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

# Manufacturing industry continues to deteriorate, driving down the domestic economy

 $\sim$  Consumer spending trends will be the key  $\sim$ 

(Companies researched: 23,678; Valid responses: 10,046; Response rate: 42.4%;

Survey start date: May 2002)

#### < Overview of November 2019: Possibility of entering a recession phase >

The economic diffusion index (DI) in November 2019 was 43.6, down 0.3 points from the previous month, and worsened for the second consecutive month. While the deteriorating manufacturing industry affects the related industries, the consumption tax rate increase also continues to impact the domestic economy, which may have entered a recession phase.

#### < Future outlook: Uncertainty has further intensified,

#### with many downside factors >

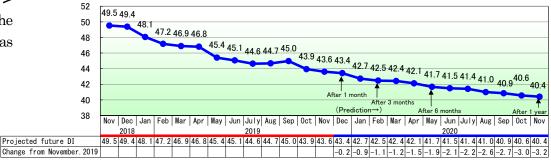
With many causes of concern, such as consumer spending trends and the global economic slowdown, uncertainty about the domestic economy has further intensified.

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

By industry: The manufacturing industry worsened for the seventh consecutive month. The economic DI entered the 30s for the first time in six years and seven months.

By size: All sizes worsened for the second consecutive month. The slowdown in small-sized manufacturers was prominent.

By region: Overseas economic stagnation and a decline in appetite for capital investment put downward pressure on the local economy.



<sup>\*:</sup> Economic DIs are calculated based on the structural ARIMA model, in which economic statistics are incorporated to the ARIMA model

©TEIKOKUDATABANK,LTD

TDB Trends Research November 2019

## Economic Diffusion Index (Economic DI)1/2

	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Ratio to tHG PrFDious Month
Total	49.5	49.4	48.1	47.2	46.9	46.8	45.4	45. 1	44.6	44.7	45.0	43.9	43.6	▲ 0.3
Large Firms	51.4	51.7	50.6	49.8	49.8	49.7	48.8	48.7	47.7	47. 9	48.0	47. 1	47.0	▲ 0.1
Small to Medium-sized Firms	49.0	48.8	47.4	46.5	46.2	46. 1	44.6	44. 2	43.9	43.9	44.2	43. 2	42.8	▲ 0.4
Micro Firms	48.2	48. 2	47.0	46.5	46.3	46. 2	44.5	44. 1	43.8	44. 2	45.1	43. 9	43.5	▲ 0.4

