TDB Trends Research (Research & Summary for April 2019)

Economic DI worsened for five months in a row

 \sim Due to the long holidays and election, as well as "construction" exerting downward pressure \sim

(Companies researched: 23,174; Valid responses: 9,775; Response rate: 42.2%; Survey start date: May 2002)

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

The economic diffusion index (DI) in April 2019 was 46.8, down 0.1 point from the previous month, and worsened for the fifth consecutive month. Cost increases against the backdrop of the long holidays, etc., and construction-related stagnation have affected the domestic economy, and signs of entering a recession continue to be seen.

< Future outlook: Uncertainty has further intensified >

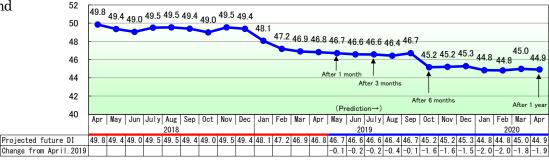
The future domestic economy expects a slowdown in capital investment and exports, and sluggish consumer spending due to a consumption tax hike, and uncertainty has further intensified.

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By industry: Construction stagnation and struggling to secure manpower due to the long holidays have become negative factors.

By size: Although minor deterioration persists in all scale, business confidence has tended to polarize.

By region: Five of the ten regions worsened, and the local economy continues to be weak.



^{*:} 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

	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Ratio to the PrFDious Month
Total	49.8	49.4	49.0	49.5	49.5	49.4	49.0	49.5	49.4	48. 1	47. 2	46.9	46.8	▲ 0.1
Large Firms	52.2	51.6	51.3	51.8	51.6	51.4	51.4	51.4	51.7	50.6	49.8	49.8	49.7	▲ 0.1
Small to Medium-sized Firms		48.8	48.5	48.9	49.0	48.9	48.4	49.0	48.8	47.4	46.5	46. 2	46.1	▲ 0.1
Micro Firms	48. 1	48. 1	47.6	48.1	48.4	48.4	47. 9	48.2	48.2	47.0	46. 5	46. 3	46.2	▲ 0.1

		Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Ratio to the PrFDious Month
Agriculture,Forest	ry,Fisheries	43.5	44. 2	43.3	43.4	45.7	43.8	41.5	40.7	40.7	41.8	41.7	42.3	41.3	▲ 1.
Finance			47.8	47.2	49.5	47.5	48. 5	46. 2	47.1	46.5	46. 1	45. 2	45.9	45.1	▲ 0.
Construction			51.8	51.9	52.8	53. 1	53.8	53. 4	53.9	54.1	53. 9	53. 6	53.6	52.8	▲ 0.
Real Estate		50.9	51.0	51.1	50.5	51.1	50.7	49.3	49.3	49.7	49.1	47.5	47.4	48.7	1.
	Food,BEWerages,Livestock Feed	42.9	43.4	43. 2	43.1	43.3	42.9	42.0	42.4	43.0	41.6	40.6	40.6	42.2	1.
	Textile,Textile Products,Clothing	42.4	42.7	42.8	42.1	41.8	41.9	41.4	41.6	41.3	37.7	38.8	39. 2	39.0	▲ 0.
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	45. 7	45. 8	45.9	46.6	45. 6	45. 2	46. 1	47.5	48. 3	47. 1	45. 5	44. 1	45. 7	1.
	Pulp, Paper and Paper Products	46.3	43. 1	45. 2	44.5	44.5	45.4	44. 3	46.5	49.3	44.6	45. 2	44. 1	45.7	1.
	Publishing, Printing	36. 2	36. 3	33. 7	35.0	33.8	34.6	33. 2	34.8	35.0	33. 5	33. 2	34. 4	35.6	1.
Manufacturing	Chemical	52.3	51.8	51.6	52.2	51.3	51.4	50.4	51.4	50.2	48. 1	46.3	45.4	46.2	0.
	Steel, Nonferrous Metals, Mining	53.7	53. 5	53. 3	54.1	54. 2	52.8	53.0	54.4	52.5	50.4	48.0	45. 4	45.5	0.
	General Machinery	60.9	60.6	60.3	60.7	59.9	59. 1	58. 1	57.5	55.9	52.5	51.4	48. 9	49.0	0.
	Electrical Machinery	54. 9	53.4	53.4	52.8	52.0	53.3	52. 9	52. 5	50.5	49.2	47.6	46.0	44.7	▲ 1.
	Transportation Machinery, Equipment	57.6	58.4	57. 3	56.6	58.7	58.3	56. 9	56. 4	53.8	52.3	50.9	49.3	49.4	0.
	Precision Machinery, Medical Instruments and Equipment	57. 5	56. 6	57.2	55. 1	54.8	54. 3	53. 7	53.4	54.0	51.3	48.6	45.5	47.3	1.
	Other	43.2	44. 3	42.5	41.5	40.7	42.6	42.8	41.8	42.8	42.7	42. 1	45.3	40.2	▲ 5.
	Total	51.0	50.8	50.4	50.6	50.2	50.0	49.5	50.0	49.2	47. 1	45.8	44. 5	44.8	0.
	Food,BEWerages	42.9	42.8	42.4	40.9	41.9	41.3	40.6	41.9	41.1	39. 4	40.5	40.5	41.1	0.
	Textile, Textile Products, Clothing	37.2	36.8	37. 3	35.9	37.3	35. 1	35. 3	33.5	34.3	34.0	32.0	33.6	33.2	▲ 0.
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	45.0	43. 3	44. 4	44.8	44. 2	44.8	43. 9	46.9	47.8	47. 4	46. 5	46.4	45.6	A 0.
Wholesale	Paper Products, Stationery, Books	38.0	37. 5	36.2	35.4	36.6	36. 9	36. 5	38. 1	39.3	37. 9	36. 0	39.0	39. 2	0.
	Chemical	49.1	49. 1	46.8	48.9	48.1	47. 1	47.0	47.8	47.7	45.3	44.3	44.3	44.2	▲ 0.
	Recycled Resources	49.5	46.6	50.6	48.2	51.2	47.8	49.4	44.0	47.6	39.8	45.6	48.6	41.0	▲ 7.
	Steel, Nonferrous Metals, Mining Products	49. 7	48. 2	47.8	48.0	50.3	49. 2	49. 4	48.8	50. 2	46.3	45. 0	43.7	43. 4	▲ 0.
	Machinery, Equipment	51.1	50.6	50.0	50.9	51.0	50.2	49.6	49.9	50.0	48. 4	46. 9	46.5	45.9	▲ 0.
	Other	45.4	43.4	43.3	43.2	42.4	42.4	43.4	44.0	43.9	41.9	41.2	42.5	42.7	0.
	Total	47.0	46.1	45.7	45.9	46.3	45.6	45. 4	46.0	46.3	44. 4	43.6	43.7	43.3	▲ 0.

