TDB Trends Research (Research & Summary for February 2019)

Economic DI worsened for three months in a row

 \sim A decline in consumption after the consumption tax hike and growing overseas risks are grounds for concern \sim

(Companies researched: 23,031; Valid responses: 9,701; Response rate: 42.1%; Survey start date: May 2002)

< Overview of January 2019: Signs of entering a recession phase >

The economic diffusion index (DI) in February 2019 was 47.2, down 0.9 points from the previous month, and worsened for the third consecutive month. In addition to a slowdown in exports to China and a downturn in automobile related businesses, a manpower shortage and an increased cost burden also had adverse effects, and the domestic economy has begun to show signs of entering a recession phase.

< Future outlook: Uncertainty has intensified >

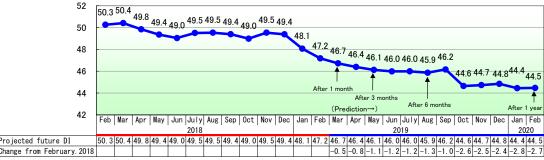
While capital investment and consumer spending underpin the domestic economy, there are concerns about a decline in consumption after the consumption tax hike and growing overseas risks, and uncertainty has further intensified.

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By industry: Nine of the ten industries worsened. In the "manufacturing" industry, a decline in machinery-related performance continues.

By size: "Large enterprises," "SMEs," and "small enterprises" all worsened for the second consecutive month.

By region: Eight of the ten regions worsened. Overseas trends also impact on the local economy.



*: Economic DIs are calculated based on the structural ARIMA model, in which economic statistics are incorporated to the ARIMA model

Economic Diffusion Index (Economic DI)1/2

	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Ratio to the PrFDious Month
Total	50.3	50.4	49.8	49. 4	49.0	49.5	49.5	49.4	49.0	49.5	49.4	48. 1	47.2	▲ 0.9
Large Firms		52.5	52.2	51.6	51.3	51.8	51.6	51.4	51.4	51.4	51.7	50.6	49.8	▲ 0.8
Small to Medium-sized Firms		49.9	49.3	48.8	48.5	48.9	49.0	48.9	48.4	49.0	48.8	47.4	46.5	▲ 0.9
Micro Firms	49.0	49.2	48. 1	48. 1	47.6	48.1	48. 4	48.4	47.9	48.2	48.2	47.0	46.5	▲ 0.5

		Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Ratio to the PrFDious Month
Agriculture,Fores	try,Fisheries	45.5	44.4	43.5	44. 2	43.3	43.4	45. 7	43.8	41.5	40.7	40.7	41.8	41.7	▲ 0.1
Finance		48.0	50.3	49.4	47.8	47.2	49.5	47.5	48.5	46.2	47.1	46.5	46. 1	45.2	▲ 0.9
Construction		53.4	52.9	51.4	51.8	51.9	52.8	53. 1	53.8	53.4	53.9	54. 1	53. 9	53.6	▲ 0.3
Real Estate		52. 1	53.1	50.9	51.0	51.1	50.5	51.1	50.7	49.3	49.3	49.7	49. 1	47.5	▲ 1.6
	Food,BEWerages,Livestock Feed	43.2	41.9	42.9	43.4	43.2	43.1	43.3	42.9	42.0	42.4	43.0	41.6	40.6	▲ 1.0
	Textile, Textile Products, Clothing	41.3	42.4	42.4	42.7	42.8	42.1	41.8	41.9	41.4	41.6	41.3	37. 7	38.8	1.1
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	46. 2	46.3	45. 7	45.8	45.9	46.6	45. 6	45. 2	46. 1	47.5	48.3	47. 1	45.5	▲ 1.6
	Pulp, Paper and Paper Products	44. 1	45.8	46.3	43. 1	45.2	44.5	44. 5	45.4	44.3	46.5	49.3	44. 6	45.2	0.6
	Publishing, Printing	37.4	37.1	36. 2	36. 3	33.7	35.0	33. 8	34.6	33. 2	34.8	35.0	33. 5	33. 2	▲ 0.3
Manufacturing	Chemical	53. 2	53.8	52.3	51.8	51.6	52.2	51.3	51.4	50.4	51.4	50.2	48. 1	46.3	▲ 1.8
	Steel, Nonferrous Metals, Mining	55.6	55.6	53.7	53. 5	53.3	54. 1	54. 2	52.8	53.0	54.4	52.5	50.4	48.0	▲ 2.4
	General Machinery	62.0	61.2	60.9	60.6	60.3	60.7	59. 9	59.1	58.1	57.5	55.9	52. 5	51.4	▲ 1.1
	Electrical Machinery	56. 5	54.8	54.9	53.4	53.4	52.8	52.0	53.3	52.9	52.5	50.5	49. 2	47.6	▲ 1.6
	Transportation Machinery, Equipment	56.6	59.8	57.6	58. 4	57.3	56.6	58. 7	58.3	56.9	56.4	53.8	52. 3	50.9	▲ 1.4
	Precision Machinery, Medical Instruments and Equipment	56. 2	54.8	57. 5	56. 6	57. 2	55. 1	54. 8	54. 3	53. 7	53. 4	54.0	51. 3	48.6	▲ 2.7
	Other	43.1	43.8	43.2	44.3	42.5	41.5	40.7	42.6	42.8	41.8	42.8	42.7	42.1	▲ 0.6
	Total	51.9	51.6	51.0	50.8	50.4	50.6	50.2	50.0	49.5	50.0	49. 2	47. 1	45.8	▲ 1.3
	Food,BEWerages	42.1	43.0	42.9	42.8	42.4	40.9	41.9	41.3	40.6	41.9	41.1	39. 4	40.5	1. 1
	Textile, Textile Products, Clothing	35. 5	37.2	37.2	36.8	37.3	35. 9	37. 3	35. 1	35.3	33.5	34.3	34.0	32.0	▲ 2.0
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	44. 9	44.7	45.0	43. 3	44. 4	44.8	44. 2	44.8	43. 9	46.9	47.8	47. 4	46.5	▲ 0.9
Wholesale	Paper Products, Stationery, Books	34. 9	36.8	38.0	37. 5	36.2	35.4	36.6	36.9	36.5	38.1	39.3	37. 9	36.0	▲ 1.9
	Chemical	49.0	49.1	49.1	49. 1	46.8	48.9	48. 1	47.1	47.0	47.8	47.7	45.3	44.3	▲ 1.0
	Recycled Resources	51.0	51.9	49.5	46.6	50.6	48.2	51.2	47.8	49.4	44.0	47.6	39.8	45.6	5.8
	Steel,Nonferrous Metals, Mining Products	51. 9	50.8	49. 7	48. 2	47.8	48.0	50.3	49. 2	49. 4	48.8	50. 2	46. 3	45.0	▲ 1.3
	Machinery, Equipment	51.4	51.8	51.1	50.6	50.0	50.9	51.0	50.2	49.6	49.9	50.0	48. 4	46.9	▲ 1.5
	Other	42.8	43.8	45.4	43.4	43.3	43.2	42.4	42.4	43.4	44.0	43.9	41.9	41.2	▲ 0.7
	Total	46.6	47.1	47.0	46. 1	45.7	45.9	46.3	45.6	45.4	46.0	46.3	44. 4	43.6	▲ 0.8

