# TDB Trends Research (Research & Summary for May 2018)

# Domestic economy worsened for two months in a row due to rising crude oil prices

 $\sim$  Retail industry significantly worsened because of weak consumer confidence  $\sim$ 

(Companies researched: 23,157; Valid responses: 10,001; Response rate: 43.2%; Survey start date: May 2002)

# < Overview of May 2018: Economy continues at a standstill >

The economic diffusion index (DI) in May 2018 was 49.4, down 0.4 points from the previous month, and worsened for two months in a row. The domestic economy remained at a standstill, due to an increased burden of costs for companies and individuals caused by rising crude oil prices, amid growing uncertainty over the environment surrounding the Japanese economy.

# <Future outlook: Possibility of change in expansion trend >

While the domestic economy is expected to be led by exports and capital investment, it is necessary to observe carefully the possibility of the emerging overseas risks putting downward pressure on business activity.

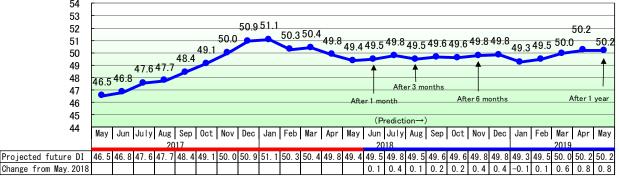
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By industry: The "retail" industry significantly worsened due to an increased cost burden and weak consumption caused by rising crude oil prices.

By size: "Large enterprises" and "SMEs" took a downturn for two months in a row.

By region: While eight of the ten regions worsened, improvement was not seen in any region.



<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

	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Ratio to the PrFDious Month
Total	46.5	46.8	47.6	47.7	48.4	49.1	50.0	50.9	51.1	50.3	50.4	49.8	49.4	▲ 0.4
Large Firms		49.8	50.3	50.5	51.3	51.6	52.1	53.0	53.2	52.2	52.5	52. 2	51.6	▲ 0.6
Small to Medium-sized Firms		46.0	46.8	47.0	47.7	48.5	49.4	50.4	50.5	49.8	49.9	49.3	48.8	▲ 0.5
Micro Firms	44. 4	44.4	45.6	45.7	46.7	47.6	48.7	49.8	49.6	49.0	49.2	48.1	48. 1	0.0

