

# KIET Manufacturing Business Survey Index (BSI) for the 1st Quarter 2020

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## 1. Overview

The overall composite Business Survey Index for the manufacturing sector in Q1 2020 still remained under the baseline (100). Moreover, all feeder indices have worsened compared to the previous quarter. Business conditions (71), sales (70), domestic demand (71), exports (75), ordinary profit (74), and financial con-

ditions (74) in the manufacturing sector have all posted drastic decreases. BSI forecasts for the 2nd quarter of 2020 indicate that manufacturers anticipate an unfavorable business environment. Most indices for the manufacturing sector are forecast to be below the baseline; only inventory (100) is expected to maintain a level of the performance in this quarter.

Table 1. Manufacturing Sector Business Survey Indices

	2019				2020	
	1/4	2/4	3/4	4/4	1/4	2/4
Business conditions	77 (83)	88 (98)	78 (90)	84 (87)	71 (86)	(84)
Sales	75 (85)	95 (102)	78 (96)	85 (88)	70 (86)	(88)
Domestic demand	75 (84)	92 (100)	80 (95)	86 (88)	71 (86)	(88)
Exports	88 (93)	96 (101)	92 (98)	90 (96)	75 (94)	(87)
Ordinary profit	78 (82)	88 (95)	78 (91)	85 (86)	74 (87)	(87)
Facilities investment	99 (95)	99 (101)	94 (98)	101 (94)	97 (100)	(97)
Operation ratio of facilities	87 (91)	94 (101)	85 (96)	90 (91)	80 (92)	(93)
Inventory	104 (101)	103 (101)	99 (101)	104 (98)	100 (100)	(100)
Employment	97 (95)	96 (100)	93 (98)	99 (94)	96 (98)	(97)
Financial condition	74 (83)	85 (91)	84 (87)	83 (86)	74 (85)	(83)

Note : 1) Figures in ( ) represent outlooks.

## 2. Sales BSI and Outlook by Industry

In Q1 2020, sales conditions in most industries have worsened compared to the previous quarter. Only displays (78) posted slight growth, though as the figures demonstrate,

sales BSIs were under the baseline. Particularly, automobiles (58), electronic products (58) and textiles (50) industries dramatically decreased. The sales outlook for the next quarter predicts all groups will post sub-baseline figures, while sales conditions in several

**Table 2. Sales BSI by Industry**

	2019				2020	
	1/4	2/4	3/4	4/4	1/4	2/4
Overall	75 (85)	95 (102)	78 (96)	85 (88)	70 (86)	(88)
Electronics*	77 (91)	95 (112)	- (107)	- -	- -	-
Semiconductors	79 (90)	95 (95)	73 (94)	85 (82)	74 (89)	(93)
Automobiles	69 (78)	92 (95)	74 (92)	87 (90)	58 (90)	(79)
Shipbuilding	88 (88)	110 (99)	84 (99)	86 (87)	76 (89)	(81)
General machinery	71 (86)	95 (104)	75 (89)	87 (83)	70 (88)	(85)
Steel	71 (77)	92 (101)	84 (89)	83 (93)	66 (83)	(85)
Chemicals	78 (86)	98 (103)	85 (102)	89 (88)	81 (93)	(96)
Electricity*	76 (79)	90 (106)	- (94)	- -	- -	-
Precision machines*	83 (91)	103 (122)	- (107)	- -	- -	-
Textiles	72 (91)	83 (100)	63 (87)	76 (86)	50 (80)	(65)
Nonmetallic minerals*	62 (74)	97 (107)	- (98)	- -	- -	-
Displays**	- -	- -	78 -	73 (82)	78 (75)	(99)
Electronic products**	- -	- -	69 -	81 (78)	58 (83)	(94)
Wireless communication products**	- -	- -	92 -	89 (102)	68 (80)	(93)
Refined petroleum products**	- -	- -	80 -	90 (96)	67 (82)	(86)
Bio/Health care**	- -	- -	99 -	105 (105)	68 (107)	(82)
Secondary batteries**	- -	- -	81 -	89 (96)	78 (96)	(89)
ICT	78 (91)	95 (103)	77 (100)	83 (89)	67 (83)	(92)
Heavy-chemical industry	73 (81)	96 (102)	- (95)	- -	- -	-
Light industry	81 (90)	90 (99)	- (94)	- -	- -	-
Material industry	- -	- -	77 -	83 (89)	65 (85)	(81)
Machinery industry	- -	- -	76 -	87 (86)	67 (89)	(82)
New industries	- -	- -	95 -	101 (104)	70 (105)	(84)
Large companies	84 (91)	104 (110)	94 (101)	96 (100)	74 (97)	(90)
Small and medium-sized enterprises (SMEs)	74 (83)	92 (103)	77 (94)	85 (87)	66 (87)	(83)

Note : 1) Figures in ( ) represent projections.

2) Due to reforms made to the survey panel and the reorganization of industries, direct quarterly comparisons of indices may not be statistically significant.

