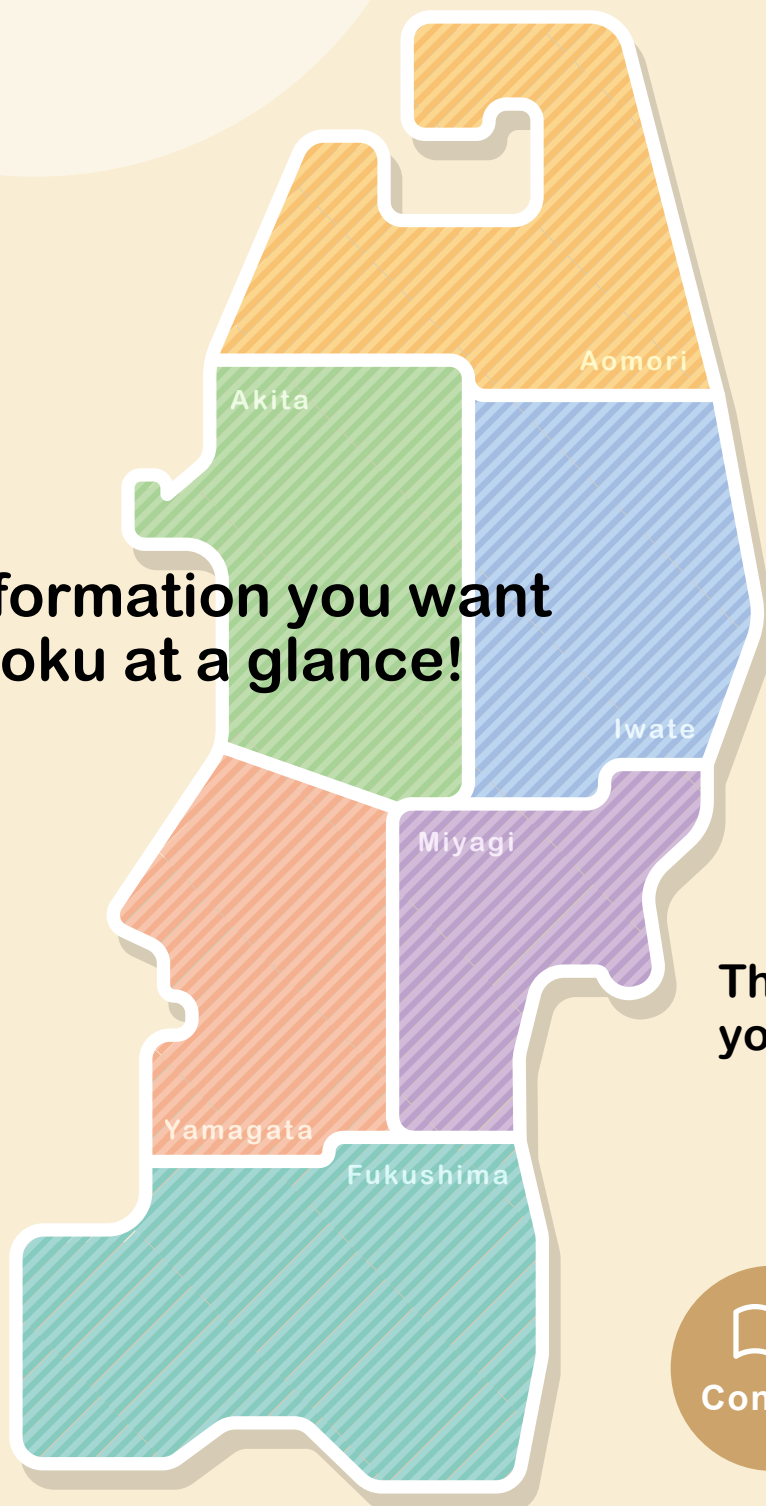


2022

# ECONOMIC OVERVIEW OF TOHOKU REGION



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Ministry of Economy, Trade and Industry  
Tohoku Bureau of Economy, Trade and Industry

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## 3. Industrial Structure of the Tohoku Region

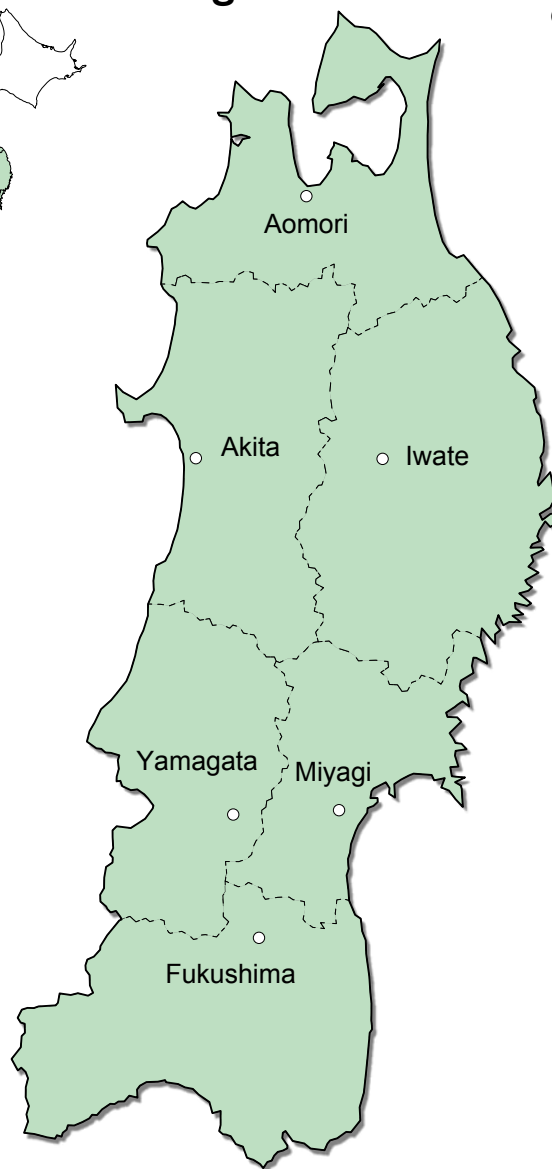
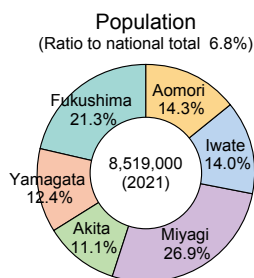
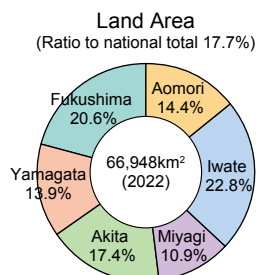
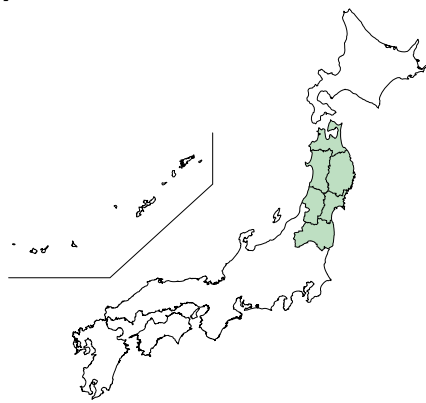
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\* Years in text and graphs throughout this document are displayed according to the Western calendar. In addition, when the name of the source material follows the Japanese calendar, the Western calendar is written in parentheses except for some parts.

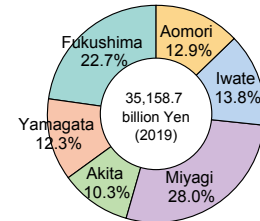
\* Due to rounding up/off, not all totals equal the sum of separate figures in tables and graphs throughout this document.

## (1) Overview of the Tohoku Region

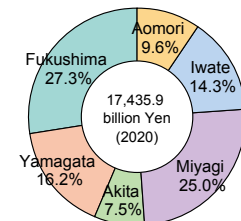
## (1) Overview of the Tohoku Region



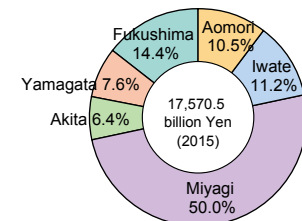
**Gross Regional Domestic Product (GRDP)**  
(Ratio to national total 6.3%)<sup>Note 4</sup>



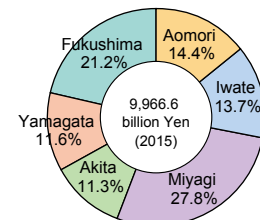
**Shipment Value of Manufactured Goods**  
(Ratio to national total 5.8%)



**Wholesale Annual Sales**  
(Ratio to national total 4.3%)



**Retail Annual Sales**  
(Ratio to national total 7.2%)



## Economic Indicators for the Tohoku Region

Item	Tohoku	Data and source	Item	Tohoku	Data and source
Major economic indicators			Major economic indicators		
Land area (km <sup>2</sup> ) As of April 1, 2022 <sup>Note 1</sup>	66,948	2022 National Land Area Survey of Prefectures and Municipalities (Geospatial Information Authority of Japan)	Prefectural income per capita (Thousand yen) (FY 2019)	2,845	2019 Annual Report on Prefectural Accounts (Cabinet Office, data published by each prefecture)
Population (Thousand persons) As of October 1, 2021	8,519	Population Estimates (Ministry of Internal Affairs and Communications)	No. of business establishments (Establishments) (As of June 1, 2021) <sup>Note 3</sup>	408,785	2020 Preliminary Aggregation of Economic Census for Business Activity (Ministry of Internal Affairs and Communications and Ministry of Economy, Trade and Industry)
No. of households (Thousands) As of October 1, 2020	3,501	Population Census 2020 (Ministry of Internal Affairs and Communications)	No. of employees (Thousand persons) (As of June 1, 2021)	3,698	
GRDP (Nominal) (Hundred million yen) (FY 2019)	351,587	2019 Annual Report on Prefectural Accounts (Cabinet Office, data published by each prefecture)	Shipment value of manufactured goods (Hundred million yen) (2020)	174,359	2020 Acts on the Collection of Insurance Premiums for Labor Insurance (Ministry of Economy, Trade and Industry)
Primary industry <sup>Note 2</sup>	8,399		Wholesale sales value (Hundred million yen) (2015)	175,705	2016 Economic Census for Business Activity (Ministry of Internal Affairs and Communications and Ministry of Economy, Trade and Industry)
Secondary industry <sup>Note 2</sup>	94,914				
Tertiary industry <sup>Note 2</sup>	248,090				
No. of municipalities As of August 1, 2022	77 cities 116 towns 34 villages	Number of Municipalities by Prefecture (Ministry of Internal Affairs and Communications)	Retail sales value (Hundred million yen) (2015)	99,666	

Note 1: For the areas of prefectures with undefined boundaries, reference values recorded in the *National Land Area Survey of Prefectures and Municipalities* (Geospatial Information Authority of Japan) are used.

Note 2: The values by industry are before the addition and deduction of duties, customs and so forth on imported goods.

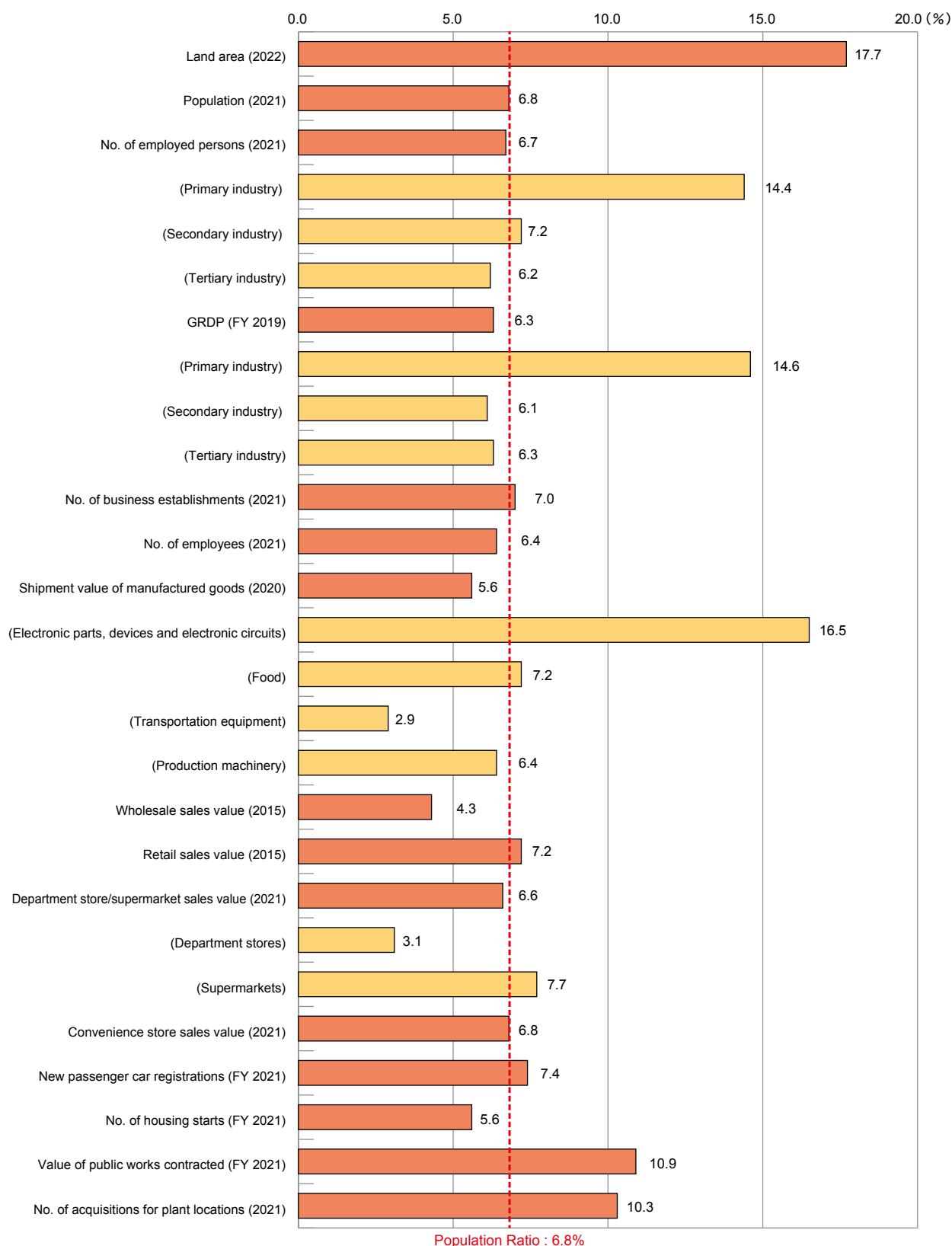
Note 3: The number of business establishments includes only the number of private business establishments.

Note 4: The national figures for calculating the national ratio of gross regional domestic product (GRDP) were calculated based on the Gross Domestic Product by Economic Activities (calendar year) of the System of National Accounts (SNA).

## (2) Positioning of Tohoku Shown in Major Economic Indicators

## (2) Positioning of Tohoku Shown in Major Economic Indicators

In comparison to the national level, gross regional domestic product (GRDP) and shipment value of manufactured goods are at a low level compared to the population ratio of 6.8%, while electronic parts, devices and circuits are at a high level in the manufacturing sector.

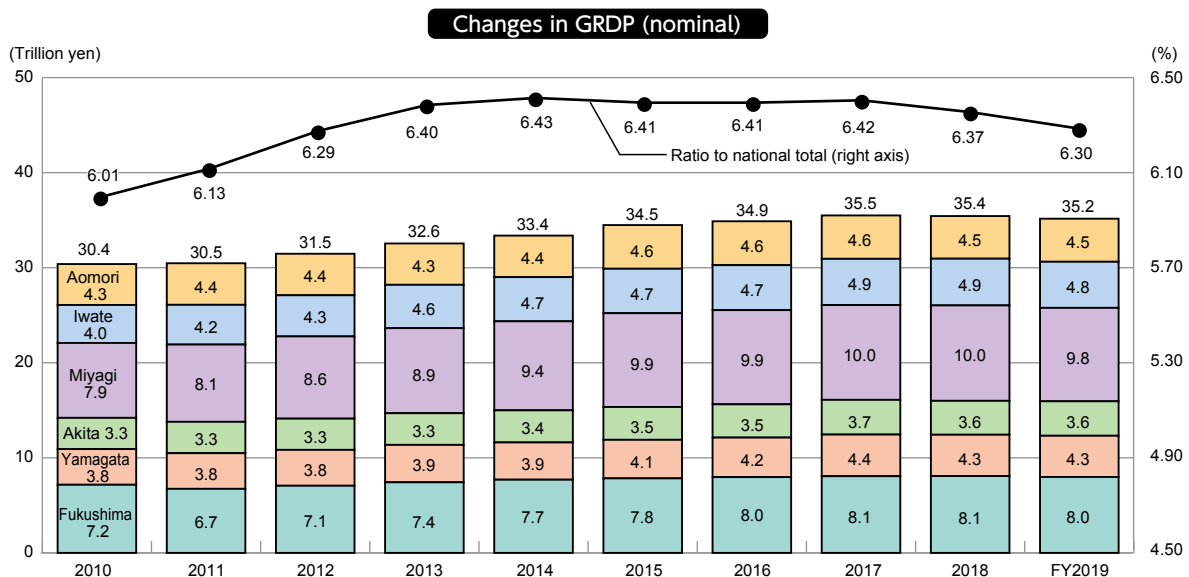


Note: The number of employees is based on the Labor Force Survey 2021(Ministry of Internal Affairs and Communications)

## (1) Gross Product

The Gross Regional Domestic Product (GRDP) is 35.2 trillion yen, or 6.30% of the national total.

- In the fiscal year 2019, the Tohoku region's nominal GRDP was 35,158.6 billion yen, down 0.8% compared to the previous fiscal year, and 6.30% of the national total. In terms of Gross Product by prefecture, Aomori, Akita, and Yamagata prefectures remained unchanged from the previous year, while Iwate, Miyagi, and Fukushima prefectures decreased from the previous year.



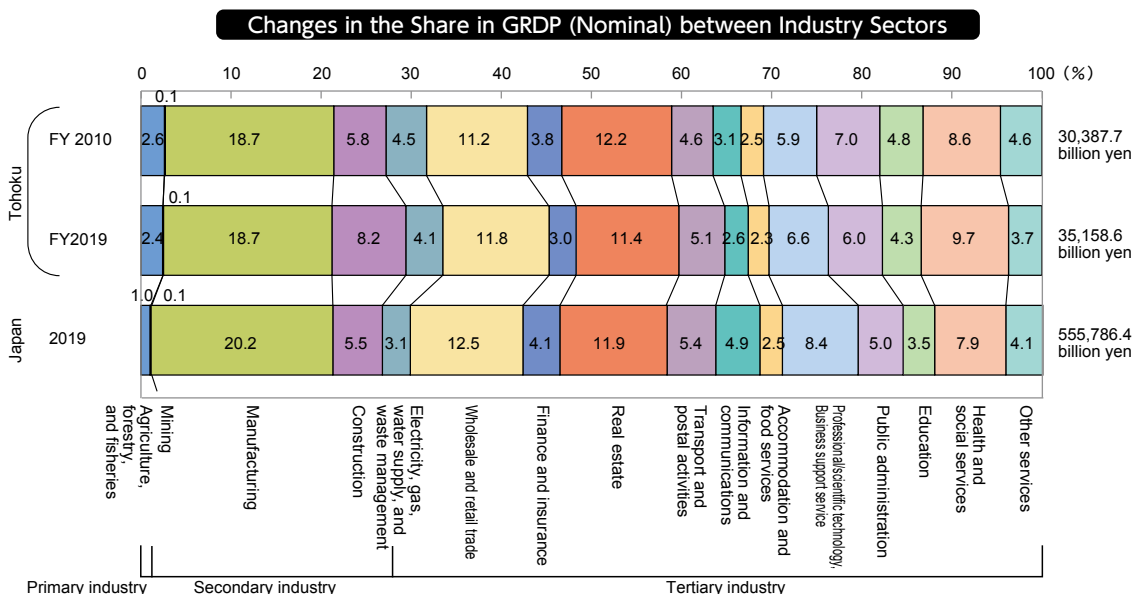
Note 1: With the System of Prefectural Accounts, the figures are retroactively revised for each previous fiscal year in conjunction with the latest fiscal year's estimates.

