## TDB Trends Research (Research & Summary for December 2019)

# Economic DI worsened for the third month in a row, with sluggish year-end demand

 $\sim$  Domestic economy has entered a recession phase, with manufacturing industry's continuing downturn  $\sim$ 

(Companies researched: 23,652; Valid responses: 10,292; Response rate: 43.5%; Survey start date: May 2002)

## < Overview of December 2019: Recession phase >

The economic diffusion index (DI) in December 2019 was 42.5, down 1.1 points from the previous month, and worsened for the third consecutive month in a row. Domestic economy seems to have entered a recession phase, although there are some positive factors.

#### < Future outlook: Moderate recession continues >

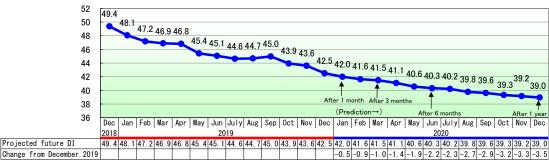
With many causes of concern, such as the consumer spending trend and a global economic slowdown, uncertainty about the domestic economy has further intensified.

e-mail: keiki@mail.tdb.co.jp

By industry: Nine of the ten industries deteriorated. Manufacturing industry deteriorated for the eighth month in a row.

By size: All sizes deteriorated for the third month in a row. "Large enterprises" significantly deteriorated for the first time in five years and eight months.

By region: There was deterioration in 36 prefectures in nine of the ten regions. Urban depression was noticeable.



<sup>\*:</sup> 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

	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Ratio to tHH PrFDious Month
Total	49. 4	48. 1	47.2	46.9	46.8	45.4	45.1	44.6	44.7	45.0	43.9	43.6	42.5	<b>▲</b> 1.1
Large Firms	51.7	50.6	49.8	49.8	49.7	48.8	48.7	47.7	47. 9	48.0	47.1	47.0	45.7	<b>▲</b> 1.3
Small to Medium-sized Firms		47. 4	46.5	46.2	46. 1	44.6	44.2	43.9	43.9	44.2	43.2	42.8	41.7	<b>▲</b> 1.1
Micro Firms	48. 2	47.0	46.5	46.3	46. 2	44. 5	44.1	43.8	44. 2	45.1	43.9	43. 5	42.1	<b>▲</b> 1.4

		Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Ratio to tHH PrFDious Month
Agriculture,Forest	ry,Fisheries	40.7	41.8	41.7	42.3	41.3	40.5	43.2	39. 1	41.5	41.8	42.3	42.5	41.7	▲ 0.8
Finance		46.5	46. 1	45.2	45.9	45. 1	44.7	44.8	45. 1	44.7	45.8	45.4	46.8	44.5	▲ 2.3
Construction		54. 1	53. 9	53.6	53.6	52.8	51.7	51.6	51.7	52. 1	53.1	52. 1	52. 2	51.6	▲ 0.6
Real Estate		49.7	49. 1	47.5	47.4	48.7	47.6	48.3	47. 4	46.5	48.0	45.9	46.0	44.2	▲ 1.8
	Food,BEWerages,Livestock Feed	43.0	41.6	40.6	40.6	42.2	41.3	40.3	40.4	41.1	39.8	39.1	39.7	39.9	0.2
	Textile,Textile Products,Clothing	41.3	37. 7	38.8	39. 2	39. 0	36.6	36.5	36. 4	36. 9	36.3	36.1	34. 6	32.6	▲ 2.0
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	48. 3	47. 1	45.5	44. 1	45. 7	45. 4	43.5	43.8	45. 2	44. 1	44.8	43.8	40.2	▲ 3.6
	Pulp, Paper and Paper Products	49.3	44.6	45.2	44.1	45.7	43.0	41.7	39.6	42.3	42.8	40.2	41.7	40.6	<b>▲</b> 1.1
	Publishing, Printing	35. 0	33. 5	33.2	34.4	35. 6	34.3	33.9	32. 5	33. 1	34.1	33.0	32. 7	32.9	0.2
Manufacturing	Chemical	50. 2	48. 1	46.3	45.4	46. 2	43.9	42.5	41.9	41.8	41.0	41.2	40.6	40.1	▲ 0.5
	Steel,Nonferrous Metals,Mining	52. 5	50.4	48.0	45.4	45. 5	42.9	41.8	41.5	41.2	40.4	39.8	38. 1	37.6	▲ 0.5
	General Machinery	55. 9	52. 5	51.4	48.9	49.0	46.0	45.1	44.0	41.5	41.1	40.8	39. 9	38.4	<b>▲</b> 1.5
	Electrical Machinery	50.5	49. 2	47.6	46.0	44.7	43.1	43.0	42.8	43.9	41.2	42.2	40.5	40.4	▲ 0.1
	Transportation Machinery, Equipment	53.8	52.3	50.9	49.3	49. 4	48.1	47.5	46. 4	43.4	42.3	43.5	41.2	40.9	▲ 0.3
	Precision Machinery, Medical Instruments and Equipment	54. 0	51. 3	48.6	45. 5	47. 3	44. 4	42.4	43. 9	43. 4	42.0	41.3	42.0	39. 9	▲ 2.1
	Other	42.8	42.7	42.1	45.3	40.2	40.2	40.2	38.0	40.7	41.8	37.4	38. 4	38.0	▲ 0.4
	Total	49. 2	47. 1	45.8	44.5	44.8	42.9	42.0	41.5	41.4	40.6	40.3	39.6	38.6	<b>▲</b> 1.0
	Food,BEWerages	41. 1	39. 4	40.5	40.5	41.1	40.8	40.4	38.8	39.0	38.8	38.1	37. 9	37.4	▲ 0.5
	Textile, Textile Products, Clothing	34. 3	34.0	32.0	33.6	33. 2	33. 2	31.6	29.8	30.8	31.6	28.8	28.8	26.5	▲ 2.3
	Construction Materials, Furniture, Ceramics, Stone and Clay Products		47. 4	46.5	46.4	45. 6	44.7	43.8	44. 7	44. 6			43. 4	43. 1	▲ 0.3
Wholesale	Paper Products,Stationery,Books	39. 3	37. 9	36.0	39.0	39. 2	39.0	36.4	37.0	37. 1	38.0	37.7	36. 3	35.0	<b>▲</b> 1.3
	Chemical	47.7	45.3	44.3	44.3	44. 2	41.8	41.2	42.7	42.0	42.7	41.0	40.4	39.0	<b>▲</b> 1.4
	Recycled Resources	47.6	39.8	45.6	48.6	41.0	40.2	37.1	32.8	32.8	30.6	34.8	29.0	33.3	4.3
	Steel,Nonferrous Metals, Mining Products	50. 2	46. 3	45.0	43.7	43. 4	40.8	40.4	39. 0	38.8	37. 6	38.0	37. 0	34. 8	<b>▲</b> 2.2
	Machinery, Equipment	50.0	48.4	46.9	46.5	45.9	44. 2	44.4	43.8	43.3	44.6	42.7	42.3	41.7	▲ 0.6
	Other	43.9	41.9	41.2	42.5	42.7	40.6	40.6	40.2	40.2	40.7	37.9	37.6	37. 1	▲ 0.5
	Total	46.3	44.4	43.6	43.7	43.3	41. 9	41.4	41.0	40.8	41. 4	39. 9	39. 3	38.4	▲ 0.9