3) \* represent industries surveyed prior to reforms, while \*\* represent industries surveyed following reforms to the survey methodology.

industries got better compared to the previous quarter. In addition, most industries and companies are not expected to improve their current economic condition in the next quarter. In particular, automobiles (79), textiles (65), bio/health care (82) and new industries

(84) anticipate double digit decreases from the previous quarter.

### 3. Exports BSI and Outlook by Industry

The overall export indices for the 1st quarter

**Table 3. Exports BSI by Industry**

	2019				2020	
	1/4	2/4	3/4	4/4	1/4	2/4
Overall	88 (93)	96 (103)	92 (98)	90 (96)	75 (94)	(87)
Electronics*	90 (97)	96 (116)	- (104)	- -	- -	-
Semiconductors	80 (98)	88 (112)	93 (92)	96 (93)	83 (104)	(91)
Automobiles	84 (86)	98 (100)	90 (96)	92 (96)	65 (94)	(77)
Shipbuilding	90 (98)	106 (98)	101 (100)	81 (99)	84 (99)	(89)
General machinery	87 (95)	93 (106)	88 (91)	84 (91)	73 (93)	(84)
Steel	87 (92)	94 (102)	94 (91)	86 (99)	74 (88)	(80)
Chemicals	93 (90)	101 (102)	93 (104)	90 (95)	85 (100)	(95)
Electricity*	85 (90)	92 (100)	- (95)	- -	- -	-
Precision machines*	86 (96)	96 (107)	- (103)	- -	- -	-
Textiles	82 (98)	95 (106)	92 (93)	85 (97)	55 (86)	(65)
Nonmetallic minerals*	94 (98)	99 (100)	- (101)	- -	-	-
Displays**	- -	- -	84 -	67 (92)	71 (69)	(96)
Electronic products**	- -	- -	91 -	82 (91)	59 (95)	(84)
Wireless communication products**	- -	- -	97 -	93 (103)	75 (89)	(86)
Refined petroleum products**	- -	- -	89 -	103 (96)	76 (92)	(91)
Bio/Health care**	- -	- -	100 -	111 (103)	77 (109)	(93)
Secondary batteries**	- -	- -	86 -	100 (98)	75 (102)	(86)
ICT	85 (97)	91 (114)	92 (98)	85 (95)	70 (92)	(88)
Heavy-chemical industry	88 (92)	97 (102)	- (97)	- -	- -	-
Light industry	91 (89)	96 (95)	- (98)	- -	- -	-
Material industry	- -	- -	93 -	88 (97)	71 (92)	(80)
Machinery industry	- -	- -	91 -	86 (94)	72 (94)	(82)
New industry	- -	- -	97 -	109 (102)	76 (108)	(91)
Large companies	87 (97)	102 (102)	99 (102)	93 (102)	77 (97)	(90)
Small and medium-sized enterprises (SMEs)	88 (92)	95 (103)	92 (96)	89 (95)	71 (94)	(83)

Note : 1) Figures in ( ) represent projections.

2) Due to the reform of the survey panel and the reorganization of industries, direct quarterly comparisons of indices not be statistically significant.

3) \* represent industries surveyed prior to reforms, while \*\* represent industries surveyed following reforms to the survey methodology.

ter were below the baseline (100), much as they were in the quarter previous. Export conditions in most industries got worse compared to the previous quarter, excepting the shipbuilding (84) and displays (71) industries. Specifically, automobiles (65), textiles (55), electronic products (59), refined petroleum products (76), bio/health care (77), secondary batteries (75), and new industries (76) recorded the biggest decreases, while chemicals (85) lagged among all groups. Similarly, the current poor conditions will hold for the next quarter with regards to the outlook for the 2nd quarter, as many industries are forecasted to post sub-baseline performances. In particular, the automobiles and textiles industries are expected to post particularly weak performances.

Only semiconductors (91), chemicals (95), displays (96), refined petroleum products (91), bio/health care (93), new industries (91) and large companies (90) are expected to stay around the baseline.

#### 4. Industrial Weather Chart for the 1st Quarter 2020

Overall, indices gauging sales, domestic demand, and ordinary profits in the manufacturing sector were depressed in Q1 2020. Specifically, the BSI for most manufacturing activities remained lower than the baseline figure of 100.

In particular, sales, domestic demand, exports and ordinary profit among all of man-

ufacturing activities in most manufacturing sectors have been stagnant. On the other hand, facilities investment and employment in the semiconductor and display industries and facilities investment in the refined petroleum products industry have been favorable, which suggests robust overall economic performance, especially compared to other sectors.

#### 5. Industrial Weather Forecast for the 2nd Quarter 2020

Overall BSI prospects in Q2 2020 suggest continuous weak economic performance given the business climate chart of major index components. In Table 5's industrial weather chart, numerous clouds and umbrellas aptly illustrate the challenging economic conditions faced by most industries.