		May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Ratio to the PrFDious Month
Agriculture,Forest	ry,Fisheries	45. 4	45.3	44. 9	44. 5	45.6	47.5	46.7	49. 2	47.1	45.5	44. 4	43.5	44. 2	0.7
Finance		46.4	46.3	47.2	46.8	48.0	47.9	49.0	48. 9	49.6	48.0	50.3	49.4	47.8	<b>▲</b> 1.6
Construction			49.5	50.4	50.7	51.7	52.7	53.7	54.2	54.0	53.4	52.9	51.4	51.8	0.4
Real Estate		50.7	49.4	49.6	49.3	49.9	50.9	50.3	51.3	52.3	52. 1	53.1	50.9	51.0	0.1
	Food,BEWerages,Livestock Feed	42.6	43.5	43.5	42.9	43.0	42.8	42.9	44.8	44.0	43.2	41.9	42.9	43.4	0.5
	Textile,Textile Products,Clothing	39. 4	37.8	37.9	38. 4	37.7	38.6	39.6	42.0	39. 1	41.3	42.4	42.4	42.7	0.3
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	43. 4	43.4	45. 3	45.9	45.6	47.0	46.8	48.0	46.8	46. 2	46.3	45. 7	45.8	0. 1
	Pulp, Paper and Paper Products	42.5	43.4	43.8	41.9	44. 4	46.6	45.6	48.7	46.6	44. 1	45.8	46.3	43.1	▲ 3.2
	Publishing, Printing		35.1	34. 2	34.6	36.4	35. 7	35.4	35.8	36.4	37.4	37. 1	36. 2	36. 3	0.1
Manufacturing	Chemical	50.3	50.2	51.4	50.5	51.8	52.5	53.3	54. 1	53.9	53.2	53.8	52.3	51.8	▲ 0.5
	Steel, Nonferrous Metals, Mining	47.3	49.6	51.1	51.6	53.0	54.3	56.6	56.3	57.6	55.6	55.6	53.7	53.5	▲ 0.2
	General Machinery	54. 5	54.8	56.5	56. 2	57. 2	59.3	59.3	60.8	62.4	62.0	61.2	60.9	60.6	▲ 0.3
	Electrical Machinery	49.3	49.7	50.3	51.5	52.2	53.7	54. 5	55.7	56.9	56.5	54.8	54.9	53.4	<b>▲</b> 1.5
	Transportation Machinery, Equipment	52.0	52.7	52.2	54.7	54.8	54. 2	58.6	56.9	57.9	56.6	59.8	57.6	58. 4	0.8
	Precision Machinery, Medical Instruments and Equipment	51. 7	51.5	50. 4	51.8	51.5	53. 2	55. 1	54. 7	57. 4	56. 2	54.8	57. 5	56. 6	▲ 0.9
	Other	38. 2	38.5	40.3	39.7	41.6	39.6	40.9	42.6	43.4	43.1	43.8	43.2	44.3	1. 1
	Total	46.9	47.5	48.5	48.6	49.4	50.3	51.2	52.1	52.6	51.9	51.6	51.0	50.8	▲ 0.2
	Food,BEWerages	42.7	41.8	42.2	41.3	41.6	41.1	42.4	43.5	42.9	42.1	43.0	42.9	42.8	▲ 0.1
	Textile,Textile Products,Clothing	34. 5	35.0	34. 3	34. 2	35.3	35. 4	36. 1	37. 4	37. 2	35.5	37. 2	37. 2	36.8	▲ 0.4
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	43. 2	42.8	43. 0	43.8	44.0	44. 2	45. 1	46.7	46. 2	44. 9	44.7	45. 0	43.3	<b>▲</b> 1.7
Wholesale	Paper Products, Stationery, Books	36. 1	38.4	37.4	35. 7	38.8	38. 4	38.9	38. 4	37.6	34. 9	36.8	38.0	37. 5	▲ 0.5
	Chemical	45. 1	45.3	46.5	47.2	47.5	48.1	48.6	50.7	49.7	49.0	49.1	49. 1	49.1	0.0
	Recycled Resources	49.0	51.8	49.5	55. 4	52.4	51.6	57.8	58.3	56. 2	51.0	51.9	49.5	46.6	▲ 2.9
	Steel, Nonferrous Metals, Mining Products	41. 3	43. 1	45. 1	45. 6	46. 2	49.5	50. 5	52.3	53. 1	51.9	50.8	49. 7	48. 2	<b>▲</b> 1.5
	Machinery, Equipment	46.1	46.6	48.0	48.2	48.5	49.3	50.9	52.1	52.3	51.4	51.8	51.1	50.6	▲ 0.5
	Other	42.0	41.4	42.1	41.3	42.0	42.0	42.7	43.7	43.9	42.8	43.8	45.4	43.4	▲ 2.0
	Total	43.1	43.4	44. 2	44.3	44.8	45.5	46.5	47.9	47.8	46.6	47.1	47.0	46. 1	▲ 0.9