Note 2: The national figures used to calculate the prefecture-national ratio are based on the FY2020 National Accounts.

Note 3: 2011 base coefficients for FY 2010 and earlier, and 2015 base coefficients for FY 2011 and later.

Source: Annual Report on Prefectural Accounts and Annual Report on National Accounts, Cabinet Office

- According to the breakdown of shares in fiscal year 2019 by industry classification, primary industries accounted for 2.4%, secondary industries for 27.0%, and tertiary industries for 70.6%. Share of the construction industry rose to 8.2%, up 2.4 percentage points compared to that of fiscal year 2010 before the Great East Japan Earthquake, which was due to recovery-related projects after the disaster.



Note 1: The figures for Japan were calculated based on the Gross Domestic Product by Economic Activities (calendar year) from the System of National Accounts (SNA) of Japan for FY2020.

Note 2: The shares are before the addition and deduction of duties, customs and so forth on imported goods.

Note 3: 2011 base coefficients for FY 2010 and earlier, and 2015 base coefficients for FY 2011 and later.

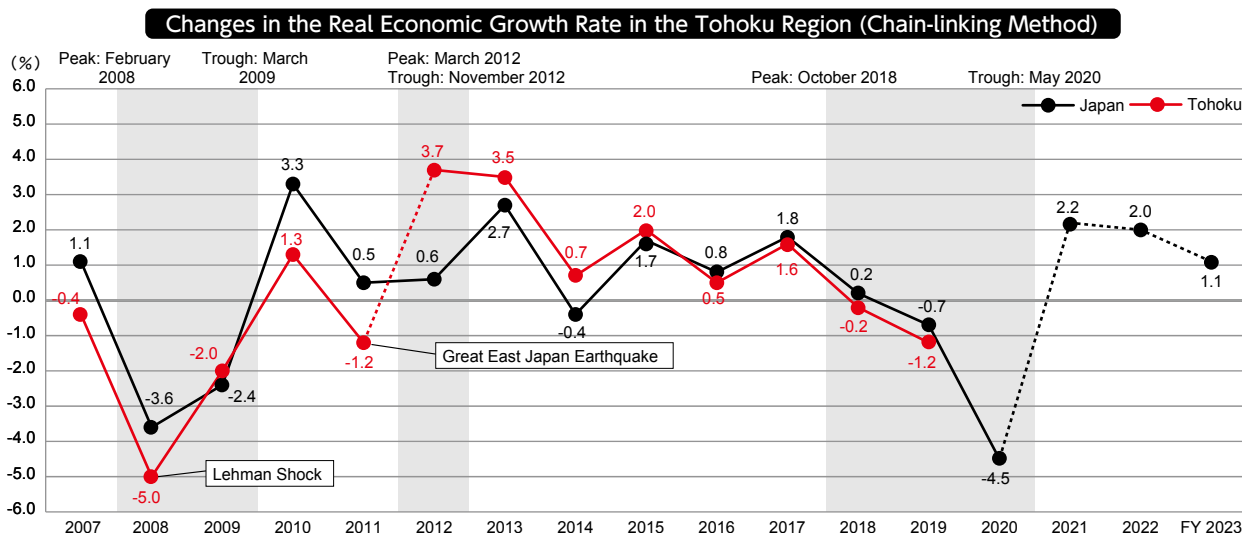
Source: Annual Report on Prefectural Accounts and Annual Report on National Accounts, Cabinet Office

## (2) Real Economic Growth Rate

## (2) Real Economic Growth Rate

The real economic growth rate was -1.2% and has been negative for two consecutive years.

- The Tohoku region's real economic growth rate in the fiscal year 2019 was -1.2% (cf. -0.7% for Japan), continuing the negative growth for two consecutive years, and was below the rate for Japan.



Note 1: The above figures for Japan are taken from the System of National Accounts of Japan for FY 2020 (benchmark year = 2015, 2008 SNA).

Note 2: Japan's figures for fiscal years 2021, 2022 and 2023 are taken from the *Mid-Year Economic Projection* for FY 2022 released by the Cabinet Office on July 25, 2022.

Note 3: Figures for Tohoku are not directly connected because they are based on the 2011 standard and chain-linking method (2011 calendar year chain prices) for FY2011 and earlier, and the 2015 standard and chain-linking method (2015 calendar year chain prices) for FY2012 and later.

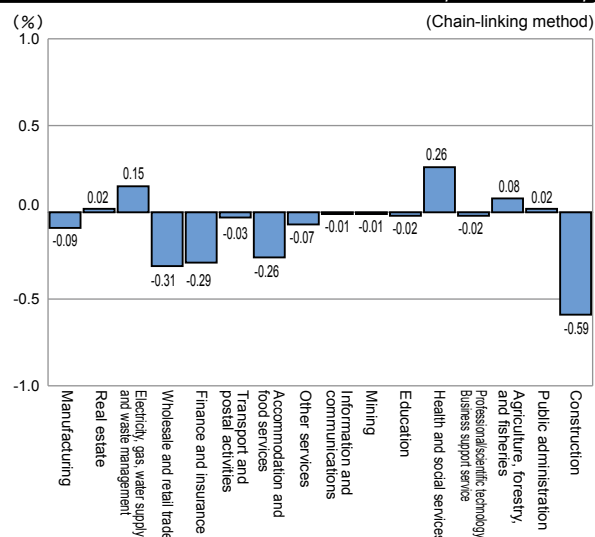
Note 4: The figures for the Tohoku region from FY 2020 onward are not indicated because the six Tohoku prefectures have not yet released their datasets publicly.

Note 5: Business-cycle peaks and troughs are based on the Cabinet Office's reference dates of the business cycle.

Source: *Annual Report on Prefectural Accounts and Annual Report on National Accounts*, Cabinet Office

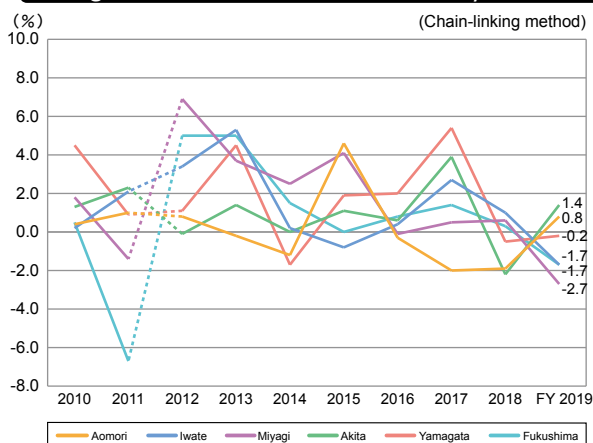
- In terms of the contribution to real economic growth in FY 2019 by economic activity (by industry), the "health and social services" and "electricity, gas, water supply and waste management" sectors made positive contributions of 0.26% and 0.15%, respectively, while the "construction" sector made a negative contribution of 0.59%.
- Looking at the real economic growth rate by prefectures in the Tohoku region, Aomori, and Akita experienced positive growth, while Iwate, Miyagi, Yamagata, and Fukushima had negative growth. When compared to the fiscal year 2018, the growth rate turned to positive in Aomori and Akita prefectures, whose growth rate was negative in the previous year. On the other hand, Iwate, Miyagi, Yamagata, and Fukushima prefectures continue to show negative trends.

**Contribution to the Real Economic Growth Rate in FY 2019 by Economic Activity**



Source: *Annual Report on Prefectural Accounts*

**Changes in Real Economic Growth Rate by Prefecture**



Note: Figures for Tohoku are not directly connected because they are based on the 2011 standard and chain-linking method (2011 calendar year chain prices) for FY2011 and earlier, and the 2015 standard and chain-linking method (2015 calendar year chain prices) for FY2012 and later.

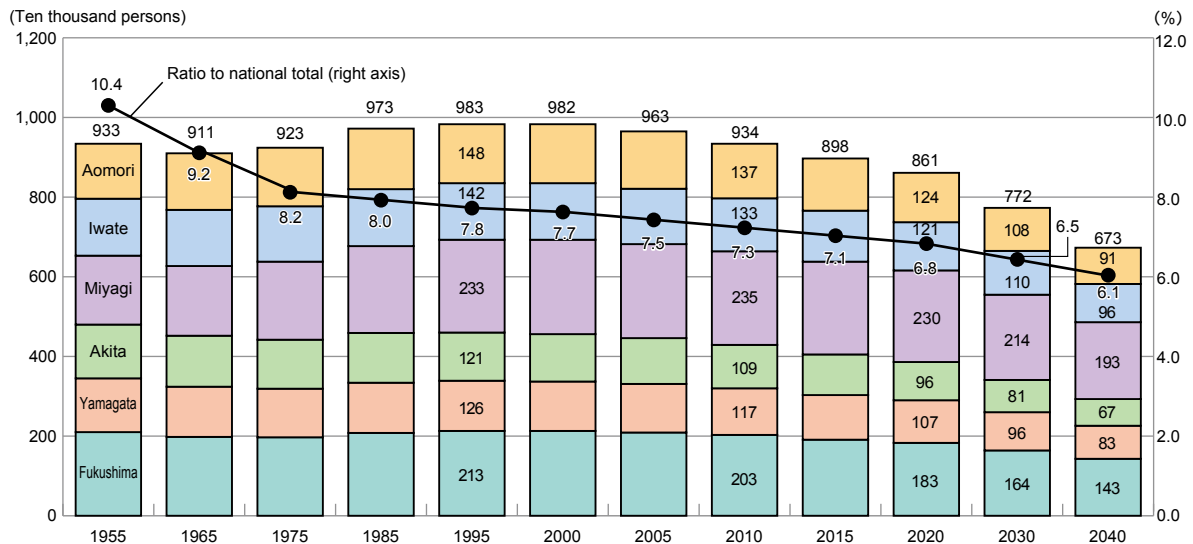
Source: *Annual Report on Prefectural Accounts*

### (3) Population

The productive-age population in the Tohoku region is projected to shrink by 30.7% in 2040 compared to 2020.

- In 2020, the Tohoku region had a population of 8.61million, accounting for 6.8% of the national population (126.15 million). Tohoku's population started to decrease after peaking in 1995, and is projected to decrease 21.8% to 6.73 million in 2040 compared to 2020, accounting for 6.1% of the national population.

Changes in the Population of the Tohoku Region



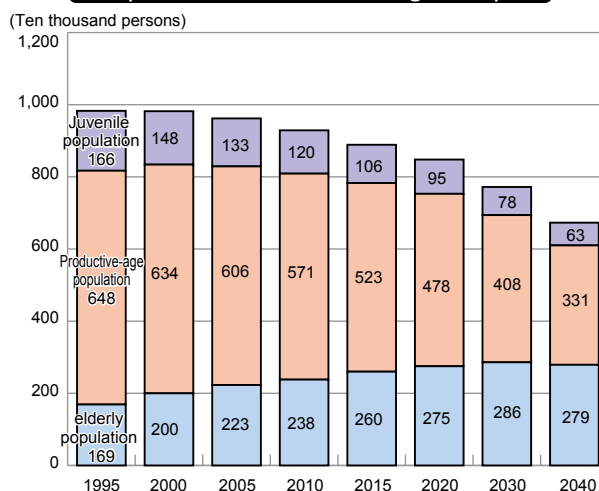
Note: The above estimates are based on medium assumptions of births and deaths.

Source: 1955-2020 : Population Census of Statistics Bureau of Japan

2030 and beyond : Population Projections by Prefecture, the National Institute of Population and Social Security Research (Projection from March 2018)

- In terms of population changes in three age groups, in 2040, the productive-age population (aged 15- 64) is projected to be 3.31 million, down 30.7% from 2020, the juvenile population (aged 0-14) is projected to be 630,000, down 33.7%, while the elderly population (aged 65 or older) is projected to be 2.79 million, up 1.7%. The population is declining and aging ahead of the rest of the country.

Population Trends in Three Age Groups

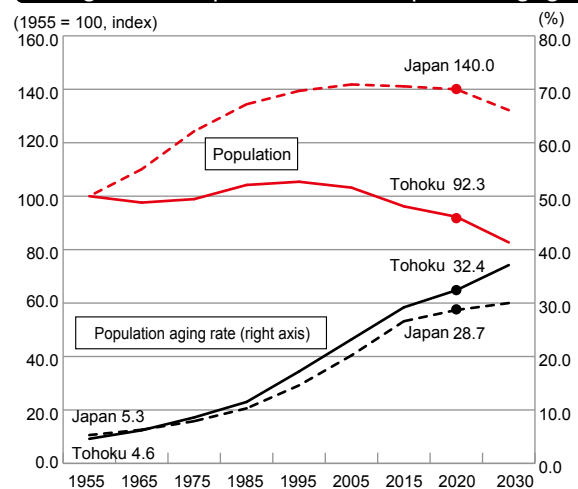


Note: The people whose age is unknown are distributed proportionally in 2019 and beyond.

Source: 1955-2020 Population Census, Statistics Bureau of Japan

2030 and beyond : Population Projections by Prefecture, the National Institute of Population and Social Security Research (Projection from March 2018)

Changes in the Population and the Population Aging Rate



## (4) Demographics

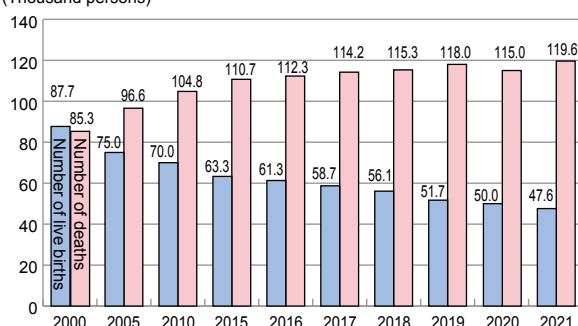
## (4) Demographics

**Tohoku's natural population decline rises to 72,000 and social decline falls to 18,600.**

- In 2021, the number of births in the Tohoku region was 47,600, down 2,400 from the previous year, and the number of deaths was 119,600, up 4,600 from the previous year, resulting in a natural decline (births - deaths) of 72,000, up from 65,000 in the previous year.
- In 2021, the number of people moving in from outside the Tohoku region was 75,300, unchanged from the previous year, and the number of people moving out of the Tohoku region was 94,000, down 2,600 from the previous year, reducing the social decline (moving in - moving out) from 21,300 in the previous year to 18,700.
- Looking at the 140,600 out-migrants from Tohoku prefectures by destination, 46,700 moved within the Tohoku region and 93,900 moved out of the Tohoku region, showing that about 70% of the people moving left the Tohoku region. Among the out-migrants within the Tohoku region, many moved to Miyagi Prefecture.

**Changes in the Number of Live Births and Deaths**

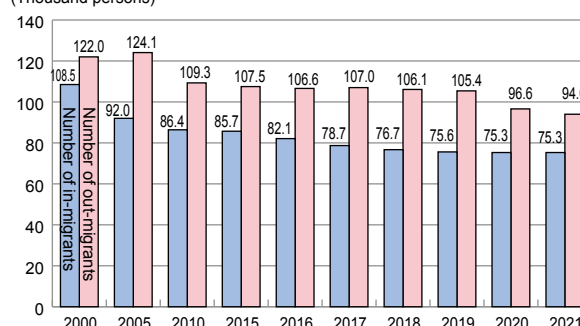
(Thousand persons)



Source: *Annual Report of Vital Statistics*, Ministry of Health, Labor and Welfare

**Changes in In-migrants and Out-migrants**

(Thousand persons)



Note: The number of in-migrants/out-migrants does not include people who moved within the Tohoku region.

Source: *Annual Report on the Internal Migration in Japan Derived from the Basic Resident Registration*, Ministry of Internal Affairs and Communications

**Number of Migrants within and into/out of the Tohoku Region (2021)**

(Persons)

		Prefecture/region (migration destination)								Out-migrants total
		Aomori	Iwate	Miyagi	Akita	Yamagata	Fukushima	Inside Tohoku total	Outside Tohoku total Of which, Tokyo area	
Prefecture/region (migration origin)	Aomori		1,688	3,221	863	314	545	6,631	13,765	20,396
	Iwate	1,543		4,441	896	484	650	8,014	11,008	19,022
	Miyagi	1,957	3,491		1,587	2,747	3,974	13,756	30,206	43,962
	Akita	841	1,091	2,414		537	427	5,310	8,129	13,439
	Yamagata	268	400	3,426	513		1,050	5,657	9,477	15,134
	Fukushima	472	694	4,826	389	978		7,359	21,379	28,738
	Inside Tohoku total	5,081	7,364	18,328	4,248	5,060	6,646	46,727	93,964	140,691
	Outside Tohoku total	11,088	8,785	25,751	6,293	6,963	16,421	75,301		
Of which, Tokyo area		5,930	4,762	13,719	3,649	3,772	8,815	40,647		
In-migrants total		16,169	16,149	44,079	10,541	12,023	23,067	122,028		

Source: *Annual Report on the Internal Migration in Japan Derived from the Basic Resident Registration*, Ministry of Internal Affairs and Communications



## (5) Number of Business Establishments (Private)

Private business establishments in the Tohoku region represent 7.0% of the national total, while the number of employees accounts for 6.4% of the national total.

- In 2021, the Tohoku region had 408,785 private business establishments, or 7.0% of the national total of 5,862,429 business establishments (7.4% in 2016). The number of the establishments decreased 1.4% from the previous 2016 survey. Akita and Yamagata, in particular, saw significant decreases of 4.9% and 4.7% respectively.
- In 2021, the number of employees in the Tohoku region will be 3,697,592, accounting for 6.4% of the national total of 57,457,856 (6.6% in the previous survey). This is a 0.8% decrease from the previous survey (2016), with a particularly large decrease in Akita (3.5%).