Economic Diffusion Index (Economic DI)2/2

		Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Ratio to the PrFDious Month
	Food,BEWerages	45.6	46. 1	47. 4	45.7	45. 2	44. 5	45.3	45.7	44. 4	45.5	42.8	43.4	41.5	▲ 1.9
	Textile, Textile Products, Clothing	38. 2	37. 3	38. 9	36. 7	32. 1	34.6	32.7	30.6	32.7	31.3	34.0	30.9	32.7	1.8
	Drugs,Sundries	45.7	47.2	44. 9	47. 1	42. 9	41.0	41.3	40.2	38. 4	42.4	44. 4	44.8	39.7	▲ 5.1
	Furniture	35. 2	35.0	36. 7	35. 2	38. 3	38. 3	37.0	37.0	37. 9	37. 5	35. 4	38. 9	33.3	▲ 5.6
Retail	Electrical Household Appliances, Information Machinery and Equipment	40. 4	45. 7	46.5	40. 2	41. 9	45. 5	43. 7	42. 8	40.6	39. 7	43. 1	39.0	40.7	1.7
	Motor Vehicles, Motor Vehicle Parts	47.8	48.3	48. 2	43.5	42.9	45.0	43.5	46. 1	40.8	41.5	42.2	44.6	44.3	▲ 0.3
	Special Merchandise	42.5	42.9	41.0	39. 7	39.7	40.7	39. 1	39. 1	39.7	43.3	43. 2	41.9	41.3	▲ 0.6
	Various Merchandise	46.0	47.5	49.6	44. 1	44. 2	48. 2	46.5	43.6	46.4	43.6	44.7	42.9	41.9	▲ 1.0
	Other	43.3	41.7	36. 1	41.7	33. 3	36. 1	40.5	38. 9	41.7	38. 1	35.7	35.7	31.3	▲ 4.4
	Total		44.8	44. 6	42.0	41.3	42.7	41.7	41.6	40.9	42.1	42.3	41.6	40.8	▲ 0.8
Transportati	Transportation, Warehousing		50.5	50.0	49.3	48.7	50.3	50.3	49.5	48.7	50.1	50.5	49. 1	48.2	▲ 0.9
	Restaurants	43.6	44. 2	44.7	45.0	42.5	42.7	42.5	39. 3	37.0	37.6	40.7	37.9	41.0	3. 1
	Postal, Telecommunications	59. 1	57.7	56. 9	50.0	54. 5	55. 6	55. 0	56. 1	59. 7	57. 1	54. 5	60.0	57.6	▲ 2.4
	Electricity,Gas,Water,Heat	58. 3	61.1	54. 2	56. 3	57.4	56.3	57.4	59.3	56.7	57.1	61.9	57. 4	57.4	0.0
	Leasing,Rentals	56.0	56.0	55. 2	51.5	52. 9	54. 5	54. 2	55.9	56. 5	57. 1	55.7	55.0	52.0	▲ 3.0
	Lodging, Hotels	48.7	52.0	51.7	50.6	50.0	45. 2	46.6	43.6	41.0	45.5	45.7	44.9	44.2	▲ 0.7
	Recreation	42.2	42.5	41.5	39. 5	40.9	39.8	40.0	39.9	35.5	40.6	39.3	38.9	37.8	▲ 1.1
	Broadcasting	47.4	47.0	39. 7	37. 2	40.3	42.3	38.5	41.7	40.5	40.0	36.7	40.5	44.4	3. 9
Service	Maintenance, Guarding, Testing	50.7	51.1	49.9	50.2	48. 5	50.5	52. 3	51.8	51.4	51.6	50.7	50.7	51.0	0.3
	Advertising	42.3	43.4	44.2	43.0	40.2	41.7	41.4	42.3	42.3	41.2	41.7	40.4	40.1	▲ 0.3
	Information	58.8	58.6	59.4	58.4	58.8	58.7	59.1	59.7	59.8	60.7	59.3	60.1	59.0	▲ 1.1
	Labor Dispatching	56. 5	57.9	57.8	59.0	59. 1	59.3	59.2	58.0	59.4	58.8	59.0	57.2	54.6	▲ 2.6
	Special Services	53. 1	54.3	53.6	53.7	54.6	54.8	55.3	53.9	55.0	54.6	53.6	53.5	52.8	▲ 0.7
	Medical, Welfare, Public Health	48.6	48. 1	48.8	48.0	46.8	46. 1	48.2	48.3	48.8	48. 3	47.4	47.5	46.5	▲ 1.0
	Education	41.7	44. 2	42.4	42.8	40.6	42.6	46.5	46.4	43.8	43.5	46.2	38.5	44.7	6. 2
	Other	51.3	51.8	50.7	50.8	50.0	51.3	50.2	51.6	49.3	49.8	52.0	50.2	49.7	▲ 0.5
	Total	52.7	53. 1	52.8	52. 1	52.0	52. 4	52.8	52. 9	52.9	53. 2	52.7	52.4	51.7	▲ 0.7
Other		47. 9	50.8	49. 2	50.0	46. 3	46. 1	45. 0	46.3	46. 2	45. 3	46.6	44. 1	48. 3	4. 2

