (27)	47 (27)
4	Abundant labor force	1 (50)	2 (40)	1 (8)	5 (50)	1 (13)	1 (8)	5 (24)	3 (17)	19 (21)	4 (14)	2 (10)	4 (19)	10 (12)	29 (17)
5	Others	0 (0)	0 (0)	0 (0)	1 (10)	0 (0)	1 (8)	4 (19)	2 (11)	8 (9)	4 (14)	1 (5)	6 (29)	14 (16)	22 (13)
6	Availability of materials and material suppliers	1 (50)	1 (20)	0 (0)	0 (0)	2 (25)	0 (0)	3 (14)	1 (6)	8 (9)	9 (31)	0 (0)	0 (0)	12 (14)	20 (11)
7	Availability of preference tariffs (GSP), FTA, etc.	0 (0)	0 (0)	1 (8)	1 (10)	0 (0)	1 (8)	2 (10)	2 (11)	7 (8)	0 (0)	0 (0)	0 (0)	1 (1)	8 (5)
8	Attractive investment incentives, including relaxation of capital regulations	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (10)	1 (6)	3 (3)	1 (3)	1 (5)	1 (5)	4 (5)	7 (4)
9	Good infrastructure	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (10)	0 (0)	2 (2)	1 (3)	1 (5)	1 (5)	3 (4)	5 (3)
10	None	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (10)	0 (0)	0 (0)	5 (6)	5 (3)
Total		4	9	19	23	14	21	44	27	161	52	27	41	144	305
No. of firms		2	5	12	10	8	13	21	18	89	29	20	21	85	174 (100)