©TEIKOKUDATABANK,LTD

TDB Trends Research December 2019

# Economic Diffusion Index (Economic DI)2/2

		Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Ratio to tHH PrFDious Month
	Food,BEWerages	42.8	43.4	41.5	42.5	42.5	44.8	42.9	41.5	41.3	41.8	40.5	40.2	38.4	<b>▲</b> 1.8
	Textile, Textile Products, Clothing	34.0	30.9	32.7	38. 9	39.1	36.9	36.6	34.6	36.5	37.9	32.7	31.5	28.7	▲ 2.8
	Drugs,Sundries	44. 4	44.8	39.7	39.7	40.9	41.0	38.5	40.0	37.7	40.6	35.8	37. 3	40.2	2. 9
	Furniture	35. 4	38.9	33. 3	33. 3	38.9	39.6	48.5	40.9	45.0	53.0	33. 3	26. 9	31.8	4.9
Retail	Electrical Household Appliances, Information Machinery and Equipment	43. 1	39.0	40.7	38. 9	41.7	39. 1	43.5	34. 3	38.9	45.0	34. 3	32. 3	38. 1	5.8
	Motor Vehicles, Motor Vehicle Parts	42. 2	44.6	44.3	45. 2	43.3	41.5	42.5	39. 2	41.1	41.4	34.5	31.4	31.9	0.5
	Special Merchandise	43. 2	41.9	41.3	40.8	42.1	41.3	41.1	40.6	40.7	43.5	38. 2	39. 1	36.0	▲ 3.1
	Various Merchandise	44.7	42.9	41.9	43.5	43.3	43.8	44.7	39. 3	38.9	43.1	36.5	36. 5	36.2	▲ 0.3
	Other	35. 7	35.7	31.3	33. 3	43.8	39.6	46.3	41.7	41.7	40.5	48.1	40.7	47.9	7. 2
	Total	42.3	41.6	40.8	41.4	42.1	41.6	42.0	39. 5	40.2	42.6	37.0	36. 1	35.8	▲ 0.3
Transportation	on,Warehousing	50.5	49.1	48.2	48. 1	48.2	46.7	45.6	44. 5	45.5	46.0	44.9	45. 1	42.6	<b>▲</b> 2.5
	Restaurants	40.7	37.9	41.0	37.8	42.9	40.6	42.9	39.6	38.1	43.6	37.3	39. 4	40.7	1.3
	Postal, Telecommunications	54. 5	60.0	57.6	62.1	57.6	56.7	60.0	58. 3	60.6	56.9	56.1	59.5	52.8	▲ 6.7
	Electricity, Gas, Water, Heat	61.9	57.4	57.4	56. 3	58.3	55.6	54.5	54. 2	52.6	51.3	51.2	52. 2	47.4	<b>▲</b> 4.8
	Leasing,Rentals	55. 7	55.0	52.0	52.7	54.1	50.9	52.5	51.8	51.7	53.5	54.5	53. 1	50.4	▲ 2.7
	Lodging, Hotels	45.7	44.9	44.2	42.3	41.0	50.0	44.9	40.3	39.9	47.2	41.3	42.0	39.1	<b>▲</b> 2.9
	Recreation	39. 3	38.9	37.8	41.0	38.8	42.0	41.5	41.8	40.9	38.7	38. 2	40.7	37.5	▲ 3.2
	Broadcasting	36. 7	40.5	44.4	43.3	41.7	44.1	43.3	41.1	45.2	43.1	42.9	41.7	38.2	<b>▲</b> 3.5
Service	Maintenance,Guarding,Testing	50.7	50.7	51.0	50.0	48.1	48.2	48.8	49.3	49.8	48.6	49.1	47.3	46.6	▲ 0.7
	Advertising	41.7	40.4	40.1	40.3	40.7	40.5	40.7	40.4	38.9	40.3	40.4	39.6	37.8	<b>▲</b> 1.8
	Information	59.3	60.1	59.0	60.3	59.6	58.0	57.8	58. 5	58.7	57.7	57.4	57.8	56.2	▲ 1.6
	Labor Dispatching	59.0	57.2	54.6	53.8	53.5	53.9	52.8	52.7	51.0	53.2	53.3	50.9	46.2	<b>▲</b> 4.7
	Special Services	53.6	53.5	52.8	52.5	51.5	49.5	50.1	49.9	51.1	51.8	51.5	50.8	49.9	▲ 0.9
	Medical, Welfare, Public Health	47.4	47.5	46.5	47.1	46.9	47.8	47.0	48.7	46.5	47.3	46.5	48.5	47.7	▲ 0.8
	Education	46. 2	38.5	44.7	45.8	44.2	43.6	44.0	41.1	39.5	40.0	42.4	37.8	43.1	5. 3
	Other	52.0	50.2	49.7	49.0	50.2	47.9	48.5	47. 9	48.3	48.4	47.9	47.9	45.6	▲ 2.3
Total		52.7	52.4	51.7	51.9	51.6	50.6	50.8	50.8	50.7	51.0	50.6	50.4	48.8	<b>▲</b> 1.6
Other		46.6	44.1	48.3	45.2	44.9	43.2	42.6	44. 1	43.2	42.1	43.1	40.4	41.7	1.3