# Economic Diffusion Index (Economic DI)2/2

		May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Ratio to the PrFDious Month
	Food,BEWerages	39. 9	42.9	41.1	44. 3	44. 4	42. 1	45.2	45.3	44.1	45.6	46.1	47.4	45.7	<b>▲</b> 1.7
	Textile,Textile Products,Clothing	33.9	34.4	34.6	35. 1	34.4	37. 5	32.7	35.6	41.0	38.2	37.3	38.9	36.7	▲ 2.2
	Drugs,Sundries	46.4	44.4	43.8	46.8	44. 2	44. 9	46.2	44.4	46.4	45.7	47.2	44.9	47.1	2.2
	Furniture	35.7	40.7	39.6	37. 5	41.7	40.9	45.0	40.7	43.9	35.2	35.0	36.7	35.2	<b>▲</b> 1.5
Retail	Electrical Household Appliances, Information Machinery and Equipment	38. 1	41.9	41.7	44. 6	40. 2	43. 9	43.9	47.7	41.9	40.4	45. 7	46. 5	40. 2	▲ 6.3
	Motor Vehicles, Motor Vehicle Parts	41.5	44.4	44.4	45.5	46. 2	45.3	45.6	44.2	49.2	47.8	48.3	48. 2	43.5	<b>▲</b> 4.7
	Special Merchandise	39. 1	39.8	39.7	39.8	39. 7	39.6	38.8	41.5	41.9	42.5	42.9	41.0	39.7	<b>▲</b> 1.3
	Various Merchandise	45.0	48.7	46.5	45.8	45.7	46.3	45.7	46.4	46.9	46.0	47.5	49.6	44. 1	▲ 5.5
	Other	41.7	41.7	38.9	44. 4	46.7	46.7	43.3	50.0	50.0	43.3	41.7	36. 1	41.7	5. 6
	Total		42.1	41.5	42.7	42. 2	42.4	42.4	43.4	44.3	43.8	44.8	44.6	42.0	▲ 2.6
Transportati	on,Warehousing	46.8	45.7	47.7	48.4	49.0	49. 9	50.7	52.5	50.7	49.6	50.5	50.0	49.3	▲ 0.7
	Restaurants	41.1	43.0	43.9	41.9	45. 2	45. 1	42.9	44.9	45.2	43.6	44. 2	44.7	45.0	0.3
	Postal, Telecommunications	51.3	56.9	55.6	54. 2	59. 1	54. 5	57.7	56.4	56.1	59.1	57.7	56. 9	50.0	▲ 6.9
	Electricity, Gas, Water, Heat	52.4	57. 1	52.4	52.8	57. 1	58.3	59.5	54.2	60.4	58.3	61.1	54. 2	56.3	2. 1
	Leasing, Rentals	50.2	50.0	50.6	49.7	52.0	54. 2	54.9	55.9	56.9	56.0	56.0	55. 2	51.5	▲ 3.7
	Lodging, Hotels	49.4	47.9	46.9	47.4	41.7	43.6	51.9	48.0	46.9	48.7	52.0	51.7	50.6	<b>▲</b> 1.1
	Recreation	40.9	40.8	40.1	38. 3	40.0	39. 1	39.0	42.2	41.7	42.2	42.5	41.5	39.5	▲ 2.0
	Broadcasting	46.7	42.9	46.2	47.2	47.2	46. 2	44.4	47.6	47.6	47.4	47.0	39.7	37.2	<b>▲</b> 2.5
Service	Maintenance, Guarding, Testing	48.9	49.7	50.2	51.4	51.3	50.3	51.6	50.3	51.5	50.7	51.1	49.9	50.2	0.3
	Advertising	41.8	40.6	41.0	41.9	40.5	43.6	41.8	41.5	46.1	42.3	43.4	44.2	43.0	<b>▲</b> 1.2
	Information	55.6	55.7	56.6	56. 1	57. 2	57.9	57.6	58.4	59.4	58.8	58.6	59.4	58.4	<b>▲</b> 1.0
	Labor Dispatching	52.3	54.8	54.8	58.6	57. 5	58.2	59.0	57.9	58.6	56.5	57.9	57.8	59.0	1.2
	Special Services	52.3	52.3	52.6	53.4	53.2	53.3	53.2	55.5	53.4	53.1	54.3	53.6	53.7	0.1
	Medical, Welfare, Public Health	47.9	48.3	45.2	46.1	47.4	44. 1	47.9	48.3	47.6	48.6	48.1	48.8	48.0	▲ 0.8
	Education	43.5	42.1	42.5	42.5	41.7	41.0	40.5	42.4	45.1	41.7	44.2	42.4	42.8	0.4
	Other	49.3	50.8	50.2	50.5	50.7	50.6	53.9	52.6	51.6	51.3	51.8	50.7	50.8	0.1
	Total	50.4	50.7	50.9	51.1	51.5	51.8	52.5	53.0	53.4	52.7	53.1	52.8	52.1	▲ 0.7
Other		41.7	42.2	41.7	42.4	43.6	43.3	47.9	48.2	47.8	47.9	50.8	49.2	50.0	0.8