	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Ratio to the PrFDious Month
Hokkaido	45.7	46.6	46. 2	45.8	46.5	46.6	47.5	44. 3	43.9	45. 2	45. 2	43.9	44. 4	0.5
Tohoku	46. 1	46.4	45.7	45.0	44. 2	46.8	46.6	46.4	45.9	46.5	45.4	44. 4	43.1	▲ 1.3
kitakanto	51.7	51.4	50.7	49.8	49. 4	50.6	50.0	50.0	49.0	48.5	48.5	45.8	44.8	▲ 1.0
minamikanto	51.0	51.5	50.7	50.3	50.2	50.3	50.0	50.4	49.8	50.4	50.1	49.0	48.1	▲ 0.9
Hokuriku	47.7	48.5	48.7	48.5	48.7	49.4	49.8	49.3	49.4	49.3	48.6	47.7	46.3	▲ 1.4
Tokai	52.5	52.3	51.9	51.9	50.9	51.6	51.8	51.4	51.3	51.8	51.8	50.1	48.6	▲ 1.5
Kinki	50.3	50.0	49.7	48.8	48.4	48.6	49.4	48.9	48.8	49.7	49.7	48.4	47.6	▲ 0.8
Chugoku	50.1	49.6	48.7	48.7	47.9	47.0	47.1	48.0	48.6	48.5	48.7	47.7	47.2	▲ 0.5
Shikoku	48.5	48.4	48.2	47.8	47.2	47.5	47.9	47.0	47.6	47.2	48.4	46.8	47.6	0.8
Kyushu	51.8	51.7	51.4	50.4	49.8	50.9	50.6	50.8	49.1	50.6	50.7	49.7	48.5	▲ 1.2

Appendix

1.Research Subjects(Companies Researched 23,031; Valid responses: 9,701; Response rate: 42.1%)

Appendix

1.Region

Hokkaido	494	Tokai	1,071
Tohoku	619	Kinki	1,631
kitaKanto	712	Chugoku	537
minamikanto	3,127	Shikoku	281
Hokuriku	548	Kyushu	681
		Total	9,701

2.Industry (10 Industries 51 Lines of business)

Agriculture, For	estry,Fisheries	50
Finance		121
Construction		1,450
Real Estate		293
	Food,Beverages,Livestock Feed	299
	Textile, Textile Products, Clothing	104
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	213
	Pulp, Paper and Paper Products	97
	Publishing, Printing	169
Manufacturing	Chemical	389
3,223	Steel, Nonferrous Metals, Mining	474
	General Machinery	424
	Electrical Machinery	312
	Transportation Machinery, Equipment	97
	Precision Machinery, Medical Instruments and Equipment	71
	Others	91
	Food,Beverages	333
	Textile, Textile Products, Clothing	179
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	321
Wholesale	Paper Products, Stationery, Books	89
3,959	Chemical	267
	Recycled Resources	34
	Steel, Nonferrous Metals, Mining Products	291
	Machinery, Equipment	878
	Others	326