	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Ratio to tHH PrFDious Month
Hokkaido	45. 2	43.9	44.4	44.6	45.5	45.3	45.1	45.7	46.4	46.6	45.7	45.0	43.8	<b>▲</b> 1.2
Tohoku	45.4	44.4	43.1	42.8	43.1	42.2	41.9	41.7	41.7	43.2	41.9	42.2	40.9	<b>▲</b> 1.3
kitakanto	48.5	45.8	44.8	44.7	44.3	43. 1	42.5	42.5	42.6	42.2	40.9	40.0	40.0	0.0
minamikanto	50.1	49.0	48. 1	47.8	47.7	46.0	46.0	45.5	45.7	46.1	45.5	45.5	44. 3	<b>▲</b> 1.2
Hokuriku	48.6	47.7	46.3	45.3	45.3	44.6	44.2	43.5	44. 1	43.5	42.1	40.4	39. 5	▲ 0.9
Tokai	51.8	50.1	48.6	48.4	48.0	46.8	45.8	44.7	45.0	45.2	43.6	42.7	41.8	▲ 0.9
Kinki	49.7	48.4	47.6	47.3	46.9	45.0	44.6	44.0	43.8	43.9	42.2	41.9	40.5	<b>▲</b> 1.4
Chugoku	48.7	47.7	47.2	46.7	47.2	45.6	45.5	45.0	44.8	45.0	44.0	43.6	42.6	<b>▲</b> 1.0
Shikoku	48.4	46.8	47.6	46.8	46.9	46.7	44.8	43.1	43.8	43.9	44. 4	44.0	43.8	▲ 0.2
Kyushu	50.7	49.7	48.5	48.6	48.3	46.9	47.0	47.6	46.3	47. 1	46.5	46.8	45. 1	<b>▲</b> 1.7

# **Appendix**

# 1.Research Subjects(Companies researched: 23,652; Valid responses: 10,292; Response rate: 43.5%)

#### Appendix

#### 1.Region

Hokkaido	517	Tokai	1,147
Tohoku	664	Kinki	1,732
kitaKanto	735	Chugoku	567
minamikanto	3,339	Shikoku	297
Hokuriku	568	Kyushu	726
		Total	10,292

#### 2.Industry (10 Industries 51 Lines of business)

Agriculture,For	estry,Fisheries	56
Finance		119
Construction		1,568
Real Estate		318
	Food,Beverages,Livestock Feed	316
	Textile, Textile Products, Clothing	116
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	221
	Pulp, Paper and Paper Products	96
	Publishing, Printing	182
Manufacturing (2,878)	Chemical	400
	Steel, Nonferrous Metals, Mining	510
	General Machinery	453
	Electrical Machinery	331
	Transportation Machinery, Equipment	101
	Precision Machinery, Medical Instruments and Equipment	74
	Others	78
	Food, Beverages	339
	Textile, Textile Products, Clothing	176
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	332
Wholesale	Paper Products, Stationery, Books	100
(2,807)	Chemical	269
	Recycled Resources	32
	Steel, Nonferrous Metals, Mining Products	317
	Machinery, Equipment	907
	Others	335

	Textile, Textile Froducts, Clothing	28
	Drugs,Sundries	22
Retail	Furniture	11
(423)	Electrical Household Appliances, Information Machinery and Equipment	38
	Motor Vehicles,Motor Vehicle Parts	68
	Special Merchandise	135
	Various Merchandise	46
	Others	3
ansportation	n,Warehousing	438
	Restaurants	50
	Telecommunications	(
	Electricity,Gas,Water,Heat	13
	Leasing,Rentals	120
	Lodging, Hotels	20
	Recreation	5
Service	Broadcasting	1
(1,647)	Maintenance,Guarding,Testing	16
	Advertising	9
	Information	46
	Labor Dispatching	5
	Special Services	26
	Medical,Welfare,Public Health	11
	Education	2
	Others	18
thers		3
	Total	10.29

Food, Beverages
Textile. Textile Products. Clothing

#### 3.Size

	Large Firms	2,007	19.5%
S	mall to Medium-sized Firms	8,285	80.5%
	micro Firms	2,787	27.1%
_	Total	10,292	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 December 16 2019 – January 6 2020

### 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 <sub>4</sub>	N <sub>3</sub>	$N_2$	$N_1$	$N_0$

#### **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 Other Industries*	Capital: More than 300 million yen and No. of Employee: Over 300	Capital: Below 300 million yen or No. of Employee: Below 300	No. of Employee: Below 20
Wholesale Trade	Capital: More than 100 million yen and No. of Employee: Over 100	Capital: Below 100 million yen or No. of Employee: Below 100	No. of Employee: Below 5
Retail Trade	Capital: More than 50 million yen and No. of Employee: Over 50	Capital: Below 50 million yen 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 Enterorises Basic Act.