**Numbers of Private Business Establishments and Employees by Prefecture**

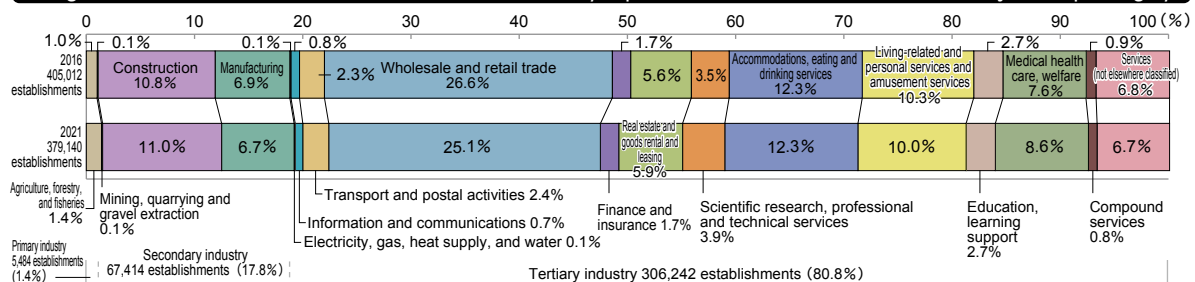
	No. of establishments				No. of employees			
	2016	2021	Ratio to the previous census (%)	Ratio to national total (%)	2016	2021	Ratio to the previous census (%)	Ratio to national total (%)
Aomori	59,069	58,200	- 1.5	1.0	498,988	498,573	- 0.1	0.9
Iwate	59,451	57,007	- 4.1	1.0	525,264	515,967	- 1.8	0.9
Miyagi	102,026	104,496	2.4	1.8	1,006,886	1,022,384	1.5	1.8
Akita	49,432	46,993	- 4.9	0.8	413,719	399,204	- 3.5	0.7
Yamagata	56,551	53,892	- 4.7	0.9	475,435	463,350	- 2.5	0.8
Fukushima	88,128	88,197	0.1	1.5	806,130	798,114	- 1.0	1.4
Tohoku	414,657	408,785	- 1.4	7.0	3,726,422	3,697,592	- 0.8	6.4
Japan	5,578,975	5,862,429	5.1	100.0	56,872,826	57,457,856	1.0	100.0

Note: The number of establishments includes those whose business details are unclear.

Source: 2016 Economic Census for Business Activity and 2021 Preliminary Aggregation of Economic Census for Business Activity

- Looking at the breakdown of private business establishments by industry (major group category), “wholesale and retail trade” had the largest share at 25.1%, followed by “accommodations, eating and drinking services” at 12.3% and “construction” at 11.0%. The tertiary industry occupied a significant share at 80.8%. In comparison to 2016, “medical, healthcare and welfare” increased its share by 1.0 percentage points, while “wholesale and retail trade” decreased shares by 1.5 percentage points.

**Changes in the Breakdown of Private Business Establishments by Japan Standard Industrial Classification (Major Group Category)**

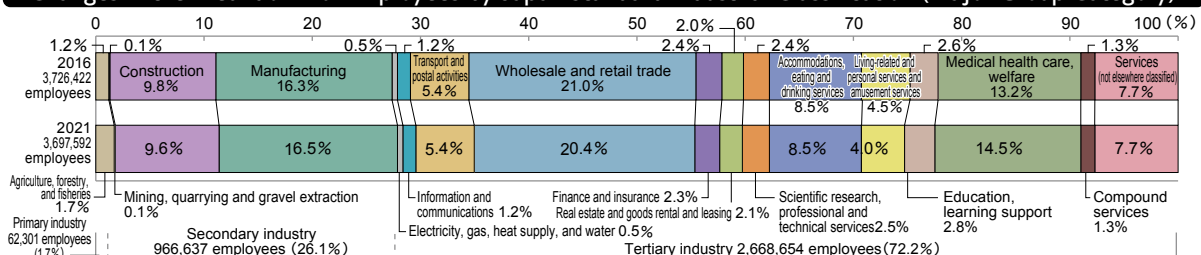


Note: The number of business establishments by industry includes only those for which numerical data for necessary items were obtained.

Source: 2016 Economic Census for Business Activity and 2021 Preliminary Aggregation of Economic Census for Business Activity

- The number of employees in private establishments by industry (major category) shows that primary industries accounted for 1.7%, secondary industries for 26.1%, and tertiary industries for 72.2%. Compared to 2016, “medical care and welfare” expanded by 1.3 percentage points, while “wholesale and retail trade” shrank by 0.6 percentage points.

**Changes in the Breakdown of Employees by Japan Standard Industrial Classification (Major Group Category)**



Note: 2016 figures are as of June 1, 2016; 2021 figures are as of June 1, 2021.

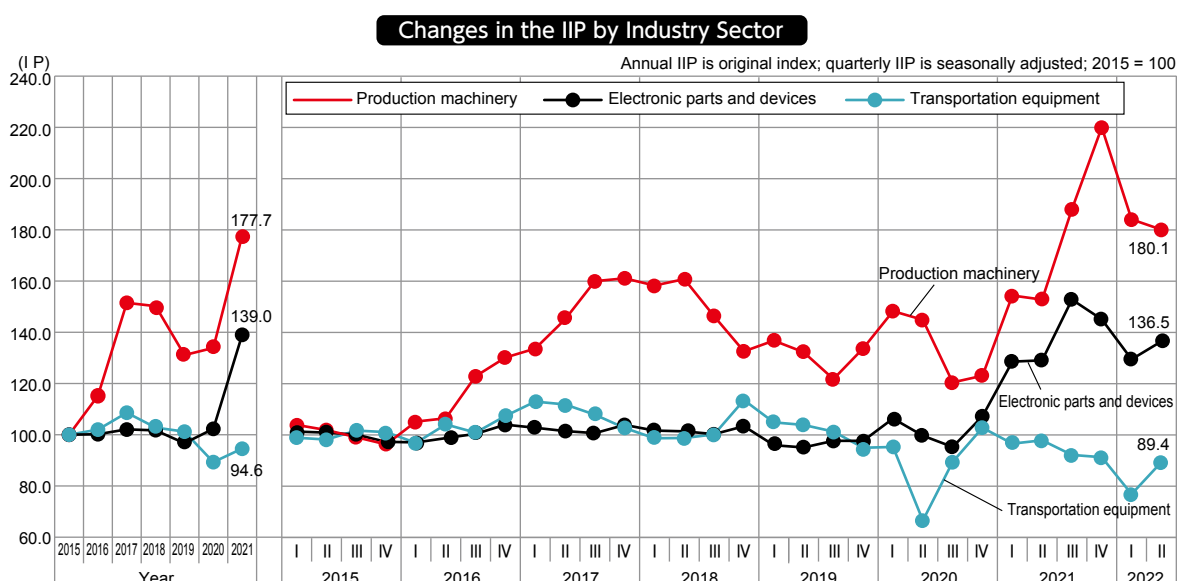
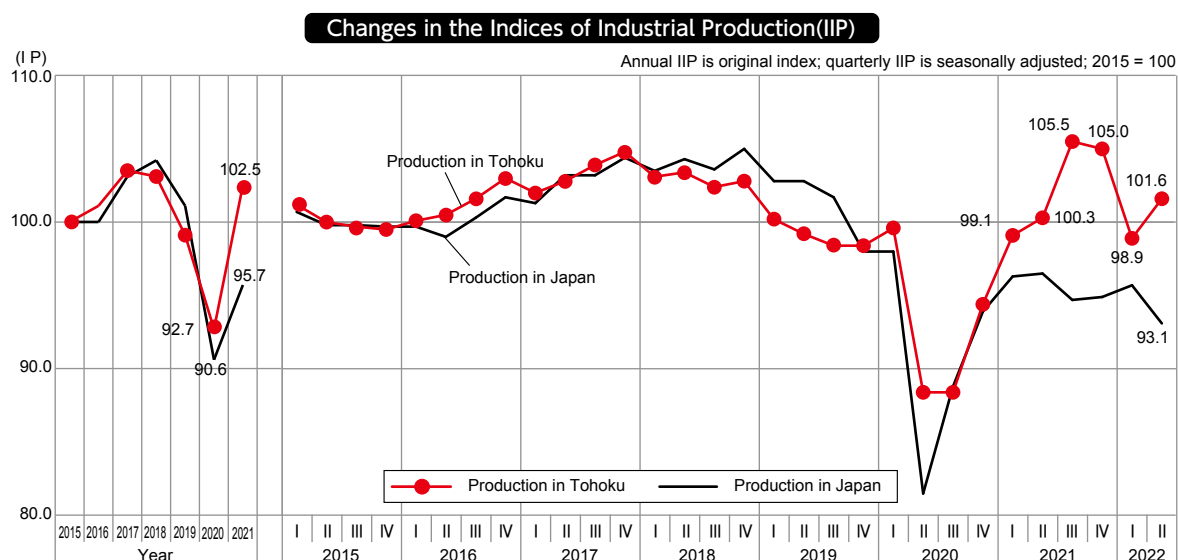
Source: 2016 Economic Census for Business Activity and 2021 Preliminary Aggregation of Economic Census for Business Activity

## (6) Industrial Production

## (6) Industrial Production

Industrial production shows trends of restoring growth from decline.

- The Index of Industrial Production (IIP) for the Tohoku region in 2021 (2015=100) rose 10.6% from the previous year to 102.5.
- Looking at the quarterly production index (seasonally adjusted index: 2015=100) for 2021, the first quarter rose 5.0% from the previous quarter to 99.1. Contributors included the electronic parts and devices industry, which saw gains in MOS integrated circuit (memory) and connectors, and the production machinery industry, which saw gains in semiconductor manufacturing equipment. In the second quarter, it rose 1.2% to 100.3. Other industries, including automobile tires and general lumber, contributed to the rise. In the third quarter, it rose 5.2% to 105.5. The electronic parts and devices industry, which saw gains in MOS integrated circuit (memory) and filters, and the production machinery industry, which saw gains in semiconductor manufacturing equipment, contributed to the rise. In the fourth quarter, it declined 0.5% to 105.0. The electronic parts and devices industry and other industries contributed to the decline in products like connectors and fixed capacitors. Overall, there was a pickup in 2021.
- The production index for the first quarter of 2022 declined 5.8% from the previous quarter to 98.9. The production machinery industry, which saw a decline in products like semiconductor manufacturing equipment, contributed to the decrease. The second quarter rose 2.7% to 101.6. The electronic parts and devices industry, which saw a rise in MOS integrated circuit (memory) and other products, contributed to the rise.



Note 1: Production indexes for Japan was prepared by the Ministry of Economy, Trade and Industry, while production indexes for Tohoku was prepared by the Tohoku Bureau of Economy, Trade and Industry

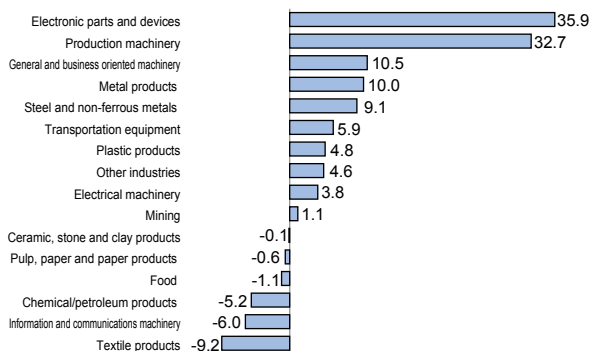
Note 2: 2015 base for both Japan and Tohoku. Both are annually adjusted for 2021.

Source: *Indices of Industrial Production*, Ministry of Economy, Trade and Industry / *Indices of Industrial Production*, Tohoku Bureau of Economy, Trade and Industry

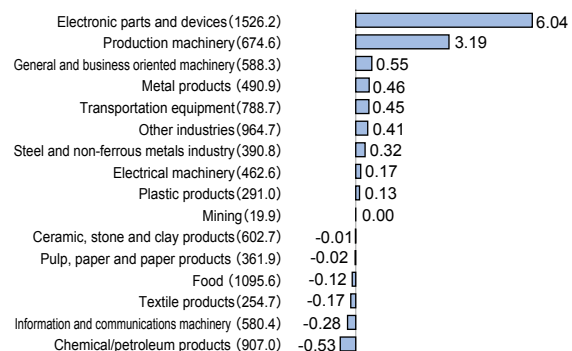
## (6) Industrial Production

- Looking at the year-on-year growth rate of the production index in 2021 by industry sector, industries that increased include the electronic parts and devices industry (+35.9%) and the production machinery industry (+32.7%). The industries that experienced declines included the textile products industry (-9.2%) and the information and communications machinery industry (-6.0%).
- Looking at the contribution of each industry sector to the year-on-year growth rate (10.6%) of the production index in 2021, the electronic parts and devices industry (6.04), which saw a rise in such products as MOS integrated circuit (memory) and filters, and the production machinery industry (3.19), which saw a rise in semiconductor manufacturing equipment, contributed to the overall increase. On the other hand, the chemical/petroleum products industry (-0.53) saw a decline in gasoline and heavy oil, and the information and communications machinery industry (-0.28) saw a decline in desktop computers and transportation equipment.

2021 YoY Growth Rate (%) in IIP



Contribution (% point) by Industry Sector to 2021 YoY Production Growth Rate (10.6%)



The figures in parentheses represent the weight of the relevant industry sector.

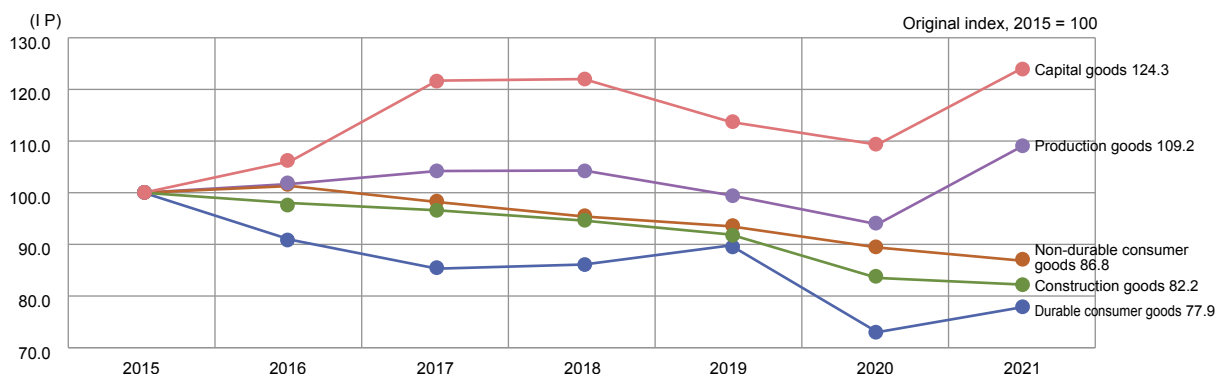
Note: Weight: Composition of each industry as a percentage of the total (total industrial Production = 10000)

Contribution: Breakdown by industry of the percentage increase or decrease in overall production. It indicates how much the increase or decrease in the industry had an impact on the total production.

Source: *Indices of Industrial Production*, Tohoku Bureau of Economy, Trade and Industry

- Looking at the 2021 production index by goods, capital goods rose 13.7% from the previous year to 124.3. Semiconductor manufacturing equipment, lathes, and cameras contributed to the rise. Construction goods declined 1.6% to 82.2. Fresh concrete, system kitchens, cement, etc. contributed to the decline. Durable consumer goods rose 6.7% to 77.9. Automobile tires, passenger cars, and interchangeable lenses for cameras contributed to the rise. Non-durable consumer goods fell 2.9% to 86.8. Gasoline, woven textile products (outerwear), and sparkling alcoholic beverages contributed to the decline. Production goods increased 16.3% to 109.2. MOS integrated circuit (memory), filters, and cemented carbide chips contributed to the rise, while heavy oil, flat plate printing (offset printing), and agricultural chemicals contributed to the decline.

Production Index Trend by Goods



Source: *Indices of Industrial Production*, Tohoku Bureau of Economy, Trade and Industry

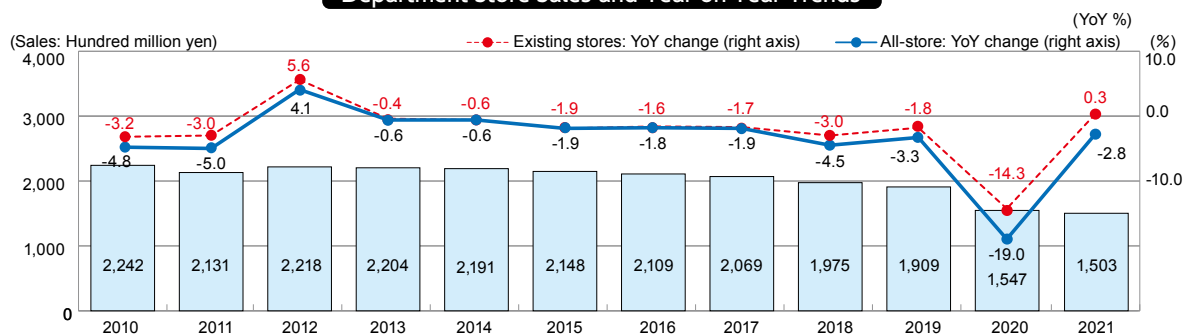
## (7) Retail Trade

## (7) Retail Trade

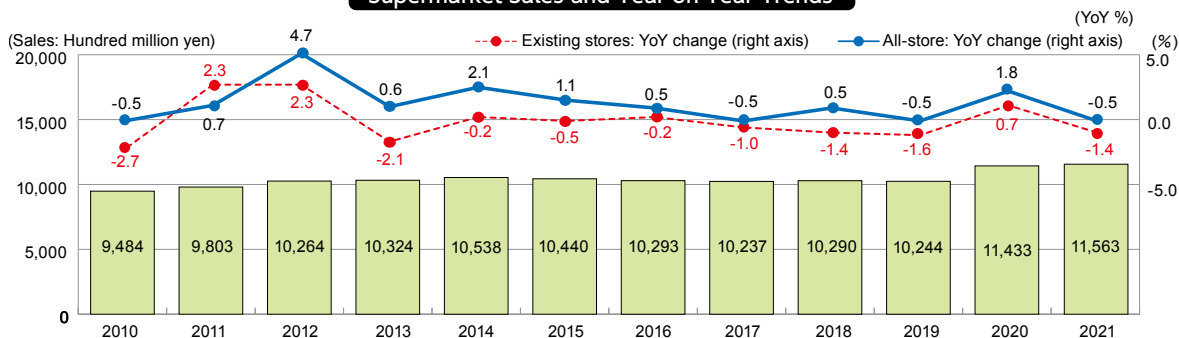
Retail trade is at a standstill.

- In 2021, department stores and supermarkets in the Tohoku region recorded 1,306.6 billion yen of sales on an all-store basis, down 0.8% from the previous year, marking five consecutive years of sales decline. Meanwhile, sales at existing stores shrank 1.2% year-on-year, declining for nine consecutive years.
- In terms of year-on-year comparison of sales by store type (on an all-store basis) in 2021, department store sales decreased for the ninth consecutive year to 150.3 billion yen, down 3.1% from the national level and 2.8% from the previous year, while supermarket sales decreased for the first time in two years to 1,156.3 billion yen, down 7.7% from the national level and 0.5% from the previous year.