		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Ratio to tHG PrFDious Month
Agriculture, Forestry, Fisheries		40.7	40.7	41.8	41.7	42.3	41.3	40.5	43.2	39. 1	41.5	41.8	42.3	42.5	0. 2
Finance		47.1	46.5	46.1	45.2	45.9	45. 1	44.7	44.8	45. 1	44. 7	45.8	45. 4	46.8	1.4
Construction		53.9	54. 1	53.9	53.6	53.6	52. 8	51.7	51.6	51.7	52. 1	53.1	52. 1	52. 2	0.1
Real Estate		49.3	49.7	49.1	47.5	47.4	48.7	47.6	48.3	47.4	46.5	48.0	45.9	46.0	0.1
	Food,BEWerages,Livestock Feed	42.4	43.0	41.6	40.6	40.6	42.2	41.3	40.3	40.4	41.1	39.8	39. 1	39. 7	0.6
	Textile, Textile Products, Clothing	41.6	41.3	37.7	38.8	39.2	39.0	36.6	36. 5	36. 4	36. 9	36.3	36. 1	34. 6	<b>▲</b> 1.5
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	47.5	48. 3	47.1	45.5	44. 1	45. 7	45. 4	43. 5	43.8	45. 2	44. 1	44. 8	43.8	<b>▲</b> 1.0
	Pulp, Paper and Paper Products	46.5	49.3	44.6	45.2	44.1	45.7	43.0	41.7	39.6	42.3	42.8	40.2	41.7	1. 5
	Publishing, Printing	34.8	35.0	33.5	33.2	34.4	35. 6	34.3	33. 9	32.5	33. 1	34.1	33.0	32. 7	▲ 0.3
Manufacturing	Chemical	51.4	50.2	48.1	46.3	45.4	46. 2	43.9	42.5	41.9	41.8	41.0	41.2	40.6	▲ 0.6
	Steel, Nonferrous Metals, Mining	54.4	52.5	50.4	48.0	45.4	45.5	42.9	41.8	41.5	41.2	40.4	39.8	38. 1	<b>▲</b> 1.7
	General Machinery	57.5	55. 9	52.5	51.4	48.9	49.0	46.0	45. 1	44.0	41.5	41.1	40.8	39. 9	▲ 0.9
	Electrical Machinery	52.5	50.5	49.2	47.6	46.0	44. 7	43.1	43.0	42.8	43.9	41.2	42. 2	40.5	<b>▲</b> 1.7
	Transportation Machinery, Equipment	56.4	53.8	52.3	50.9	49.3	49.4	48.1	47.5	46.4	43.4	42.3	43.5	41.2	<b>▲</b> 2.3
	Precision Machinery, Medical Instruments and Equipment	53. 4	54.0	51.3	48.6	45.5	47. 3	44. 4	42. 4	43. 9	43. 4	42.0	41. 3	42.0	0.7
	Other	41.8	42.8	42.7	42.1	45.3	40.2	40.2	40.2	38.0	40.7	41.8	37. 4	38. 4	1.0
	Total	50.0	49. 2	47.1	45.8	44.5	44.8	42.9	42.0	41.5	41.4	40.6	40.3	39.6	▲ 0.7
	Food,BEWerages	41.9	41.1	39.4	40.5	40.5	41.1	40.8	40.4	38.8	39.0	38.8	38. 1	37. 9	▲ 0.2
	Textile, Textile Products, Clothing	33.5	34. 3	34.0	32.0	33.6	33. 2	33.2	31.6	29.8	30.8	31.6	28.8	28.8	0.0
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	46.9	47.8	47. 4	46.5	46. 4	45. 6	44. 7	43.8	44. 7	44. 6	46.0	45. 1	43. 4	<b>▲</b> 1.7
Wholesale	Paper Products, Stationery, Books	38. 1	39. 3	37.9	36.0	39.0	39. 2	39.0	36. 4	37.0	37. 1	38.0	37. 7	36. 3	<b>▲</b> 1.4
	Chemical	47.8	47.7	45.3	44.3	44.3	44. 2	41.8	41.2	42.7	42.0	42.7	41.0	40.4	▲ 0.6
	Recycled Resources	44.0	47.6	39.8	45.6	48.6	41.0	40.2	37. 1	32.8	32.8	30.6	34.8	29.0	▲ 5.8
	Steel,Nonferrous Metals, Mining Products	48.8	50. 2	46.3	45.0	43.7	43. 4	40.8	40.4	39. 0	38.8	37.6	38.0	37. 0	<b>▲</b> 1.0
	Machinery, Equipment	49.9	50.0	48. 4	46.9	46.5	45. 9	44. 2	44.4	43.8	43.3	44.6	42.7	42. 3	▲ 0.4
	Other	44.0	43.9	41.9	41.2	42.5	42.7	40.6	40.6	40.2	40.2	40.7	37.9	37.6	▲ 0.3
	Total	46.0	46.3	44. 4	43.6	43.7	43.3	41.9	41.4	41.0	40.8	41.4	39. 9	39.3	▲ 0.6

©TEIKOKUDATABANK,LTD

-	TD : 00 .		/T .	T) ()
H:conomic	Diffusion	Indev	(Economic	11119/9
Liconomic	DILLUSION	IIIUCA	(LICOHOLILIC	1/1/4/4