	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Ratio to the PrFDious Month
Hokkaido	46.1	45.7	48.4	48.8	48.6	48.6	48.6	48.4	47.8	45.7	46.6	46.2	45.8	▲ 0.4
Tohoku	45.4	45.4	45.7	45.4	45.9	45.9	47.2	47.9	46.9	46.1	46.4	45.7	45.0	▲ 0.7
kitakanto	46. 4	47.0	48.3	47.8	49.1	50.2	51.2	52.9	52.3	51.7	51.4	50.7	49.8	▲ 0.9
minamikanto	47.3	47.7	48.2	48.2	49. 1	49.7	50.5	51.3	51.8	51.0	51.5	50.7	50.3	▲ 0.4
Hokuriku	45.3	45.9	47.5	48.0	48.8	49.3	49.0	49.9	49.7	47.7	48.5	48.7	48.5	▲ 0.2
Tokai	46.4	47.3	48. 1	48.8	49. 2	50.0	51.2	52.5	52.6	52.5	52.3	51.9	51.9	0.0
		44. 9	45.6	46. 1	46.7	48.0	49.0	50.8	51.1	50.3	50.0	49.7	48.8	▲ 0.9
		46.5	47.0	47.7	47.8	48.6	50.1	50.6	50.8	50.1	49.6	48.7	48.7	0.0
Shikoku	46.8	47.0	47.0	46.8	48.5	48.2	48.5	49.0	49.4	48.5	48.4	48.2	47.8	▲ 0.4
Kyushu	49.5	48.9	49.4	49.4	49.9	50.5	51.3	51.7	51.7	51.8	51.7	51.4	50.4	<b>▲</b> 1.0

# **Appendix**

# 1.Research Subjects(Companies Researched 23,157; Valid responses: 10,001; Response rate: 43.2%)

#### Appendix

#### 1.Region

Hokkaido	503	Tokai	1,108
Tohoku	645	Kinki	1,661
kitaKanto	719	Chugoku	546
minamikanto	3,243	Shikoku	287
Hokuriku	565	Kyushu	724
		Total	10,001

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

Agriculture,For	estry, Fisheries	52
Finance		128
Construction		1,484
Real Estate		302
	Food,Beverages,Livestock Feed	306
	Textile, Textile Products, Clothing	110
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	21'
	Pulp, Paper and Paper Products	9'
	Publishing, Printing	186
Manufacturing	Chemical	40'
3,223	Steel, Nonferrous Metals, Mining	504
	General Machinery	442
	Electrical Machinery	330
	Transportation Machinery, Equipment	9'
	Precision Machinery, Medical Instruments and Equipment	76
	Others	8'
	Food, Beverages	348
	Textile, Textile Products, Clothing	172
	Construction Materials, Furniture, Ceramics, Stone and Clay Products	318
Wholesale	Paper Products, Stationery, Books	108
3,959	Chemical	27
	Recycled Resources	29
	Steel, Nonferrous Metals, Mining Products	310
	Machinery, Equipment	908
	Others	333

	Total	10,00
thers		4
	Others	18
	Education	2
	Medical,Welfare,Public Health	10
	Special Services	24
	Labor Dispatching	ŧ
	Information	42
	Advertising	10
1,384	Maintenance,Guarding,Testing	15
Service	Broadcasting	1
	Recreation	
	Lodging, Hotels	
	Leasing, Rentals	10
	Electricity, Gas, Water, Heat	
	Telecommunications	1
	Restaurants	4
ansportation	n.Warehousing	41
	Others	-
	Various Merchandise	10
	Special Merchandise	15
400	Motor Vehicles, Motor Vehicle Parts	
Retail 480	Electrical Household Appliances, Information Machinery and Equipment	
	Furniture	1
	Drugs, Sundries	1
	Food, Beverages  Textile, Textile Products, Clothing	9

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

	Large Firms	2,000	20.0%
8	Small to Medium-sized Firms	8,001	80.0%
	micro Firms	2,666	26.7%
	Total	10,001	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 May 18 – 31 2018

## 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 Formula**

The DI (Diffusion Index) is calculated by attaching a number (in parenthesis in the diagram below) to each of seven possible responses. Then multiplying the percentage of each response by the appropriate number, and adding the results.

Very Bad	Bad	Moderately Bad	Neither Good or Bad	Moderately Good	Good	Very Good
(0)	(1/6)	(2/6)	(3/6)	(4/6)	(5/6)	(6/6)
0	16.7	33.3	DI=50 Dividing point	66.7	83.3	100

A DI over 50 is in the range of "Good." A score under 50 is "Bad." The number 50 is the dividing point ("Neither Good or Bad"). All numbers are rounded off to the hundredth. It should be noted that no weight is given to a company's responses based on its size. Calculations are made according to a "one company, one vote" rule.

For example, all corporations rated 'Very Good'.

DI=6/6x100(%)=100

All corporations rated 'Neither Good nor Bad'.

DI=3/6x100(%)=50

### **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.