Department Store Sales and Year-on-Year Trends



Supermarket Sales and Year-on-Year Trends



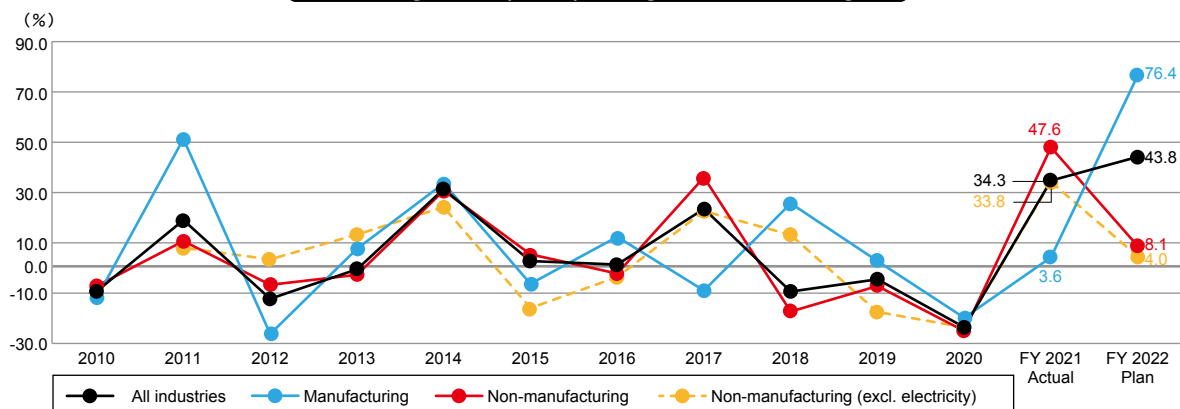
Note: The year-on-year rate of increase and/or decrease in supermarkets is calculated using the numerical value processed by the link coefficient.  
Source: *the Current Survey of Commerce*, Ministry of Economy, Trade and Industry

## (8) Private Sector Capital Spending

Capital spending plans see an increase in both manufacturing and non-manufacturing industries.

- The capital investment plan for the Tohoku region in FY2022 (survey in June 2022) is 461.4 billion yen, an increase of 43.8% year-on-year. The manufacturing industry plans to increase by 76.4%, and the non-manufacturing industry plans to increase by 8.1% (non-manufacturing industry excluding electric power is plans to increase by 4.0%).
- Capital investment in FY2021 increased by 34.3% in all industries. The manufacturing sector increased 3.6% over the previous year due to an increase in electrical machinery, despite a decrease in transportation equipment. The non-manufacturing sector increased 47.6% from the previous year due to factors like an increase in electric power, (the non-manufacturing sector, excluding electric power, increased 33.8% from the previous year).

YoY Changes in Capital Spending in the Tohoku Region



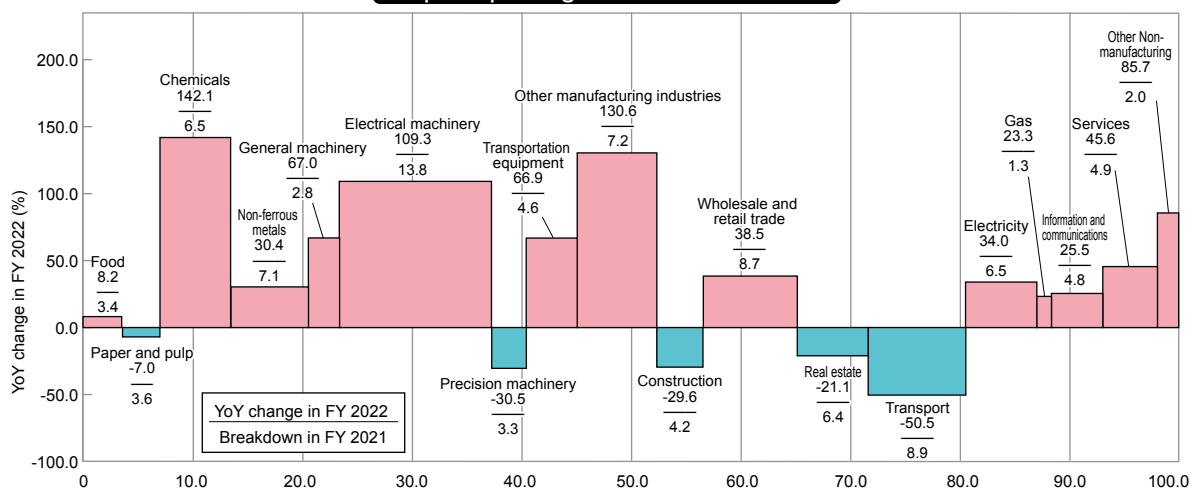
Note 1: The publicly released data (for the seven Tohoku prefectures including Niigata Prefecture) were recalculated for the six Tohoku prefectures. The same shall apply hereinafter.

Note 2: In FY2010, actual investment by industry category for the seven prefectures in the Tohoku region was not disclosed.

Source: Survey on Planned Capital Spending (by Region), Development Bank of Japan

- Looking at the FY2022 capital investment plans by industry sector, the manufacturing sector plans to increase in such areas as electrical machinery, which will build or expand factories in response to the global spread of electric vehicles (EVs) and the trend toward digital transformation (DX), and chemicals, which will expand factories in the medicine manufacturing field. In the non-manufacturing sector, while there will be declines in transportation, where investment has slowed, there are plans for increases in wholesale and retail, where stores will be opened and renovated, and in electric power, where power plants will be repaired and renovated.

Capital Spending Trends (FY 2022 Plan)



Breakdown of capital spending by industry sector in FY 2021 (%)

Source: Survey on Planned Capital Spending (by Region) for Fiscal Year 2022, Development Bank of Japan

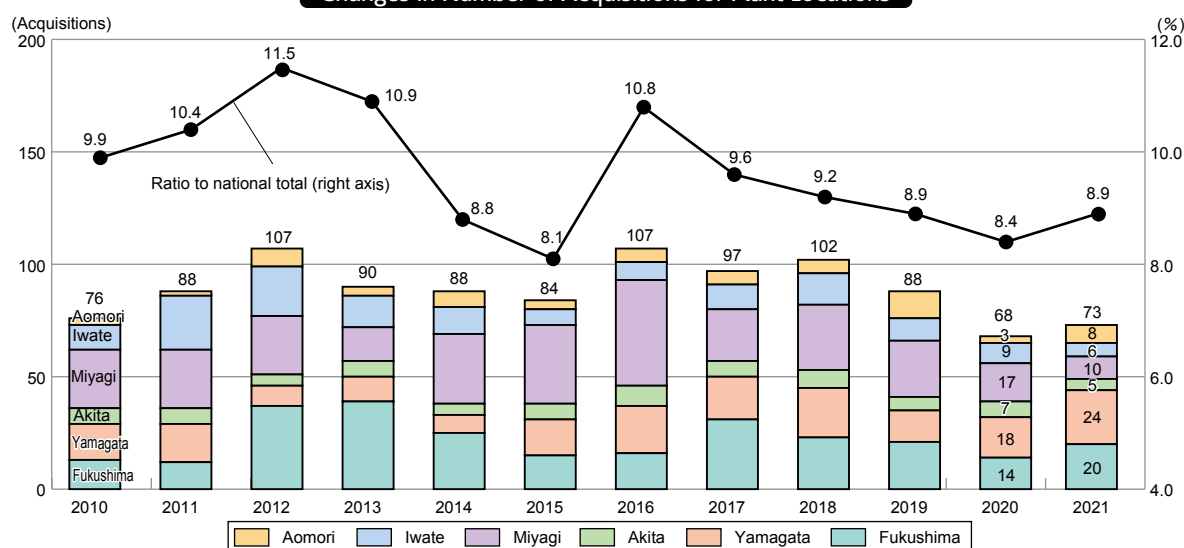
## (9) Acquisition of Plant Locations

## (9) Acquisition of Plant Locations

## Number of acquisition for plant locations increased for the first time in three years

- In 2021, the number of acquisition for plant locations (manufacturing) in the Tohoku region increased for the first time in three years, up 5 (7.4%) from the previous year to 73. The national ratio rose 0.5 points from the previous year to 8.9%.
- By prefecture, in descending order of number of locations, 24 were in Yamagata (18 in the previous year), 20 in Fukushima (14 in the previous year), 10 in Miyagi (17 in the previous year), 8 in Aomori (3 in the previous year), 6 in Iwate (9 in the previous year), and 5 in Akita (7 in the previous year).
- Looking at the changes in the number of acquisitions, the number reached the 70s during the global economic crisis in 2009. Although the number of locations tended to increase and level off due to the long-term economic recovery phase and support for affected areas, including relocation, the number has recently decreased and leveled off, partly due to the global economic crisis caused by the spread of the COVID-19 infection.

Changes in Number of Acquisitions for Plant Locations



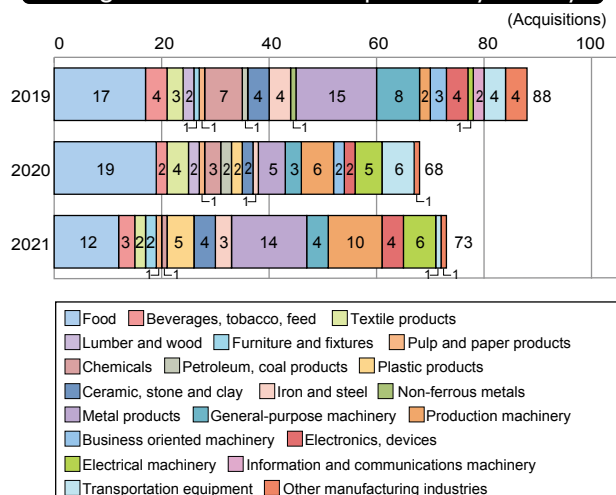
Note 1: Electricity, gas, and heat supply industries and laboratories are excluded.

Note 2: Plant Location Acquisition Trend targets the acquisition (including leasing) of land with a size of 1,000 square meters or larger for use to build a factory, business office or research center for manufacturing, electricity (excluding hydraulic power plants, geothermal power plants and solar power plants,) gas and heat supply. : Solar power plants were excluded from the 2015 survey for the electricity sector.

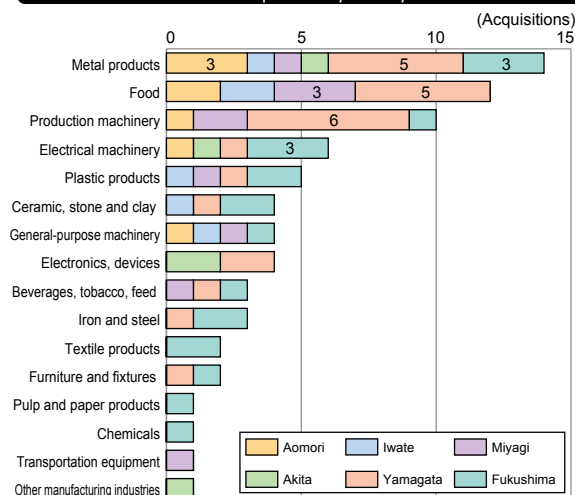
Source: *Plant Location Acquisition Trend (Preliminary Report) January - December 2021: Tohoku Version*, the Tohoku Bureau of Economy, Trade and Industry

- By industry, in descending order of the number of acquisitions, metal products accounted for 14, food for 12, production machinery for 10, and electrical machinery for 6. By prefecture, in descending order of the number of acquisitions, Yamagata Prefecture had 6 acquisitions in production machinery, 5 in food, and 5 in metal products.

Changes in the Number of Acquisitions by Industry



Distribution of Plant Location Acquisitions by Industry Sector and Prefecture (2021)



Note: Excludes the electricity industry, gas industry, heat supply industry, and research institutes.

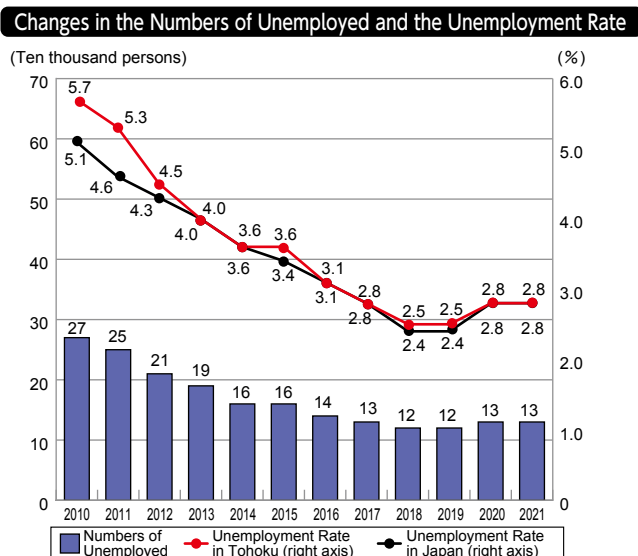
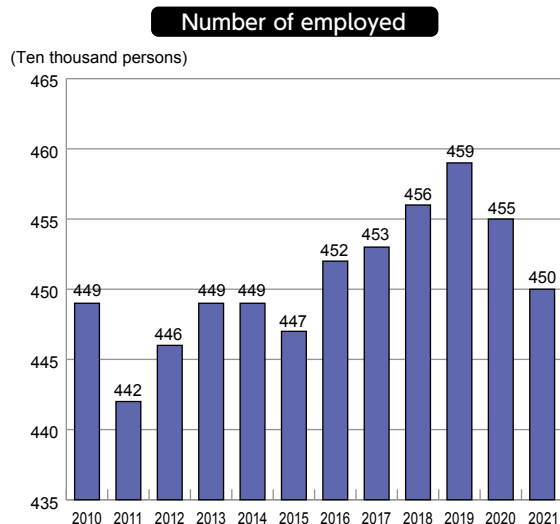
Source: *Plant Location Acquisition Trend (Preliminary Report) Jan. – Dec. 2021: Tohoku version*, the Tohoku Bureau of Economy, Trade and Industry



## (10) Labor Force Population

The number of people employed is 4.5 million, and the number of unemployed is 130,000.

- In 2021, the number of people employed in the Tohoku region was 4.5 million, which while exceeding the figures for 2010, was 50,000 lower than the previous year, while the number of totally unemployed persons remained at a low level of 130,000, the same as the previous year. The unemployment rate was 2.8%, the same as the previous year.



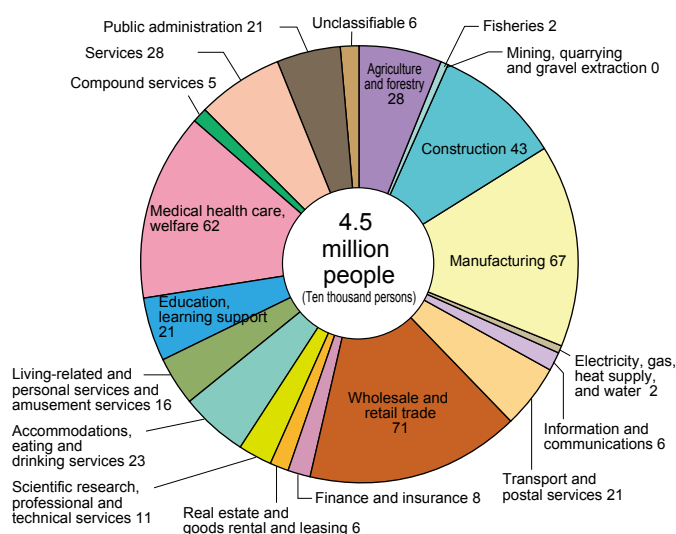
Note: The figure for 2011 is a supplementary estimate made because of the impact of the Great East Japan Earthquake.

Source: *Labor Force Survey*, Ministry of Internal Affairs and Communications

Source: *Labor Force Survey*, Ministry of Internal Affairs and Communications

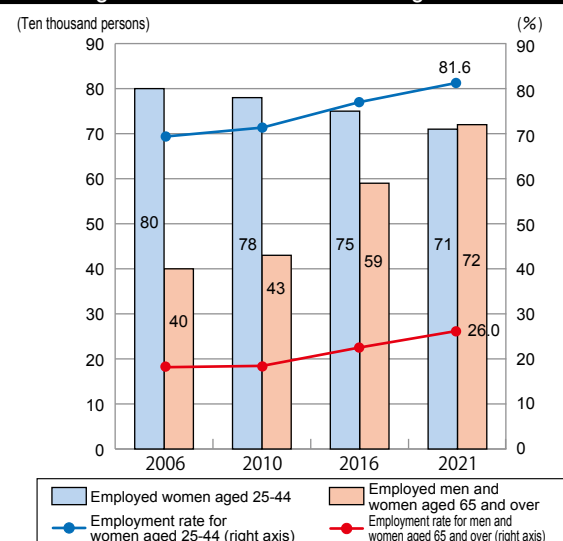
- By industrial sector, the largest number of people employed was seen in “wholesale and retail trade” at 710,000 (15.9%), followed by “manufacturing” with 670,000 (15.0%), “medical care and welfare” with 620,000 (13.9%), “construction” with 430,000 (9.6%), and then “agriculture and forestry” and “services”, both with 280,000 (6.3%).
- The number of employed women aged 25-44 years (child-caring age) was decreasing, while the number of people employed (men and women) aged 65 and over was increasing. The employment rate for women aged 25-44 years and that for men and women aged 65 and over showed an upward tendency.

**Number of Employed by Industrial Sector (2021)**



Source: *Labor Force Survey*, Ministry of Internal Affairs and Communications

**Number of Employed and Employment Rate (Women Aged 25-44 and Men and Women Aged 65 and Over)**



Note: The figure for 2011 is a supplementary estimate made because of the impact of the Great East Japan Earthquake.

Source: *Labor Force Survey*, Ministry of Internal Affairs and Communications

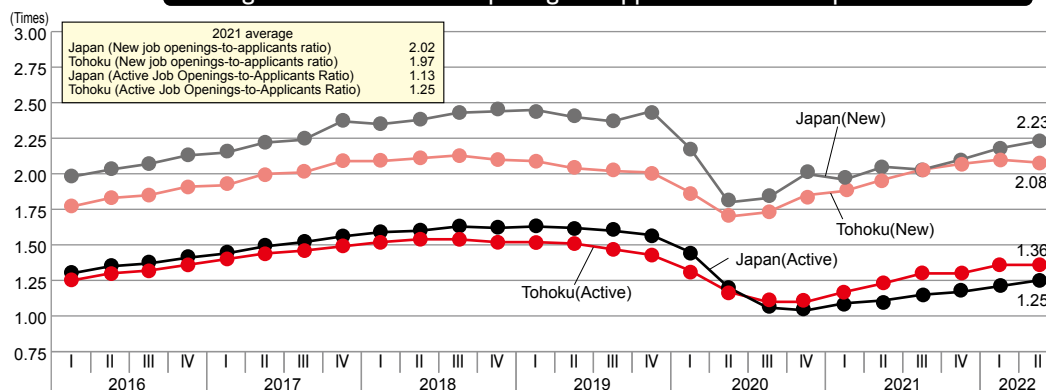
## (11) Employment

## (11) Employment

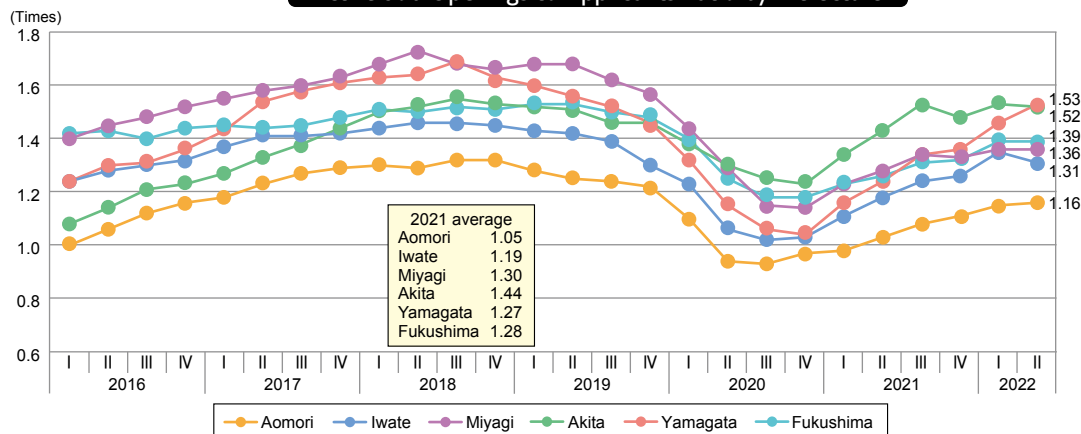
Both the active job openings-to-applicants ratio and the new job openings-to-applicants ratio are recovering from the impact of the COVID-19 infections.