		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Ratio to tHG PrFDious Month
	Food,BEWerages	45.5	42.8	43.4	41.5	42.5	42.5	44.8	42.9	41.5	41.3	41.8	40.5	40.2	▲ 0.3
	Textile, Textile Products, Clothing	31.3	34.0	30.9	32.7	38.9	39. 1	36. 9	36.6	34.6	36. 5	37. 9	32.7	31.5	<b>▲</b> 1.2
	Drugs,Sundries	42.4	44.4	44.8	39. 7	39.7	40.9	41.0	38.5	40.0	37. 7	40.6	35.8	37.3	1.5
	Furniture	37.5	35.4	38.9	33. 3	33.3	38. 9	39. 6	48.5	40.9	45.0	53.0	33.3	26.9	▲ 6.4
Retail	Electrical Household Appliances, Information Machinery and Equipment	39. 7	43. 1	39. 0	40. 7	38.9	41. 7	39. 1	43.5	34. 3	38. 9	45.0	34.3	32. 3	<b>▲</b> 2.0
	Motor Vehicles, Motor Vehicle Parts	41.5	42.2	44.6	44.3	45.2	43.3	41.5	42.5	39. 2	41.1	41.4	34.5	31.4	▲ 3.1
	Special Merchandise	43.3	43.2	41.9	41.3	40.8	42.1	41.3	41.1	40.6	40.7	43.5	38.2	39. 1	0.9
	Various Merchandise	43.6	44.7	42. 9	41.9	43.5	43.3	43.8	44.7	39.3	38. 9	43. 1	36.5	36.5	0.0
	Other	38. 1	35.7	35.7	31.3	33.3	43.8	39. 6	46.3	41.7	41.7	40.5	48.1	40.7	<b>▲</b> 7.4
	Total	42.1	42.3	41.6	40.8	41.4	42.1	41.6	42.0	39.5	40.2	42.6	37.0	36. 1	▲ 0.9
Transportati	on,Warehousing	50.1	50.5	49. 1	48. 2	48.1	48. 2	46.7	45.6	44.5	45.5	46.0	44.9	45.1	0.2
	Restaurants	37.6	40.7	37. 9	41.0	37.8	42.9	40.6	42.9	39.6	38. 1	43.6	37.3	39.4	2. 1
	Postal, Telecommunications	57.1	54.5	60.0	57. 6	62.1	57.6	56. 7	60.0	58.3	60.6	56. 9	56.1	59.5	3. 4
	Electricity,Gas,Water,Heat	57.1	61.9	57.4	57. 4	56.3	58.3	55.6	54.5	54. 2	52.6	51. 3	51.2	52.2	1.0
	Leasing,Rentals	57.1	55.7	55.0	52.0	52.7	54. 1	50.9	52.5	51.8	51.7	53.5	54.5	53.1	<b>▲</b> 1.4
	Lodging, Hotels	45.5	45.7	44. 9	44. 2	42.3	41.0	50.0	44.9	40.3	39. 9	47. 2	41.3	42.0	0.7
	Recreation	40.6	39.3	38. 9	37.8	41.0	38.8	42.0	41.5	41.8	40.9	38. 7	38.2	40.7	2. 5
	Broadcasting	40.0	36.7	40.5	44. 4	43.3	41.7	44. 1	43.3	41.1	45.2	43. 1	42.9	41.7	<b>▲</b> 1.2
Service	Maintenance, Guarding, Testing	51.6	50.7	50.7	51.0	50.0	48. 1	48. 2	48.8	49.3	49.8	48.6	49.1	47.3	<b>▲</b> 1.8
	Advertising	41.2	41.7	40.4	40.1	40.3	40.7	40.5	40.7	40.4	38. 9	40.3	40.4	39.6	▲ 0.8
	Information	60.7	59.3	60.1	59.0	60.3	59.6	58.0	57.8	58.5	58.7	57.7	57.4	57.8	0.4
	Labor Dispatching	58.8	59.0	57.2	54.6	53.8	53.5	53. 9	52.8	52.7	51.0	53.2	53.3	50.9	▲ 2.4
	Special Services	54.6	53.6	53.5	52.8	52.5	51.5	49.5	50.1	49.9	51.1	51.8	51.5	50.8	▲ 0.7
	Medical,Welfare,Public Health	48.3	47.4	47.5	46. 5	47.1	46.9	47.8	47.0	48.7	46.5	47.3	46.5	48.5	2.0
	Education	43.5	46.2	38. 5	44.7	45.8	44. 2	43.6	44.0	41.1	39.5	40.0	42.4	37.8	<b>▲</b> 4.6
	Other	49.8	52.0	50.2	49.7	49.0	50.2	47.9	48.5	47.9	48.3	48.4	47.9	47.9	0.0
	Total	53.2	52.7	52.4	51.7	51.9	51.6	50.6	50.8	50.8	50.7	51.0	50.6	50.4	▲ 0.2
Other		45.3	46.6	44. 1	48.3	45.2	44. 9	43. 2	42.6	44.1	43.2	42. 1	43.1	40.4	<b>▲</b> 2.7