	Food,Beverages	68
	Textile, Textile Products, Clothing	2'
	Drugs,Sundries	2
Retail	Furniture	
480	Electrical Household Appliances, Information Machinery and Equipment	3
	Motor Vehicles,Motor Vehicle Parts	7
	Special Merchandise	12
	Various Merchandise	4
	Others	
ransportation	n,Warehousing	41
	Restaurants	3
	Telecommunications	1
	Electricity, Gas, Water, Heat	
	Leasing, Rentals	10
	Lodging, Hotels	2
	Recreation	5
Service	Broadcasting	1
1,384	Maintenance,Guarding,Testing	14
	Advertising	9
	Information	41
	Labor Dispatching	5
	Special Services	24
	Medical,Welfare,Public Health	9
	Education	2
	Others	15
Others		3
_	Total	9.70

$3.\underline{\mathrm{Size}}$

Large Firms	1,930	19.9%
Small to Medium-sized Firms	7,771	80.1%
micro Firms	2,587	26.7%
Total	9,701	100.0%

2.Research Items

*Business Confidence (current, in 3 months, in 6 months, in 1 year)

*Business Conditions (sales, purchasing and selling unit price, inventory, capacity utilization ratio, number of employees, overtime work hours)

3. Research Period and Methodology

Internet-based survey conducted February 15 – 28 2019

The explanation of the Economic Diffusion Index

Research Purpose/Researched Terms

TDB Economic Trend Research (started from May 2002) is a monthly statistical survey conducted for over 20,000 nationwide corporations on their general business activities including the current condition and future outlook of the industry business performance and operating climate. The primary purpose of such a survey is to assess the current state of Japan's economy.

Selection of the Subject Corporations

Companies of all sizes in all domestic industries are eligible to participate in the survey.

DI Calculation

The DI (Diffusion Index) is calculated by multiplying the number of responses for each assessment category by the number given in parentheses in the table below, to a seven-level assessment rated by companies.

Selection category	Extremely good	good	fairly good	neither good nor bad	fairly bad	bad	very bad
points	6	5	4	3	2	1	0
number of responses for each category	N_6	N_5	N ₄	N ₃	N_2	N_1	N_0

Economic DI

$$= \frac{\text{Total of (Points for each category} \times \text{Number of responses for each category)}}{\text{Number of valid responses} N} \times \frac{1}{6} \times 100$$

$$\equiv \frac{\sum_{i=0}^{6} i \times N_i}{N} \times \frac{1}{6} \times 100$$

An economic DI of 50 is **the point separating good and bad**, so a DI over 50 means "good," and below 50 means "bad." (The numbers are rounded off to one decimal place.) No weight is given according to a company's size, and calculations are made on the basis of "one company, one vote."

Size Classification

Industry	Large Firms	Small to Medium-Sized Firms (Micro Firms included)	Micro Firms
Manufacturing and	Capital: More than 300 million yen	Capital: Below 300 million yen	No. of Ferritories Balance
Other Industries*	and No. of Employee: Over 300	or No. of Employee: Below 300	No. of Employee: Below 20
Wholesale Trade	Capital: More than 100 million yen and	Capital: Below 100 million yen or	No. of Employee: Below 5
Retail Trade	No. of Employee: Over 100 Capital: More than 50 million yen	No. of Employee: Below 100 Capital: Below 50 million yen	
inetali Hade	and No. of Employee: Over 50	or No. of Employee: Below 50	No. of Employee: Below 5
Service**	Capital: More than 50 million yen and No. of Employee: Over 100	Capital: Below 50 million yen or No. of Employee: Below 100	No. of Employee: Below 5

Note1: Large Firms refer to companies that rank in the top 3% in terms of sales volume according to the type of business, among small to midium-sized corporations excluding micro firms, which are defined in Small and Medium Enterprises Basic Act.

Note2: Small to Medium-Sized Firms refer to companies that rank in the bottom 50% in terms of sales volume according to the type of business, among those not categorized as small to midium-sized corporations in Small to Medium-Sized Enterprises Basic Act.