- The 2021 average active job openings-to-applicants ratio for the Tohoku region was 1.25 (1.13 for the nation), and the average new job openings-to-applicants ratio was 1.97 (2.02 for the nation), up from the previous year, with some signs of a pickup from the impact of COVID-19.
- The active job openings-to-applicants ratio in Tohoku in the second quarter of 2022 was 1.36, and the new job openings-to-applicants ratio has also increased to 2.08, showing signs of recovery from the impact of COVID-19.
- Looking at the changes in the number of new job openings (original figures) by major industry, medical care and welfare, manufacturing and services industries (those not classified elsewhere) are recovering, while the recoveries of wholesale and retail trade, accommodations, eating and drinking services, transportation and postal services, and living-related and personal services and amusement services are lagging.

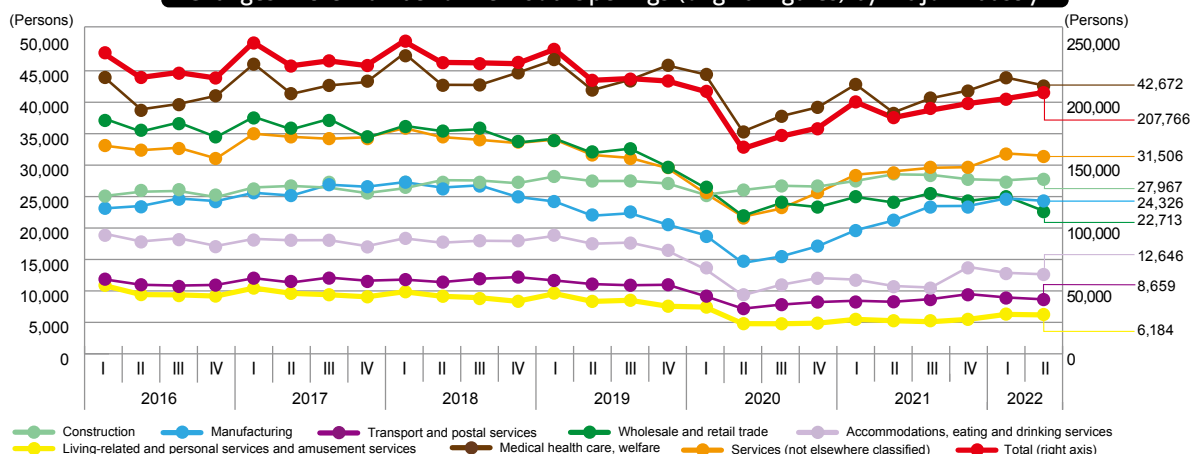
Changes in the Active Job Openings-to-Applicants Ratio in Japan and Tohoku



Active Job Openings-to-Applicants Ratio by Prefecture



Changes in the Number of New Job Openings (original figures) by Major Industry

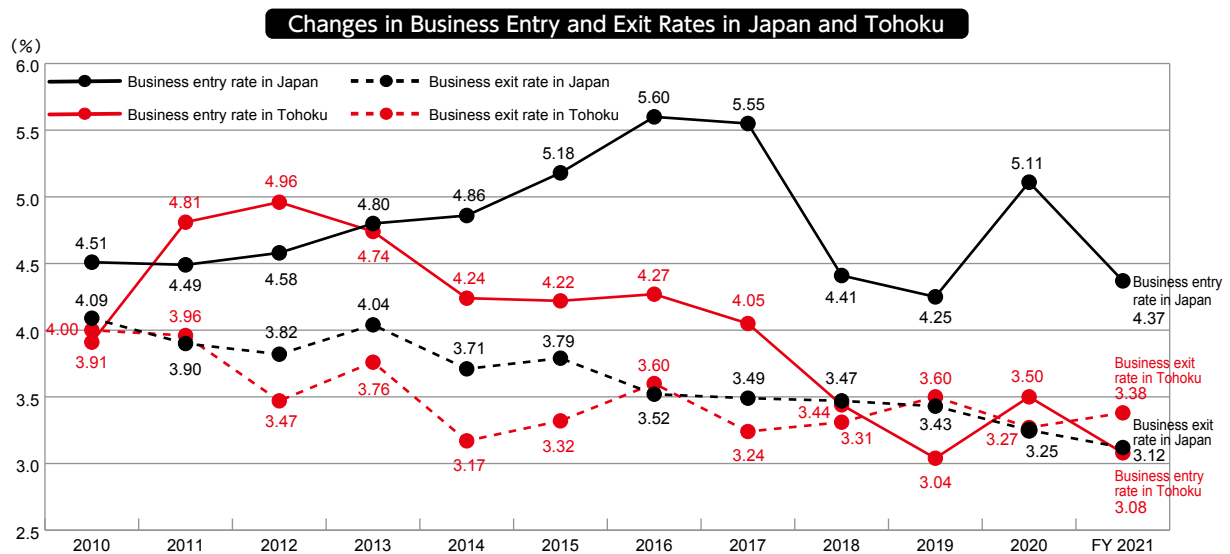




## (12) Business Entry and Exit Rates

The business entry rate declined while the exit rate increased, with the entry rate falling below the exit rate.

- The business entry rate in the Tohoku region in FY2021 was 3.08%, down from the previous year, according to employment insurance statistics. The entry rate, which increased after the Great East Japan Earthquake, peaked in FY2012 and has been on a downward trend since then. The national rate also declined from the previous year to 4.37%.
- The exit rate for the Tohoku region was 3.38%, up from the previous year, while the national rate was 3.12%, showing a downward trend.



Note: The business entry and exit rates were calculated using the following formulas based on the data from the *Monthly & Annual Reports on Employment Insurance Services*.

Business entry rate = Number of newly applied establishments in the relevant fiscal year of employment insurance / Number of applicable establishments at the end of the previous fiscal year × 100 (%)

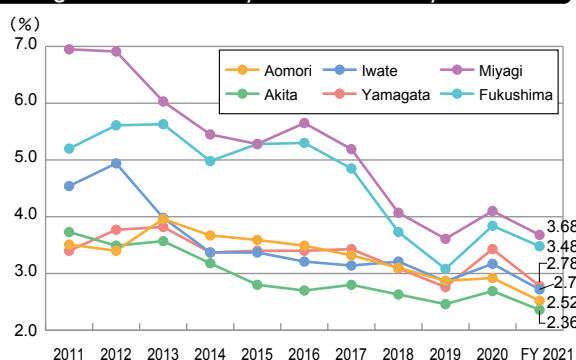
Exit rate = Number of closed establishments in the relevant fiscal year of employment insurance / Number of applicable establishments at the end of the previous fiscal year × 100 (%)

※ Applicable establishments shall mean establishments where the insurance relation of labor insurance pertaining to employment insurance has been established pursuant to the provisions of the Act on Collection of Insurance Premiums of Labor Insurance. Even an existing establishment becomes an applicable establishment when it hires an employee for the first time.

Source: *Monthly & Annual Reports on Employment Insurance Services*, Ministry of Health, Labour and Welfare

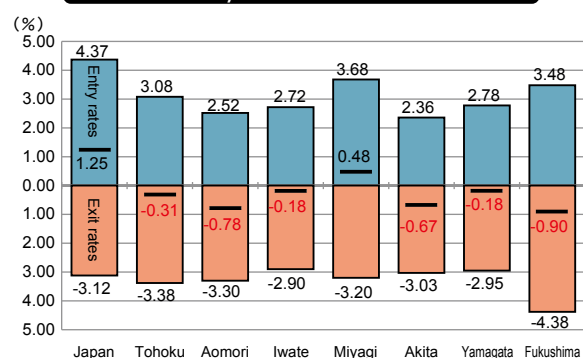
- Looking at the business entry rate in FY2021 by prefecture, it has gone into decline in all six prefectures in Tohoku. Looking at the difference between the business entry rate and the exit rate, the entry rate is 1.25 points higher than the exit rate nationally, but it is 0.31 points lower in Tohoku. By prefecture, the entry rate only exceeds the exit rate in Miyagi, by 0.48 points.

**Changes in Business Entry Rate in Tohoku by Prefecture**



Source: *Monthly & Annual Reports on Employment Insurance Services*, Ministry of Health, Labour and Welfare

**Business Entry and Exit Rates in FY 2021**



Note: Plotting (–) on each bar indicates the difference in rate between business entry and exit.

Source: *Monthly & Annual Reports on Employment Insurance Services*, Ministry of Health, Labour and Welfare

## (13) Internationalization

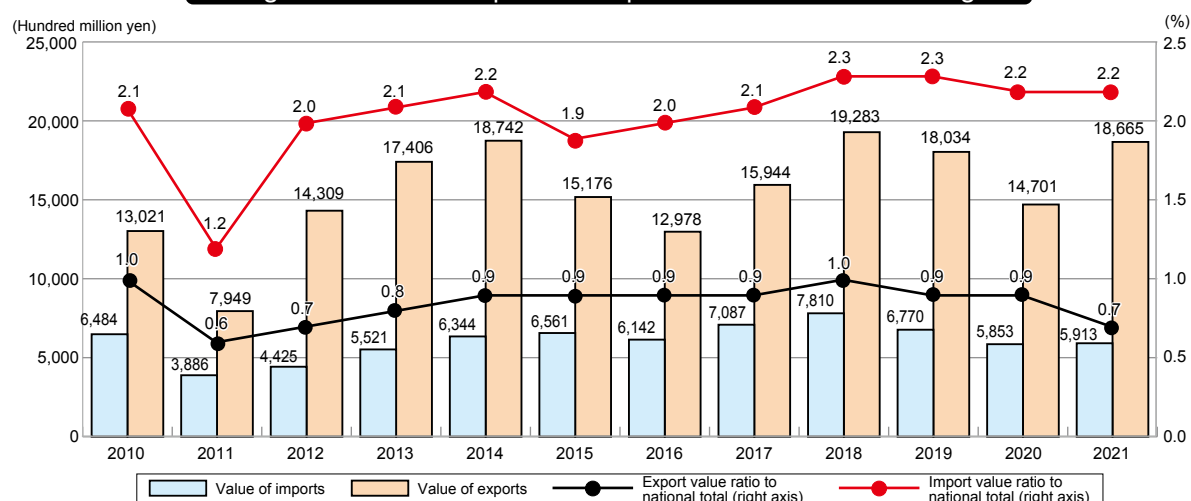
## (13) Internationalization

## (i) Trade

## Exports and imports increase for the first time in three years

- In 2021, exports from the Tohoku region totaled 591.3 billion yen, up 1.0% from the previous year, the first increase in three years, due to an increase in steel and other products despite a decrease in medical products. Imports totaled 1,866.5 billion yen, up 27.0% from the previous year, the first increase in three years, due to an increase in coal, metalliferous and scrap despite a decrease in organic chemicals and other materials. As a percentage of the national total, exports account for 0.7% (0.9% in 2020) and imports account for 2.2% (2.2% in 2020).

Changes in the Value of Exports and Imports Handled in the Tohoku Region

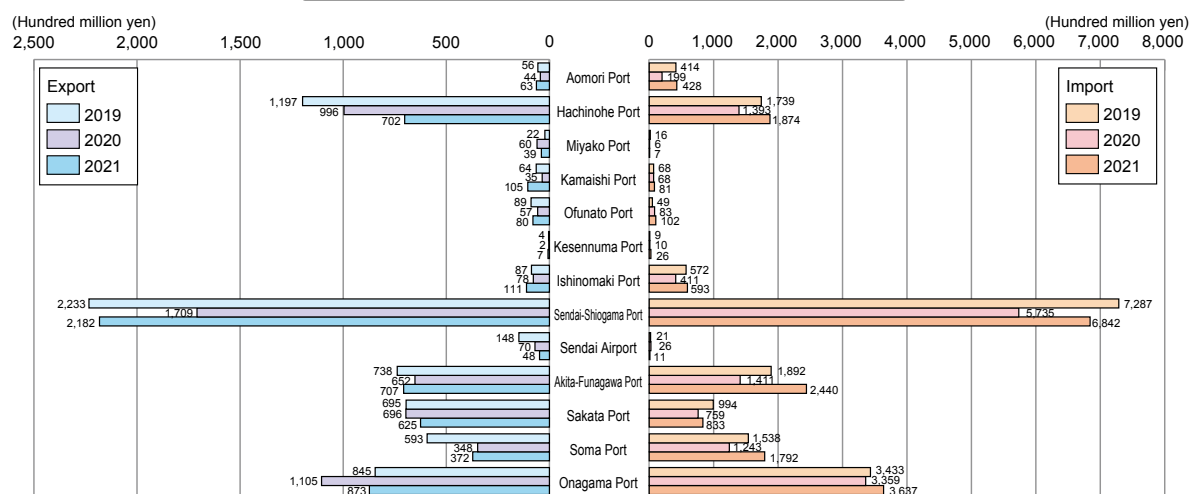


Note: The value of cargo that passed through export and import custom clearances at the custom offices in the six Tohoku prefectures.

Source: Compiled by processing Overview of Trade in the Tohoku Region, Yokohama Customs, and Trade Statistics of Japan, Ministry of Finance Japan

- In terms of volume handled by port in the Tohoku region, the top three largest ports are the same for both exports and imports: Sendai-Shiogama Port, Onahama Port, and Akita-Funagawa Port. Compared to the previous year, exports decreased at Hachinohe Port, Onahama Port, and other ports, but increased at Sendai-Shiogama Port and other ports, while imports decreased at Sendai Airport, but increased at all others.

2019/2021 Trade Value by Port in the Tohoku Region

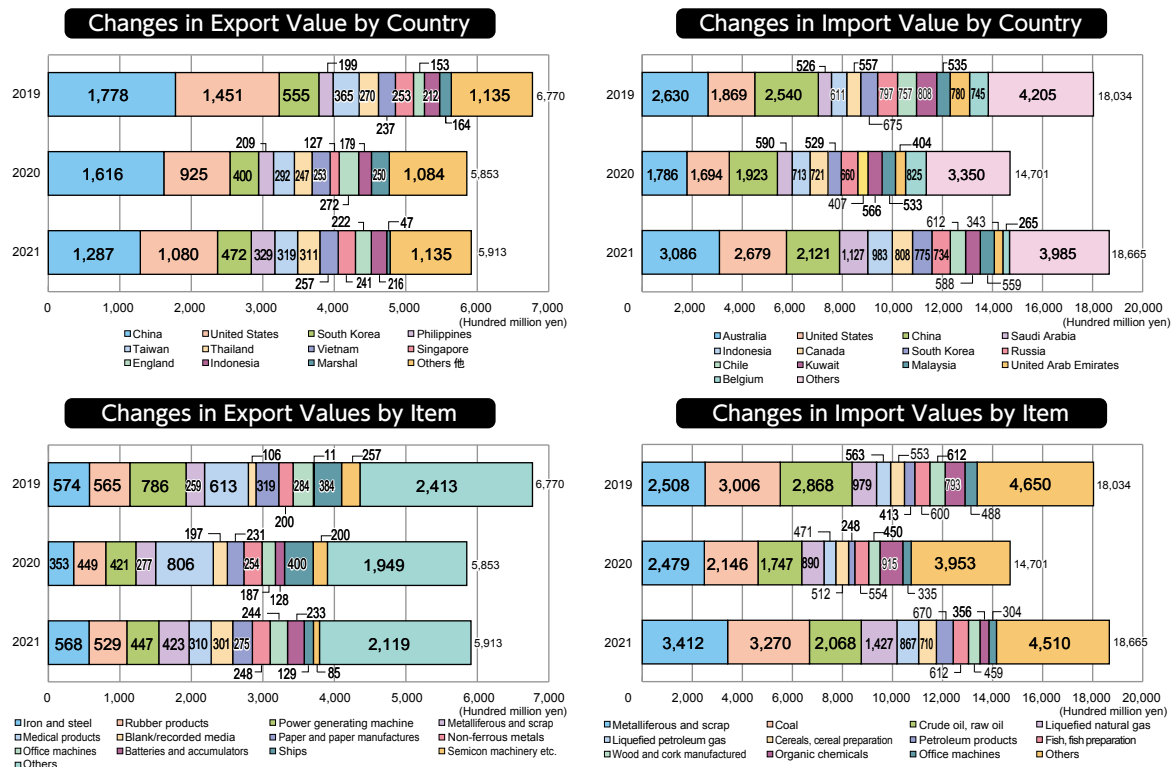


Note: Ports in the Tohoku region (except Kesennuma Port) are posted at (2) Transportation Infrastructure of 4. Industrial Infrastructure

Due to a revision of the customs administration structure, Miyako Sub-Branch Customs of Kamaishi Branch Customs (formerly Miyako Branch Customs) has become non-stationed since July 2021.

Source: Compiled by processing Overview of Trade in the Tohoku Region, Yokohama Customs, and Trade Statistics of Japan, Ministry of Finance Japan

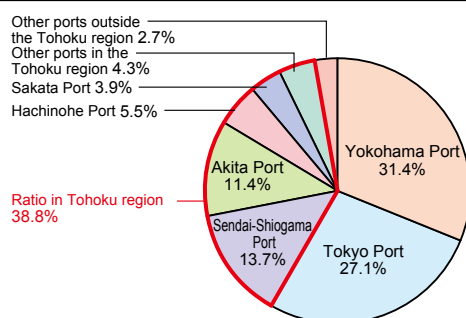
- As for trading partner country, the major export destinations from Tohoku region are China, the United States, and South Korea, while the major origin countries of imports are Australia, the United States and China. Compared to the previous year, exports from China and other countries decreased, while those from the United States, the Philippines, Singapore, and other countries increased. Imports from Belgium and other countries decreased, while those from Australia, the United States, Saudi Arabia, and other countries increased.
- Looking at the value of exports and imports by item, exports were dominated by steel, rubber manufactured, and power generating machine, while imports were dominated by coal, and crude oil and raw oil. Compared to the previous year, exports of medical products and ships decreased, but exports of steel and metalliferous and scrap increased, while imports of organic chemicals decreased, but imports of coal, metalliferous and scrap, and liquefied natural gas increased.