Economic Diffusion Index (Economic DI)2/2

		Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Ratio to the PrFDious Month
	Food,BEWerages	47. 4	45.7	45.2	44.5	45.3	45.7	44. 4	45.5	42.8	43.4	41.5	42.5	42.5	0.0
	Textile, Textile Products, Clothing	38. 9	36. 7	32.1	34.6	32.7	30.6	32.7	31.3	34.0	30.9	32.7	38.9	39. 1	0.2
	Drugs,Sundries	44. 9	47.1	42.9	41.0	41.3	40.2	38. 4	42.4	44.4	44.8	39.7	39.7	40.9	1.2
	Furniture	36.7	35. 2	38.3	38.3	37.0	37.0	37. 9	37.5	35.4	38. 9	33. 3	33. 3	38.9	5.6
Retail	Electrical Household Appliances, Information Machinery and Equipment	46. 5	40. 2	41.9	45.5	43. 7	42.8	40.6	39. 7	43. 1	39. 0	40. 7	38.9	41.7	2.8
	Motor Vehicles, Motor Vehicle Parts	48. 2	43.5	42.9	45.0	43.5	46. 1	40.8	41.5	42.2	44.6	44. 3	45.2	43.3	▲ 1.9
	Special Merchandise	41.0	39. 7	39.7	40.7	39. 1	39. 1	39. 7	43.3	43.2	41.9	41.3	40.8	42.1	1.3
	Various Merchandise	49.6	44. 1	44.2	48.2	46.5	43.6	46.4	43.6	44.7	42.9	41.9	43.5	43.3	▲ 0.2
	Other	36.1	41.7	33. 3	36.1	40.5	38. 9	41.7	38.1	35.7	35.7	31.3	33. 3	43.8	10.5
	Total		42.0	41.3	42.7	41.7	41.6	40.9	42.1	42.3	41.6	40.8	41.4	42.1	0.7
Transportation	on,Warehousing	50.0	49.3	48.7	50.3	50.3	49.5	48.7	50.1	50.5	49. 1	48. 2	48.1	48.2	0.1
	Restaurants	44.7	45.0	42.5	42.7	42.5	39. 3	37.0	37.6	40.7	37. 9	41.0	37.8	42.9	5. 1
	Postal, Telecommunications	56. 9	50.0	54.5	55.6	55.0	56. 1	59.7	57.1	54.5	60.0	57.6	62.1	57.6	▲ 4.5
	Electricity, Gas, Water, Heat	54. 2	56. 3	57.4	56.3	57.4	59.3	56.7	57.1	61.9	57.4	57.4	56.3	58.3	2.0
	Leasing,Rentals	55. 2	51.5	52.9	54.5	54. 2	55. 9	56. 5	57.1	55.7	55.0	52.0	52.7	54.1	1.4
	Lodging, Hotels	51.7	50.6	50.0	45.2	46.6	43.6	41.0	45.5	45.7	44.9	44. 2	42.3	41.0	▲ 1.3
	Recreation	41.5	39. 5	40.9	39.8	40.0	39. 9	35. 5	40.6	39.3	38.9	37.8	41.0	38.8	▲ 2.2
	Broadcasting	39.7	37. 2	40.3	42.3	38.5	41.7	40.5	40.0	36.7	40.5	44.4	43.3	41.7	▲ 1.6
Service	Maintenance,Guarding,Testing	49.9	50.2	48.5	50.5	52.3	51.8	51.4	51.6	50.7	50.7	51.0	50.0	48.1	▲ 1.9
	Advertising	44. 2	43.0	40.2	41.7	41.4	42.3	42.3	41.2	41.7	40.4	40.1	40.3	40.7	0.4
	Information	59.4	58. 4	58.8	58.7	59.1	59.7	59.8	60.7	59.3	60.1	59.0	60.3	59.6	▲ 0.7
	Labor Dispatching	57.8	59.0	59. 1	59.3	59.2	58.0	59. 4	58.8	59.0	57.2	54.6	53.8	53.5	▲ 0.3
	Special Services	53.6	53. 7	54.6	54.8	55.3	53. 9	55.0	54.6	53.6	53.5	52.8	52. 5	51.5	▲ 1.0
	Medical,Welfare,Public Health	48.8	48.0	46.8	46.1	48.2	48.3	48.8	48.3	47.4	47.5	46. 5	47.1	46.9	▲ 0.2
	Education	42.4	42.8	40.6	42.6	46.5	46. 4	43.8	43.5	46.2	38. 5	44.7	45.8	44.2	▲ 1.6
	Other	50.7	50.8	50.0	51.3	50.2	51.6	49.3	49.8	52.0	50.2	49.7	49.0	50.2	1.2
	Total	52.8	52. 1	52.0	52.4	52.8	52. 9	52. 9	53.2	52.7	52.4	51.7	51.9	51.6	▲ 0.3
Other		49.2	50.0	46.3	46.1	45.0	46.3	46. 2	45.3	46.6	44.1	48.3	45.2	44.9	▲ 0.3