	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Ratio to tHG PrFDious Month
Hokkaido	45.2	45.2	43.9	44. 4	44.6	45.5	45.3	45.1	45.7	46. 4	46.6	45.7	45.0	▲ 0.7
Tohoku	46.5	45.4	44. 4	43.1	42.8	43. 1	42.2	41.9	41.7	41.7	43.2	41.9	42.2	0.3
kitakanto	48.5	48.5	45.8	44.8	44.7	44. 3	43.1	42.5	42.5	42.6	42.2	40.9	40.0	▲ 0.9
minamikanto	50.4	50.1	49.0	48.1	47.8	47.7	46.0	46.0	45.5	45.7	46.1	45.5	45.5	0.0
Hokuriku	49. 3	48.6	47.7	46.3	45.3	45.3	44.6	44. 2	43.5	44. 1	43.5	42.1	40.4	<b>▲</b> 1.7
Tokai	51.8	51.8	50.1	48.6	48.4	48.0	46.8	45.8	44.7	45.0	45. 2	43.6	42.7	▲ 0.9
Kinki	49.7	49.7	48.4	47.6	47.3	46.9	45.0	44.6	44.0	43.8	43.9	42.2	41.9	▲ 0.3
Chugoku	48.5	48.7	47.7	47.2	46.7	47.2	45.6	45.5	45.0	44.8	45.0	44.0	43.6	▲ 0.4
Shikoku	47.2	48.4	46.8	47.6	46.8	46. 9	46.7	44.8	43. 1	43.8	43.9	44. 4	44. 0	▲ 0.4
Kyushu	50.6	50.7	49.7	48.5	48.6	48.3	46.9	47.0	47.6	46.3	47.1	46.5	46.8	0.3

### **Appendix**

## 1.Research Subjects(Companies researched: 23,678; Valid responses: 10,046; Response rate: 42.4%)

#### Appendix

#### 1.Region

Hokkaido	523	Tokai	1,137
Tohoku	653	Kinki	1,678
kitaKanto	723	Chugoku	558
minamikanto	3,255	Shikoku	285
Hokuriku	538	Kyushu	696
		Total	10,046

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

Agriculture,For	estry,Fisheries	53
Finance		120
Construction		1,578
Real Estate		314
	Food,Beverages,Livestock Feed	302
	Textile, Textile Products, Clothing	103
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	222
	Pulp, Paper and Paper Products	98
	Publishing, Printing	163
Manufacturing	Chemical	393
(2,777)	Steel, Nonferrous Metals, Mining	48'
	General Machinery	463
	Electrical Machinery	308
	Transportation Machinery, Equipment	98
	Precision Machinery, Medical Instruments and Equipment	73
	Others	79
	Food,Beverages	337
	Textile, Textile Products, Clothing	176
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	322
Wholesale	Paper Products, Stationery, Books	94
(2,745)	Chemical	260
	Recycled Resources	3
	Steel, Nonferrous Metals, Mining Products	307
	Machinery, Equipment	889
	Others	329

3	.Size

Large Firms	1,990	19.8%
Small to Medium-sized Firms	8,056	80.2%
micro Firms	2,696	26.8%
Total	10,046	100.0%

Food, Beverages	5
Textile, Textile Products, Clothing	2
Drugs, Sundries	2
Retail Furniture	1
(393) Electrical Household Appliances, Information Machinery and Equipment	3
Motor Vehicles, Motor Vehicle Parts	6
Special Merchandise	12
Various Merchandise	4
Others	
Transportation, Warehousing	43
Restaurants	ā
Telecommunications	
Electricity, Gas, Water, Heat	1
Leasing,Rentals	12
Lodging, Hotels	
Recreation	
Service Broadcasting	
(1,598) Maintenance, Guarding, Testing	18
Advertising	(
Information	48
Labor Dispatching	
Special Services	25
Medical,Welfare,Public Health	11
Education	2
Others	16
Others	5
Total	10,04

#### 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 November 18 – 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 <sub>4</sub>	N <sub>3</sub>	$N_2$	N <sub>1</sub>	$N_0$

#### **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.