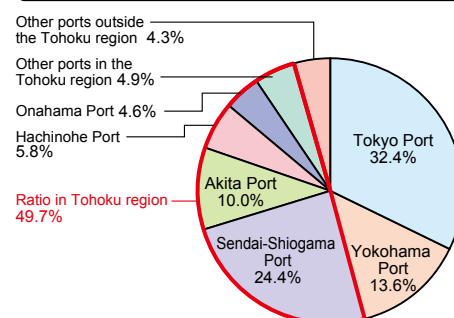
Source: Compiled by processing *Overview of Trade in the Tohoku Region*, Yokohama Customs, and *Trade Statistics of Japan*, Ministry of Finance Japan

- Approximately 31.4% of marine export cargoes, comprised of products produced in the Tohoku region, were transported in international containers and loaded at the port of Yokohama, while 27.1% were loaded at the Port of Tokyo and 13.7% at Sendai-Shiogama Port. This implies that a large proportion of cargoes were loaded at ports located outside the Tohoku region. Looking at which ports the cargo consumed in the Tohoku region was unloaded from, Tokyo Port accounted for 32.4%, Sendai-Shiogama Port accounted for 24.4%, and Yokohama Port accounted for 13.6%. About half of the imported cargoes were unloaded at ports in the Tohoku region..

Component Ratio of Export Cargo Volume (tons) by Shipping Port (November 2018) (Production area: Tohoku)



Component Ratio of Import Cargo Volume (tons) by Shipping Port (November 2018) (Consumption area: Tohoku)



Note: The survey is conducted once every five years for clarifying the contemporary status of the international maritime container cargo flow and policy making, etc.

Survey period: one month from Thursday, November 1, 2018 to Friday, November 30, 2018

Source: FY 2018 Survey Results of Japan's Export and Import Container Cargo Movements, Ports and Harbours Bureau, Ministry of Land, Infrastructure, Transport and Tourism

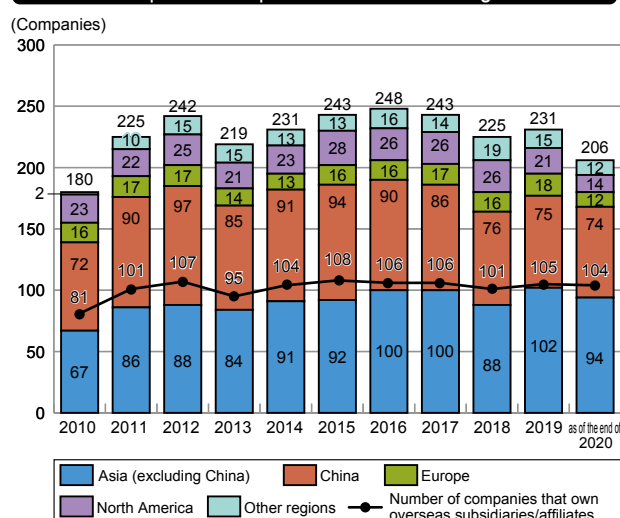
## (13) Internationalization

## (ii) Internationalization of Corporate Activities

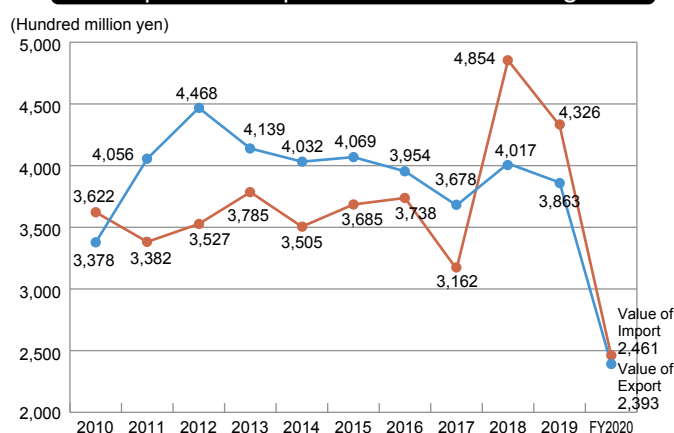
## Number of overseas subsidiaries of firms headquartered in the Tohoku region, exports and imports declined

- Of the firms headquartered in Tohoku in FY2020 (1,584 responding firms), 104 firms had subsidiaries or affiliates overseas, bringing the total number of overseas subsidiaries and affiliates to 206. By country of location, Asia (excluding China) accounted for the largest share with 94 companies (45.6%), followed by China with 74 companies (35.9%) and North America with 14 companies (6.8%).
- Looking at overseas transactions (FY2020) by firms headquartered in the Tohoku region, the value of exports of goods (160 firms responded) was 239.3 billion yen. Meanwhile, the value of imports of goods (177 firms responded) was 246.1 billion yen.

Changes in the Number of Overseas Subsidiaries/Affiliates Owned by Companies Headquartered in the Tohoku Region



Changes in Values of Export and Import Goods by Companies Headquartered in the Tohoku Region



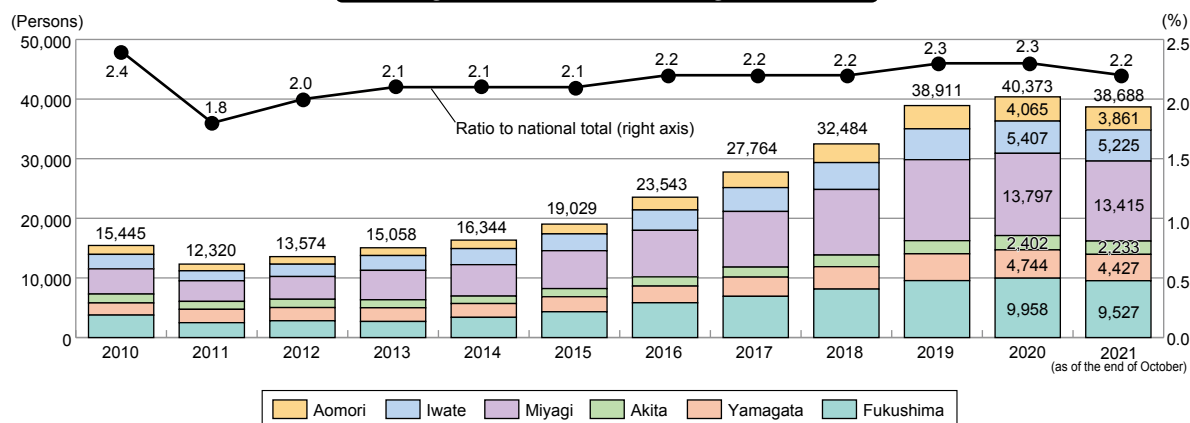
Note 1: The *Basic Survey of Japanese Business Structure and Activities* targets companies that own a business establishment engaging in mining, manufacturing, electricity and gas, wholesale, retail, and services with 50 or more employees and a capital or equity investment, amounting to 30 million yen or more.

Note 2: In principle, overseas subsidiaries shall hold more than 50% of voting rights, and overseas affiliates between 20-50%. Source: Basic Survey of Japanese Business Structure and Activities, Ministry of Economy, Trade and Industry

Source: *Basic Survey of Japanese Business Structure and Activities*, Ministry of Economy, Trade and Industry

- The number of foreign workers in the Tohoku region at the end of October 2021 was 38,688, a 4.2% decrease from the end of the same month last year and 2.2% lower than the national level. By prefecture, Miyagi Prefecture had 13,415, followed by Fukushima Prefecture with 9,527.

Changes in the Number of Foreign Workers



Note: The above figures are obtained by totaling the numbers reported in the notifications submitted by employers who are required to notify the status of their employed foreign workers (excluding those who are special permanent residents, and those who hold diplomatic/ official status) as of the end of October every year.

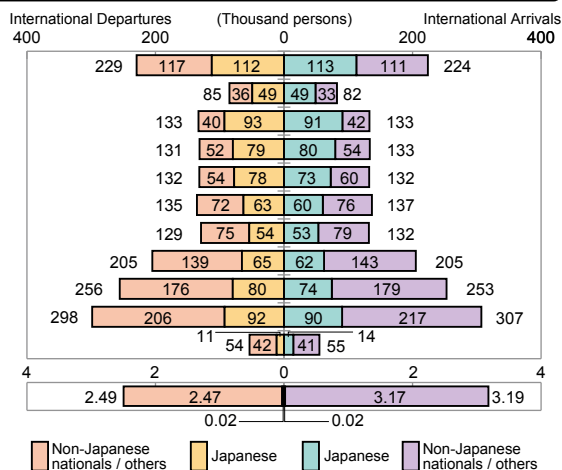
Source: *Table of Notification Status of Foreign Workers' Employment Status*, Ministry of Health, Labour and Welfare

### (iii) International Arrivals/Departures and Foreign Residents

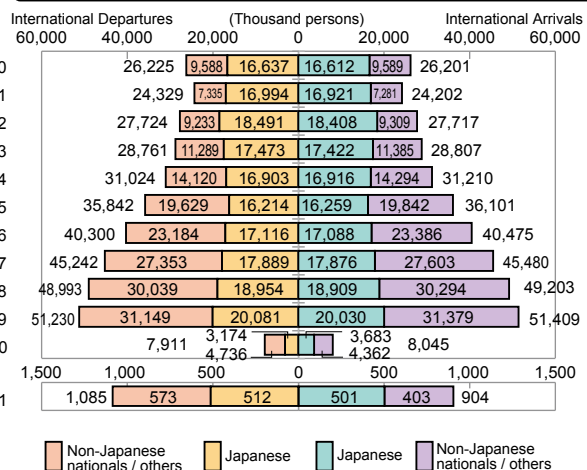
Among the international arrivals and departures via ports and airports in the Tohoku region, the number of non-Japanese nationals is decreasing considerably. Vietnam has the largest number of foreign residents.

- In 2021, 5,677 people entered and departed from ports and airports in the Tohoku region, down 94.8% from 108,655 in 2020, and down 99.1% from 605,553 in 2019, representing a significant decrease in both Japanese and foreign arrivals and departures. By port and airport, the number of inbound and outbound arrivals and departures declined significantly at all ports and airports.

Changes in International Arrivals and Departures through Ports and Airports in Tohoku



Changes in the Number of International Arrivals and Departures (All Japan)

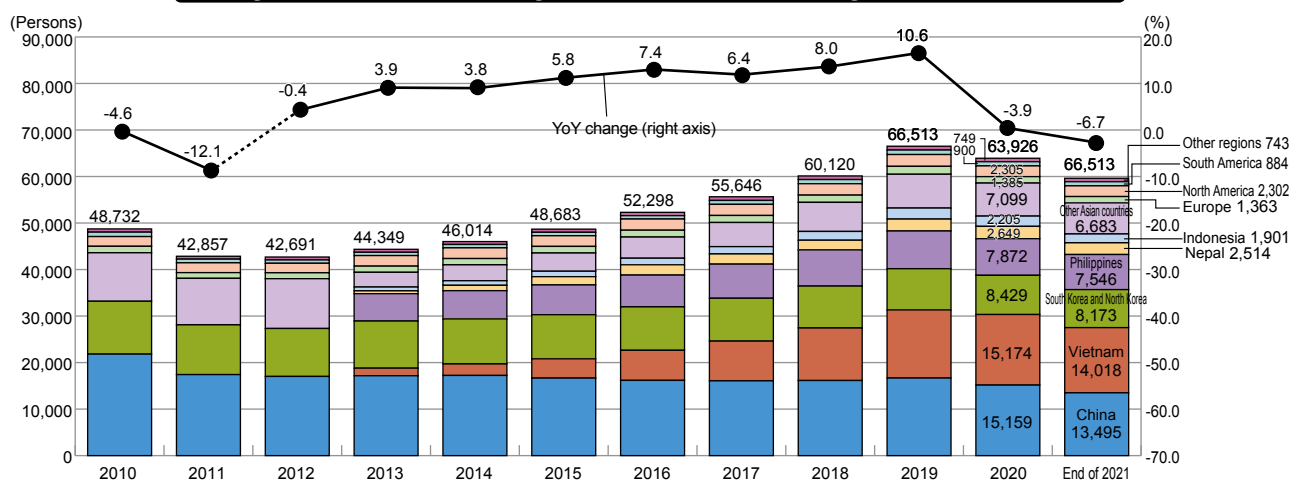


Source: Yearly reports, Immigration Control statistics, Ministry of Justice

- The number of foreigners residing in the Tohoku region at the end of 2021 was 59,622, a decrease of 6.7% year-on-year.

By nationality, Vietnam accounted for the largest number of residents with 14,018, or 23.5% of the total. China followed with 13,495 (22.6%), South Korea and North Korea with 8,173 (13.7%), and the Philippines with 7,546 (12.7%).

Changes in the Number of Foreign Residents (Former Alien Registration Card Holders)



Note 1: "Other Asian countries" for 2010, 2011 and 2012 represent Asian countries excluding China, South Korea and North Korea.

Note 2: With the revision of the Immigration Control and Refugee Recognition Act in July 2012 and the introduction of a new residence management system, the Foreign Resident Registration Act was abolished. Thus, statistics have been created for "medium- to long-term residents" and "special permanent residents" (hereinafter collectively referred to as "foreign residents"). As a result of these changes to the system, the figures for foreign residents under the new system and registered aliens under the old system do not match.

Source: Statistics on foreign residents in Japan (formerly, registered alien statistics), Ministry of Justice

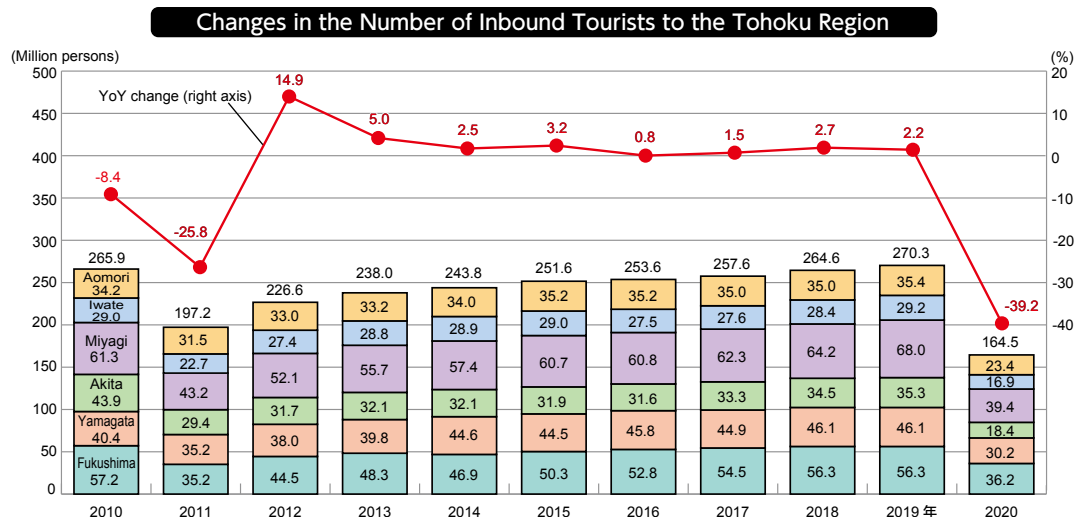
## (14) Tourism

## (14) Tourism

## (i) Domestic Tourism

The total number of inbound tourists declined for the first time in nine years due to the spread of the COVID-19.

- The number of inbound tourists to the Tohoku region declined significantly in 2011 due to the Great East Japan Earthquake. The number increased for eight consecutive years thereafter, but declined to 164.49 million in 2020 due to the spread of the COVID-19 and other factors.

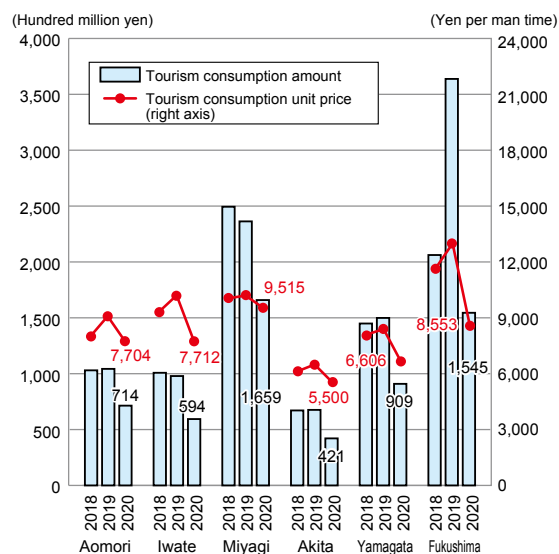


Note: The figures for 2010 are shown for reference purpose only because the survey criteria prior to 2010 differed among prefectures.

Source: Tourism statistics for each prefecture

- Comparing the tourism consumption amount and tourism consumption unit price in 2020 with the previous year, both the tourism consumption amount and tourism consumption unit price decreased in all six prefectures.
- The total number of overnight stays in each prefecture in 2020 decreased in all six prefectures, but increased in Aomori, Iwate, and Akita prefectures in 2021.

**Changes in Tourism Consumption Amount by Prefecture (Japanese / Sightseeing purpose)**



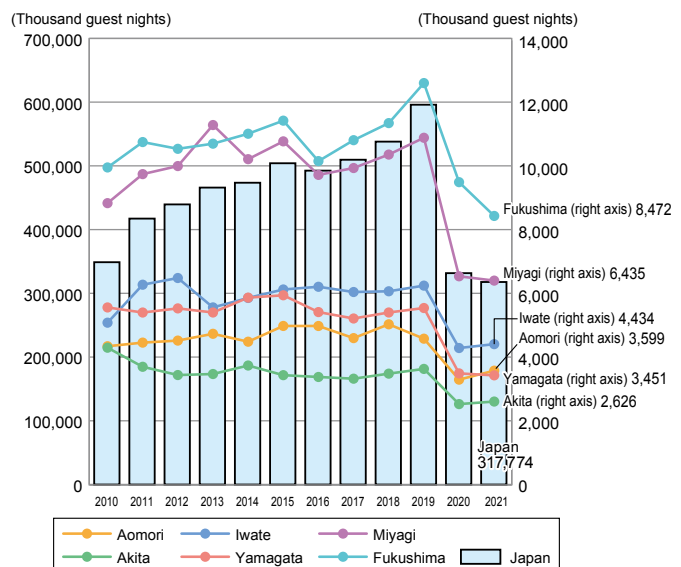
Note 1: Tourism consumption amount refers to the total spent by inbound tourists to the relevant prefecture(s).

Note 2: The tourism consumption unit price refers to tourism consumption per tourist visiting the relevant prefecture(s) during one visit.

Note 3: 2018 data for Iwate Prefecture is based on the "2018 Iwate Prefecture Tourism Statistics Overview"

Source: Tourist Statistics, Japan Tourism Agency

**Changes in the Total Number of Overnight Guests in Each Prefecture**



Note 1: Estimated values such as the total number of guests at all accommodation facilities.

Note 2: For the period from January to March 2010, the number of visitors represents those of staying overnight at accommodations with 10 or more employees.