	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Ratio to the PrFDious Month
Hokkaido	46. 2	45.8	46.5	46.6	47.5	44. 3	43.9	45.2	45.2	43.9	44. 4	44.6	45.5	0.9
Tohoku	45.7	45.0	44.2	46.8	46.6	46.4	45. 9	46.5	45.4	44.4	43. 1	42.8	43.1	0.3
kitakanto	50.7	49.8	49.4	50.6	50.0	50.0	49.0	48.5	48.5	45.8	44.8	44.7	44.3	▲ 0.4
minamikanto		50.3	50.2	50.3	50.0	50.4	49.8	50.4	50.1	49.0	48. 1	47.8	47.7	▲ 0.1
Hokuriku	48.7	48.5	48.7	49.4	49.8	49.3	49.4	49.3	48.6	47.7	46.3	45.3	45.3	0.0
Tokai	51.9	51.9	50.9	51.6	51.8	51.4	51.3	51.8	51.8	50.1	48.6	48. 4	48.0	▲ 0.4
Kinki	49.7	48.8	48.4	48.6	49.4	48.9	48.8	49.7	49.7	48.4	47.6	47. 3	46.9	▲ 0.4
Chugoku		48.7	47. 9	47.0	47.1	48.0	48.6	48.5	48.7	47.7	47.2	46.7	47.2	0.5
Shikoku	48.2	47.8	47. 2	47.5	47.9	47.0	47.6	47. 2	48. 4	46.8	47.6	46.8	46.9	0.1
Kyushu	51.4	50.4	49.8	50.9	50.6	50.8	49.1	50.6	50.7	49.7	48.5	48.6	48.3	▲ 0.3

Appendix

1.Research Subjects(Companies researched: 23,174; Valid responses: 9,775; Response rate: 42.2%)

Appendix

1.Region

Hokkaido	497	Tokai	1,076
Tohoku	627	Kinki	1,630
kitaKanto	748	Chugoku	519
minamikanto	3,148	Shikoku	287
Hokuriku	544	Kyushu	699
		Total	9,775

2.Industry (10 Industries 51 Lines of business)

Agriculture, For	estry, Fisheries	46
Finance		116
Construction		1,473
Real Estate		303
	Food, Beverages, Livestock Feed	318
	Textile, Textile Products, Clothing	105
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	210
	Pulp, Paper and Paper Products	96
Manufacturing 3,223	Publishing, Printing	175
	Chemical	392
	Steel,Nonferrous Metals,Mining	479
	General Machinery	429
	Electrical Machinery	314
	Transportation Machinery, Equipment	90
	Precision Machinery, Medical Instruments and Equipment	74
	Others	88
	Food,Beverages	333
	Textile, Textile Products, Clothing	176
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	313
Wholesale	Paper Products, Stationery, Books	91
3,959	Chemical	268
	Recycled Resources	37
	Steel, Nonferrous Metals, Mining Products	282
	Machinery, Equipment	852
	Others	325

	Food,Beverages	6
	Textile,Textile Products,Clothing	2
	Drugs,Sundries	2
Retail	Furniture	
480	Electrical Household Appliances,Information Machinery and Equipment	3
	Motor Vehicles,Motor Vehicle Parts	6
	Special Merchandise	12
	Various Merchandise	4
	Others	
'ransportation	ı,Warehousing	42
	Restaurants	4
	Telecommunications	1
	Electricity,Gas,Water,Heat	
	Leasing,Rentals	10
	Lodging, Hotels	2
	Recreation	
Service	Broadcasting	
1,384	Maintenance,Guarding,Testing	18
	Advertising	9
	Information	42
	Labor Dispatching	
	Special Services	28
	Medical,Welfare,Public Health	9
	Education	2
	Others	15
Others	·	3
	Total	0.77

3.Size

	Large Firms	1,918	19.6%
8	Small to Medium-sized Firms	7,857	80.4%
	micro Firms	2,625	26.9%
	Total	9,775	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 April 15 – 30 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 <u>the point separating good and bad</u>, 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	
Other Industries*	and	or	No. of Employee: Below 20
	No. of Employee: Over 300	No. of Employee: Below 300	
Wholesale Trade	Capital: More than 100 million yen	Capital: Below 100 million yen	
	and	or	No. of Employee: Below 5
	No. of Employee: Over 100	No. of Employee: Below 100	
Retail Trade	Capital: More than 50 million yen	Capital: Below 50 million yen	
	and	or	No. of Employee: Below 5
	No. of Employee: Over 50	No. of Employee: Below 50	
Service**	Capital: More than 50 million yen	Capital: Below 50 million yen	
	and	or	No. of Employee: Below 5
	No. of Employee: Over 100	No. of Employee: Below 100	

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.