Specifically the automobiles, textiles, material industries, machinery industries, SMEs and export-oriented companies are projected to face difficult conditions, while the displays industry is expected to see improved business conditions. Yet overall conditions should halt the depression and record a slight improvement.

Also, while major indices are expected to stay below the baseline, facilities investment and employment in the semiconductors and ICT industries should post figures measurably better than those recorded in recent quarters.

**Table 4. Major Index Components of Current Manufacturing Activity**

	Sales	Domestic Demand	Exports	Ordinary Profit	Facilities Investment	Employment
Overall	70	71	75	74	97	96
Semiconductors	74	76	83	78	100	102
Automobiles	58	61	65	63	89	87
Shipbuilding	76	78	84	79	97	92
General machinery	70	72	73	75	92	92
Steel	66	67	74	74	99	96
Chemicals	81	81	85	81	98	100
Textiles	50	53	55	59	92	79
Displays**	78	78	71	77	105	103
Electronic products**	58	59	59	69	96	94
Wireless communication products**	68	72	75	76	98	93
Refined petroleum products**	67	65	76	73	102	98
Bio/Health care**	68	69	77	77	96	96
Secondary batteries**	78	77	75	82	97	92
ICT	67	69	70	74	99	97
Material industry**	65	66	71	71	96	91
Machinery industry**	67	69	72	71	92	90
New industries**	70	71	76	78	97	95
Large companies	74	76	77	85	96	97
Small and medium-sized enterprises (SMEs)	66	67	71	71	95	92
Domestic-oriented	66	68	72	71	95	92
Export-oriented	69	71	73	77	94	94

Note : 1) 115 above, 100~115, 85~100, 85 below.  
 2) \*\* represent industries surveyed following reforms to the survey methodology.

## Appendix.

### Outline of KIET Quarterly Manufacturing Business Survey Index

□ BSI figures were compiled through surveys completed by representatives at 1030 domestic manufacturing firms, with 90 percent of the respondents who complied with the survey identifying as a small or medium-sized enterprise. The survey was

conducted from March 12 to 24, 2020.

□ The questionnaire issued comprises 10 sections on business conditions, sales, domestic demand, exports, ordinary profit, facilities investment, operation ratio of facilities, inventory, employment, and financial conditions. This survey is intended to assess quarterly performance and grasp the economic climate of the upcoming quarter.

**Table 5. Manufacturing Outlook Major Index Components**

	Sales	Domestic Demand	Exports	Ordinary Profit	Facilities Investment	Employment
Overall	88 ☁	88 ☁	87 ☁	87 ☁	97 ☁	97 ☁
Semiconductors	93 ☁	91 ☁	91 ☁	91 ☁	101 ☀	102 ☀
Automobiles	79 ☁	81 ☁	77 ☁	76 ☁	90 ☁	87 ☁
Shipbuilding	81 ☁	81 ☁	89 ☁	81 ☁	97 ☁	92 ☁
General machinery	85 ☁	86 ☁	84 ☁	82 ☁	94 ☁	94 ☁
Steel	85 ☁	84 ☁	80 ☁	81 ☁	95 ☁	96 ☁
Chemicals	96 ☁	97 ☁	95 ☁	96 ☁	98 ☁	102 ☀
Textiles	65 ☁	66 ☁	65 ☁	65 ☁	90 ☁	85 ☁
Displays**	99 ☁	103 ☀	96 ☁	99 ☁	105 ☀	104 ☀
Electronic products**	87 ☁	87 ☁	84 ☁	87 ☁	98 ☁	99 ☁
Wireless communication products**	93 ☁	97 ☁	86 ☁	92 ☁	98 ☁	100 ☀
Refined petroleum products**	86 ☁	84 ☁	91 ☁	87 ☁	94 ☁	95 ☁
Bio/Health care**	82 ☁	82 ☁	93 ☁	83 ☁	95 ☁	94 ☁
Secondary batteries**	89 ☁	88 ☁	86 ☁	90 ☁	94 ☁	94 ☁
ICT	92 ☁	93 ☁	88 ☁	91 ☁	100 ☀	101 ☀
Material industry**	81 ☁	82 ☁	80 ☁	81 ☁	94 ☁	94 ☁
Machinery industry**	82 ☁	83 ☁	82 ☁	80 ☁	93 ☁	91 ☁
New industry**	84 ☁	84 ☁	91 ☁	85 ☁	95 ☁	94 ☁
Large companies	90 ☁	93 ☁	90 ☁	90 ☁	93 ☁	94 ☁
Small and medium-sized enterprises (SMEs)	83 ☁	84 ☁	83 ☁	82 ☁	95 ☁	94 ☁
Domestic-oriented	85 ☁	85 ☁	86 ☁	83 ☁	95 ☁	95 ☁
Export-oriented	81 ☁	84 ☁	81 ☁	79 ☁	92 ☁	91 ☁

Note : 1) ☀ 115 above, ☀ 100~115, ☁ 85~100, ☁ 85 below.

2) \*\* represent industries surveyed following reforms to the survey methodology.