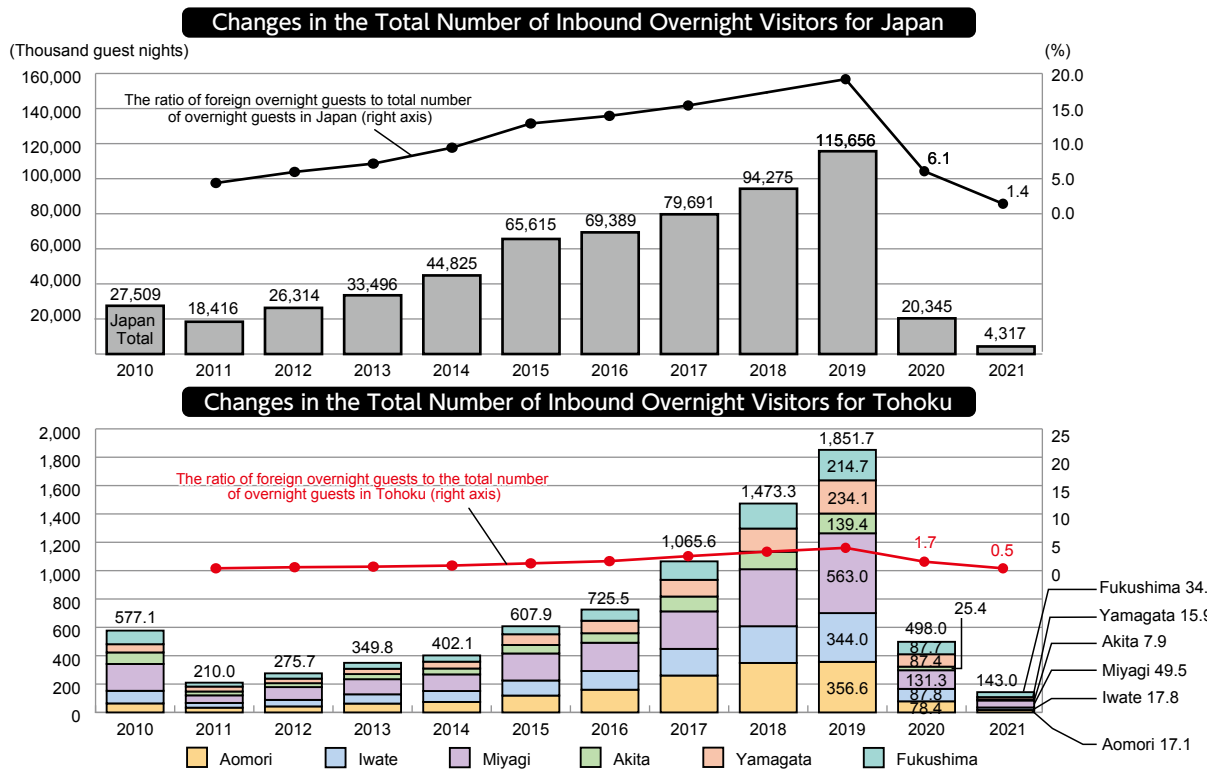
Source: Overnight Travel Statistics, Japan Tourism Agency



## (ii) International Inbound Tourism

The number of total foreign overnight stays decreased due to the impact of the spread of the COVID-19 and other factors.

- In 2021, the total number of foreign overnight stays in the Tohoku region was 143,000, down 71.3% from the previous year. The national total was also down 78.8% from the previous year.

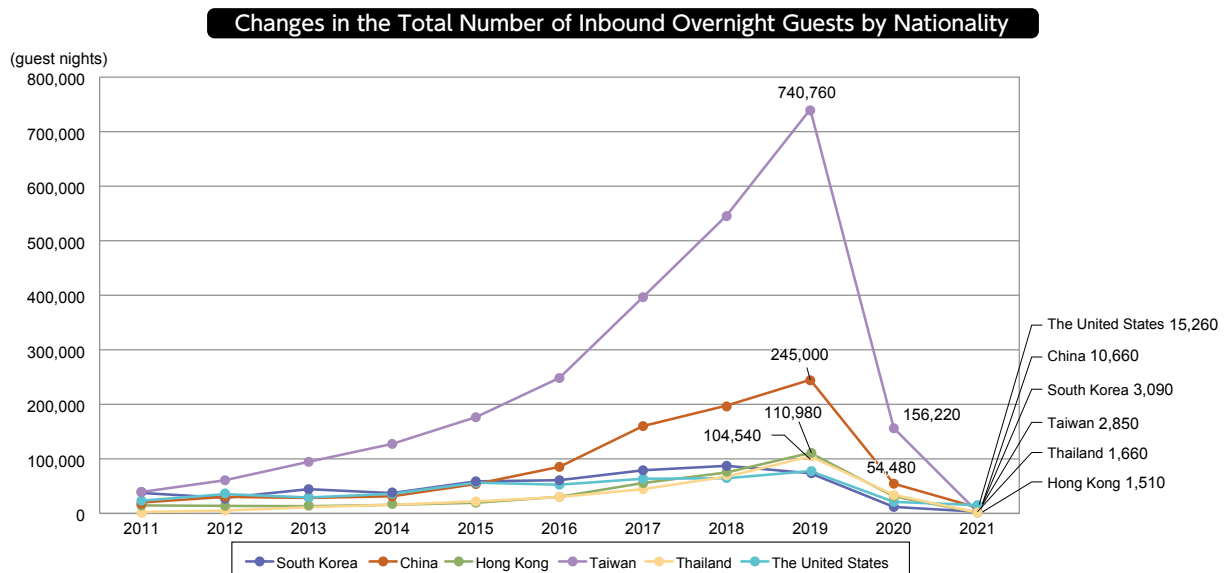


Note 1: Estimated values such as the total number of guests at all accommodation facilities.

Note 2: For the period from January to March 2010, the number of visitors represents those staying overnight at accommodations with 10 or more employees.

Source: *Overnight Travel Statistics*, Japan Tourism Agency

- By nationality, the number of overnight visitors from Taiwan had been increasing rapidly in recent years, but due to the impact of the COVID-19 and other factors, the number decreased to approximately 2,850 in 2021, a 98.2% decrease from the previous year. The U.S. dropped 27.9% to about 15,260, China dropped 80.4% to about 10,660, South Korea dropped 74.0% to about 3,090, Thailand dropped 95.1% to about 1,660, and Hong Kong dropped 95.2% to about 1,510.



Note: Accommodation facilities with 10 or more employees.

Source: *Overnight Travel Statistics*, Japan Tourism Agency

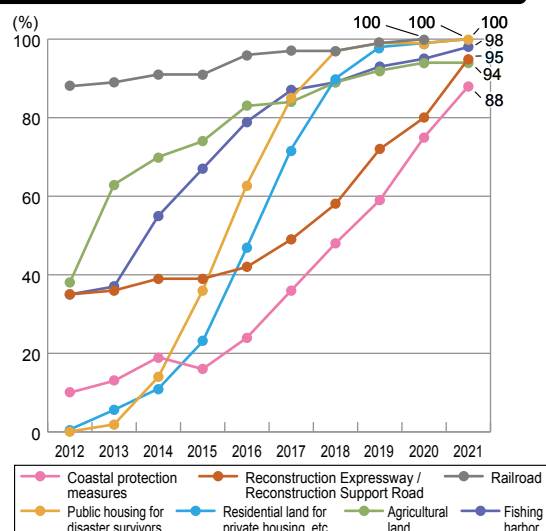
## (15) Reconstruction-Related Trends

## (15) Reconstruction-Related Trends

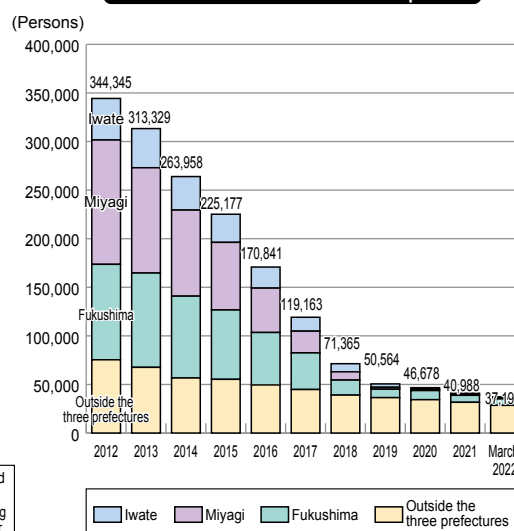
Steady progress has been made in the development of public infrastructure. Shipment of manufactured goods is generally recovering, but the degree of recovery varies from municipality to municipality.

- As of the end of September 2021, the progress of full-scale restoration and reconstruction of public infrastructure was 100% complete for railroads, public housing for disaster survivors, and residential land for private housing, etc.
- The number of evacuees has decreased from more than 340,000 in March 2012 to about 37,000 as of March 2022.

Progress in Full-scale Restoration and Reconstruction of Public Infrastructure



Number of Evacuees in Japan



Note 1: Ratio of the number of completed projects to the number of planned projects (number of extensions and units) for coastal protection measures, reconstruction expressways and reconstruction support roads, railroad, public housing for disaster survivors, and residential land for private housing, etc.

Note 2: Agricultural land is the ratio of the area available for resumption of farming to the area of tsunami-affected agricultural land.

Note 3: Fishing harbor is the ratio of the number of fishing harbors that have recovered all functions to the number of affected fishing harbors.

Source: *Reconstruction of Public Infrastructure*, Reconstruction Agency

Source: *The Number of Evacuees Nationwide*, Reconstruction Agency

- In the 2021 survey, the number of business establishments in the 12 coastal municipalities of Iwate Prefecture was 12,084 (20.4% of the prefecture total. The same applies to the following brackets), down 1.2% from the 2016 survey, and the number of employees was 99,402 (17.4%), up 10.0%. Compared to the 2009 survey, the number of respondents decreased by 17.9% and 10.3%, respectively. Similarly, the number of businesses in the 14 coastal municipalities of Miyagi Prefecture was 25,443 (23.7%), up 8.0% from the 2016 survey, and the number of employees was 238,064 (21.3%), up 10.8%. Compared to the 2009 survey, the number of respondents decreased by 19.5% and 11.5%, respectively.

Changes in the Number of Business Establishments and Employees in the Affected Areas

	Number of establishments								Number of employees							
	2009	2012	2016	2021	Compared to 2009 (%)	Compared to 2012 (%)	Compared to 2016 (%)	In-Prefecture Ratio(%)	2009 (Persons)	2012 (Persons)	2016 (Persons)	2021 (Persons)	Compared to 2009 (%)	Compared to 2012 (%)	Compared to 2016 (%)	In-Prefecture Ratio(%)
<b>Iwate</b>	64,293	59,537	59,451	59,231	-7.9	-0.5	-0.4	-	605,948	509,979	525,264	572,412	-5.5	12.2	9.0	-
Of which 12 municipalities	14,716	11,089	12,226	12,084	-17.9	9.0	-1.2	20.4	110,827	78,410	90,396	99,402	-10.3	26.8	10.0	17.4
<b>Miyagi</b>	110,209	92,769	97,974	107,148	-2.8	15.5	9.4	-	1,120,793	955,780	1,006,886	1,115,600	-0.5	16.7	10.8	-
Of which 14 municipalities	31,598	20,500	23,559	25,443	-19.5	24.1	8.0	23.7	269,109	191,077	214,880	238,064	-11.5	24.6	10.8	21.3
<b>Fukushima</b>	102,063	86,170	85,960	91,153	-10.7	5.8	6.0	-	943,465	782,816	806,130	869,626	-7.8	11.1	7.9	-
<b>Tohoku</b>	470,282	404,616	405,012	392,326	-16.6	-3.0	-3.1	-	4,327,070	3,228,659	3,726,422	4,074,547	-5.8	26.2	9.3	-
<b>Japan</b>	6,043,300	5,453,635	5,340,783	5,211,445	-13.8	-4.4	-2.4	-	62,860,514	55,837,252	56,872,826	61,935,849	-1.5	10.9	8.9	-

Note 1: 12 municipalities of Iwate : Miyako City, Ofunato City, Kuji City, Rikuzentakata City, Kamaishi City, Otsuchi Town, Yamada Town, Iwazumi Town, Tanohata Village, Fudai Village, Noda Village, Hirono Village

Note 2: 14 municipalities of Miyagi : Ishinomaki City, Shiogama City, Kesennuma City, Natori City, Tagajo City, Iwanuma City, Higashimatsushima City, Watari Town, Yamamoto Town, Matsushima Town, Shichigahama Town, Rifu Town, Onagawa Town, Minamisanriku Town

Note 3 : In the 2012, 2016, and 2021 surveys, all or part of the areas of Tamura City, Minamisoma City, Kawamata Town, Naraha Town, Tomioka Town, Kawauchi Village, Okuma Town, Futaba Town, Namie Town, Katsurao Village, and Iitate Village in Fukushima Prefecture were excluded from the survey.

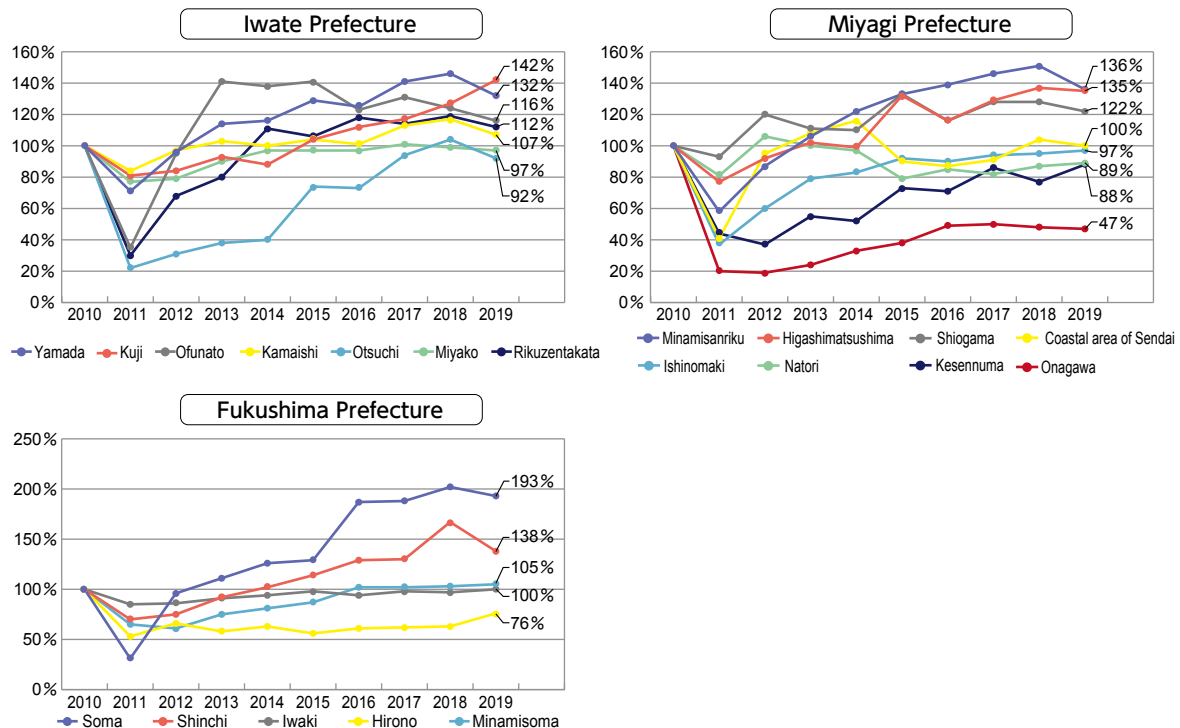
Source: *Economic Census for Business Frame for 2009, Economic Census for Business Activity for 2012, 2016 and 2021* (Preliminary tabulation results for 2021)



## (15) Reconstruction-Related Trends

- While the value of manufactured goods shipments in the coastal areas of the three affected prefectures is generally recovering, the degree of recovery varies from municipality to municipality, with some areas falling below the pre-disaster level of 2010.

Changes in the Shipment Value of Manufactured Goods from the Coastal Areas of the Three Affected Prefectures

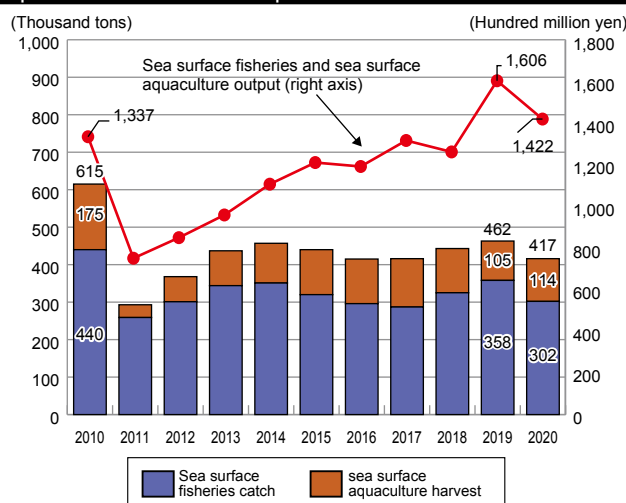


Note: Each of the above figures represents the percentage of the total number of respondents when 2010 is set as 100.

Source: Compiled from RESAS download data (Census of Manufacture, Economic Census for Business Activity)

- In 2020, the sea surface fisheries catch in the three affected prefectures of Iwate, Miyagi, and Fukushima was 302,000 tons, and the sea surface aquaculture harvest in the two affected prefectures of Iwate and Miyagi was 114,000 tons. Although the catch and harvest have not recovered to pre-disaster levels, the value of production has recovered to pre-disaster levels, at 142.2 billion yen.
- In 2018, the production of major processed marine products in the three affected prefectures was 245,000t of fresh and frozen marine products, 39,000t of frozen foods, 33,000t of fish cakes, and 22,000t of salted products.

Changes in the Sea Surface Fisheries Catch and Sea Surface Aquaculture Harvest and Output in the Three Affected Prefectures

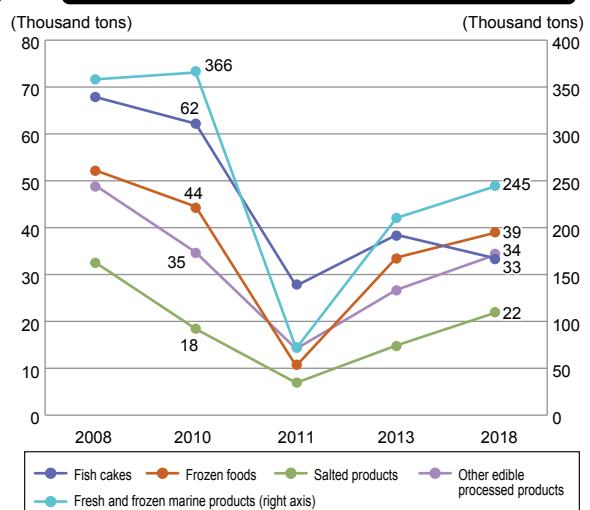


Note 1: The sea surface fisheries catch and output are the total of Iwate, Miyagi, and Fukushima prefectures.

Note 2: The sea surface aquaculture harvest and output are the total of Iwate and Miyagi prefectures.

Source: Annual Statistics on Fisheries and Aquaculture Production, Fishery Output, Ministry of Agriculture, Forestry and Fisheries

Changes in Production of Processed Marine Products in the Three Affected Prefectures



Note 1: Amounts for fish cakes in 2010, 2011, and 2013 exclude Iwate Prefecture, which is not disclosed.

Note 2: Amounts for salted products in 2010, 2011, and 2013 exclude Fukushima Prefecture, which is not disclosed.

Source: Census of Fisheries for 2008, 2013 and 2018, (Annual Report on Distribution Statistics of Fishery Products for fresh and frozen marine products in 2008), Fisheries Processing Statistics for 2010, 2011.

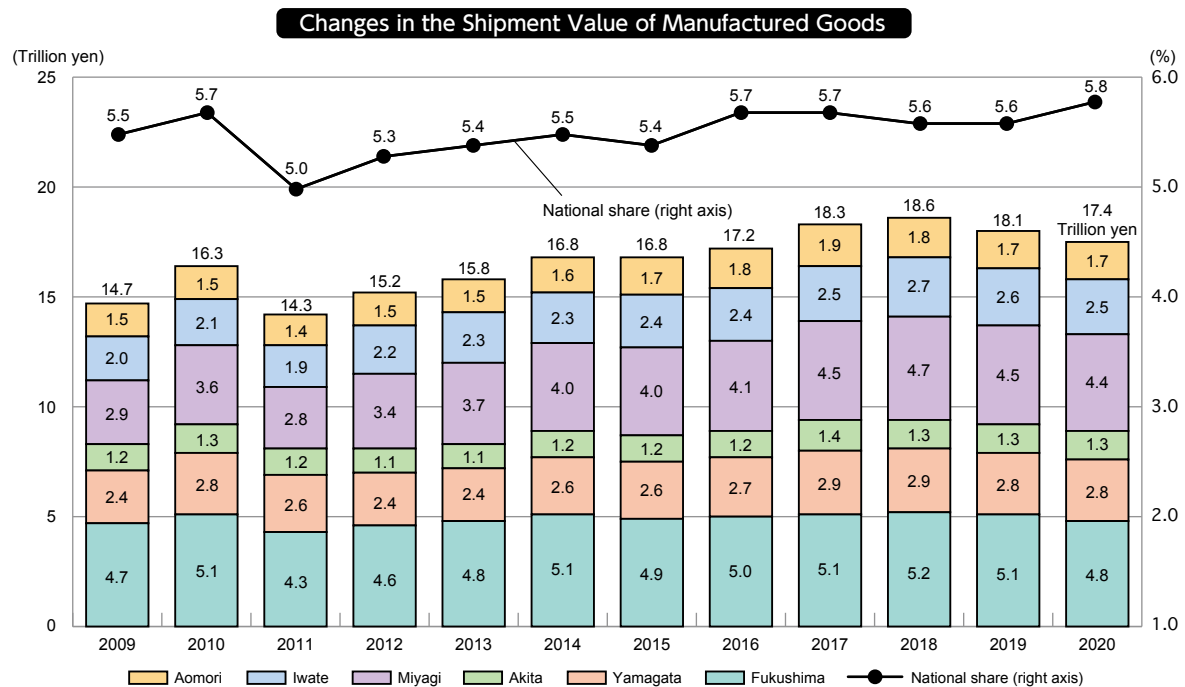
## (1) Manufacturing

## (1) Manufacturing

## (i) Overview

Shipment value of manufactured goods was 17,435.9 billion yen, falling below the previous year's level for the second consecutive year.

- In 2020, the shipment value of manufactured goods, etc. in the Tohoku region totaled 17,435.9 billion yen, down 3.7% from the previous year, the second consecutive year of year-on-year decline. The region's share of the national total was 5.8%, up from the previous year.



Source: *Economic Census for Business Activity* (business establishments with 4 or more employees) and *Census of Manufacture* (business establishments with 4 or more employees)

- By prefecture, the number of business establishments in 2021 increased in Miyagi Prefecture, but decreased in the other prefectures. In 2020, the shipment value of manufactured goods increased in Akita, while the value added increased in Akita and Yamagata. On the other hand, each kind of value decreased in the other prefectures.

**Manufacturing Industry Data by Prefecture**

	No. of establishments			No. of employees (Persons)			Shipment value of manufactured goods (Million yen)			Value added (Gross value added for business establishments with 29 or fewer employees) (Million yen)		
	2020	2021	YoY change	2020	2021	YoY change	2019	2020	YoY change	2019	2020	YoY change
Aomori	1,342	1,272	- 5.2	56,877	55,763	- 2.0	1,727,106	1,676,471	- 2.9	563,173	522,756	- 7.2
Iwate	2,055	1,866	- 9.2	87,639	84,349	- 3.8	2,626,206	2,494,299	- 5.0	773,489	719,913	- 6.9
Miyagi	2,528	2,593	2.6	116,847	111,794	- 4.3	4,533,565	4,357,999	- 3.9	1,357,816	1,354,445	- 0.2
Akita	1,648	1,535	- 6.9	61,753	58,468	- 5.3	1,286,172	1,307,827	1.7	494,187	518,560	4.9
Yamagata	2,339	2,277	- 2.7	98,407	97,429	- 1.0	2,845,633	2,832,284	- 0.5	1,078,539	1,079,592	0.1
Fukushima	3,485	3,279	- 5.9	158,688	154,274	- 2.8	5,088,966	4,766,985	- 6.3	1,714,968	1,638,642	- 4.5
Tohoku	13,397	12,822	- 4.3	580,211	562,077	- 3.1	18,107,648	17,435,865	- 3.7	5,982,172	5,833,908	- 2.5
Japan	181,877	176,858	- 2.8	7,717,646	7,465,556	- 3.3	322,533,418	302,003,273	- 6.4	100,234,752	96,825,529	- 3.4

Note: The numbers of business establishments and employees are as of June 1.

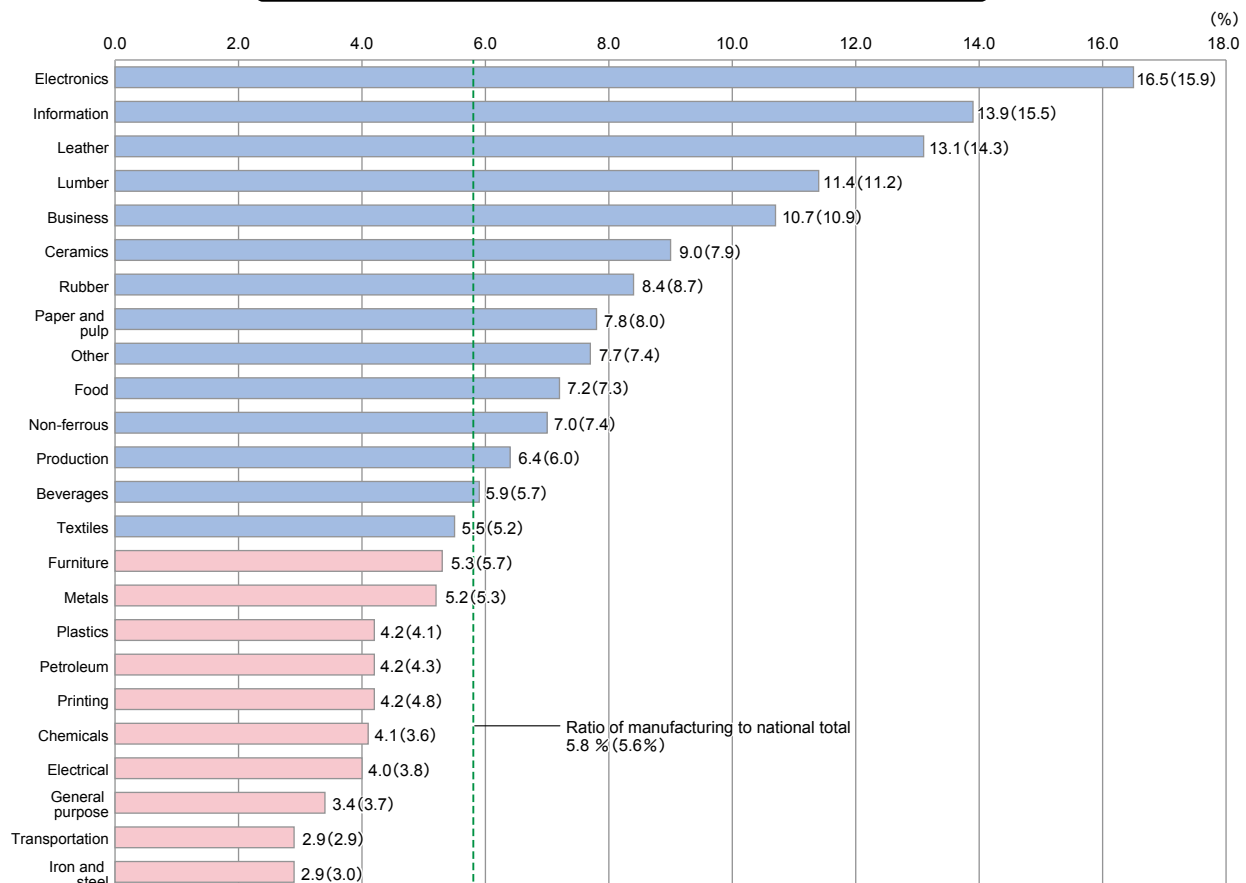
Source: *Economic Census for Business Activity* (business establishments with 4 or more employees), *Census of Manufacture* (business establishments with 4 or more employees)

## (ii) National Share by Industry Sector

Tohoku has a high national share for electronic components, devices, electronic circuits, and information and communication electronics equipment.

- With regard to Tohoku's share of the Japan's shipment value of manufactured goods, etc. in 2020, by industry, 16.5% for electronic parts, devices, electronic circuits and 13.9% for information and communication electronics equipment are high, while 2.9% for iron and steel and 2.9% for transportation equipment are low.

National Share of Shipment Value of Manufactured Goods (2020)



Note: Figures in parentheses are national shares for 2019.

Source: *Economic Census for Business Activity* (business establishments with 4 or more employees), *Census of Manufacture* (business establishments with 4 or more employees)

<Reference>Abbreviations for industry sectors in the above graph refer to the following:

(JSIC= Japan Standard Industrial Classification)

Classified name in JSIC	Abbreviation	Classified name in JSIC	Abbreviation	Classified name in JSIC	Abbreviation
Manufacture of food	Food	Manufacture of petroleum and coal products	Petroleum	Manufacture of general-purpose machinery	General purpose
Manufacture of beverages, tobacco and feed	Beverages	Manufacture of plastic products (except other listing)	Plastics	Manufacture of production machinery	Production
Manufacture of textile products	Textiles	Manufacture of rubber products	Rubber	Manufacture of business oriented machinery	Business
Manufacture of lumber and wood products (except furniture)	Lumber	Manufacture of leather tanning, leather products and fur skins	Leather	Manufacture of electronic parts, devices, electronic circuits,	Electronics
Manufacture of furniture and fixtures	Furniture	Manufacture of ceramic, stone and clay products	Ceramics	Manufacture of electrical machinery, equipment and supplies	Electrical
Manufacture of pulp, paper and paper products	Paper and pulp	Manufacture of iron and steel	Iron and steel	Manufacture of information and communication electronics equipment	Information
Printing and allied industries	Printing	Manufacture of non-ferrous metals and products	Non-ferrous	Manufacture of transportation equipment	Transportation
Manufacture of chemical and allied products	Chemicals	Manufacture of fabricated metal products	Metals	Miscellaneous manufacturing industries	Other

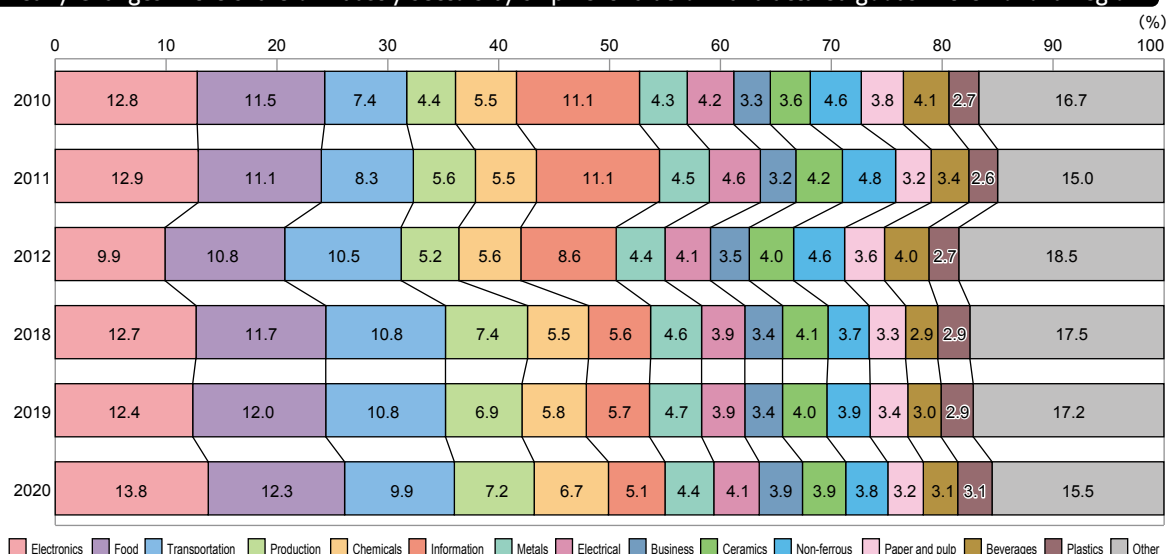
## (1) Manufacturing

## (iii) Shares of Industry Sectors by Year and Prefecture

The top industries in the Tohoku region in terms of value of shipments are electronic parts, devices, and circuits, food, and transportation equipment.

- Looking at the composition of manufactured goods shipments, etc. by industry sector in the Tohoku region in 2020, six of the 24 industries, electronic parts/devices/electronic circuits, food, transportation equipment, production machinery, chemicals, and information and communication electronics equipment, account for about 50% of the total. Compared to 2019, the composition of electronic parts, devices, and electronic circuits is expanding.

Yearly Changes in the Share of Industry Sectors by Shipment value of manufactured goods in the Tohoku Region

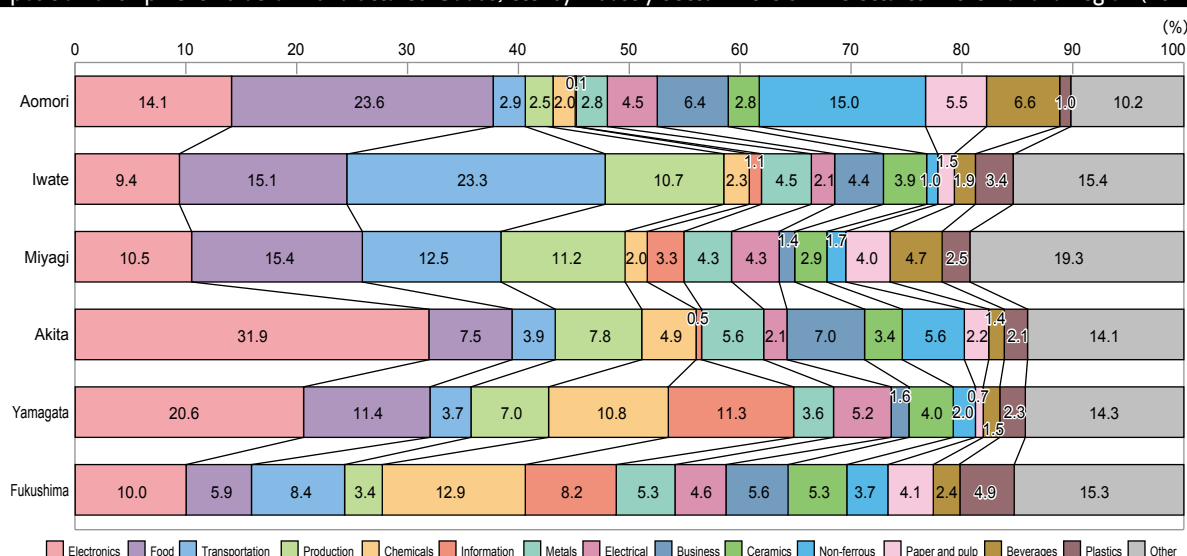


Note: The figures for manufacture of rubber products, manufacture of leather tanning, leather products and fur skins in 2010, 2011, and 2012, and information and communication electronics equipment, manufacture of leather tanning, leather products and fur skins in 2018 are totals for the five prefectures because Aomori Prefecture does not disclose information.

Source: *Economic Census for Business Activity* (business establishments with 4 or more employees), *Census of Manufacture* (business establishments with 4 or more employees)

- By prefecture, the industries with the highest percentages were food products in Aomori, transportation equipment in Iwate, food products in Miyagi, electronic parts/devices/electronic circuits in Akita and Yamagata, and chemicals in Fukushima.

Composition of Shipment Value of Manufactured Goods, etc. by Industry Sector in the Six Prefectures in the Tohoku Region (2020)



Note: The following industry sectors make up only a small percentage in the Tohoku region compared to other sectors and are therefore classified as "Other".  
 "Manufacture of textile products", "Manufacture of lumber and wood products", "Manufacture of furniture and fixtures", "Printing and allied industries",  
 "Manufacture of petroleum and coal products", "Manufacture of rubber products", "Manufacture of leather tanning, leather products and fur skins",  
 "Manufacture of iron and steel", "Manufacture of general-purpose machinery", "Miscellaneous manufacturing industries"

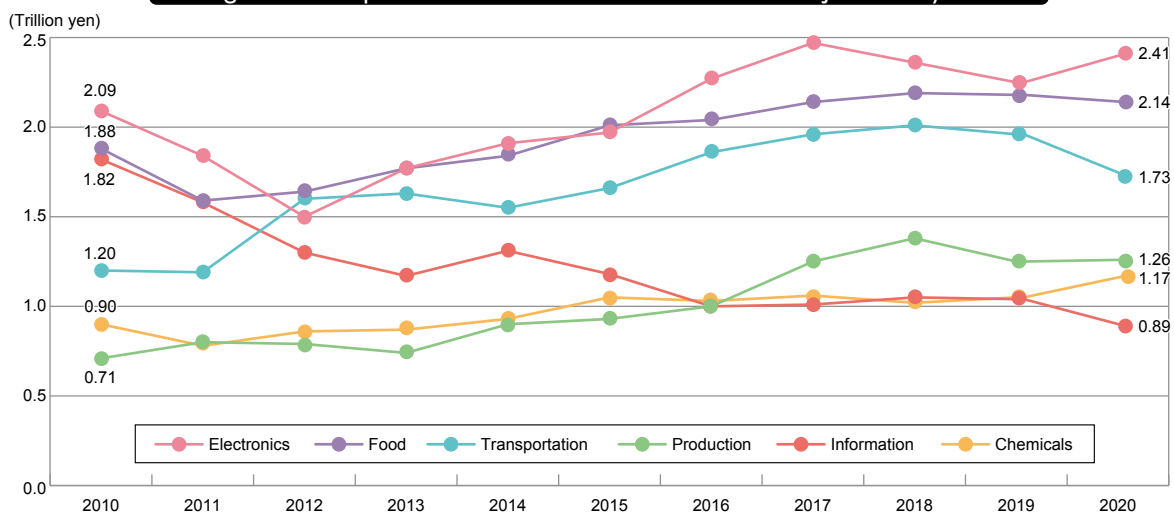
Source: *Economic Census for Business Activity* (business establishments with 4 or more employees)

## (iv) Shipment value of manufactured goods from Major Industry Sectors and Value-added Productivity by Region

The shipment value of manufactured goods in the Tohoku region from five out of the top six industry sectors exceeded that in 2010.

- In 2020, the shipment value of manufactured goods in the Tohoku region exceeded that of 2010, the year before the Great East Japan Earthquake, in all five of the top six industries. Since 2008, the manufacture of chemical and allied products has recorded the highest value, the manufacture of production machinery the second highest, and the manufacture of food and the manufacture of electronic parts, devices, electronic circuits, the third highest in terms of value of shipments, etc.

Changes in the Shipment Value of Manufactured Goods in Major Industry Sectors



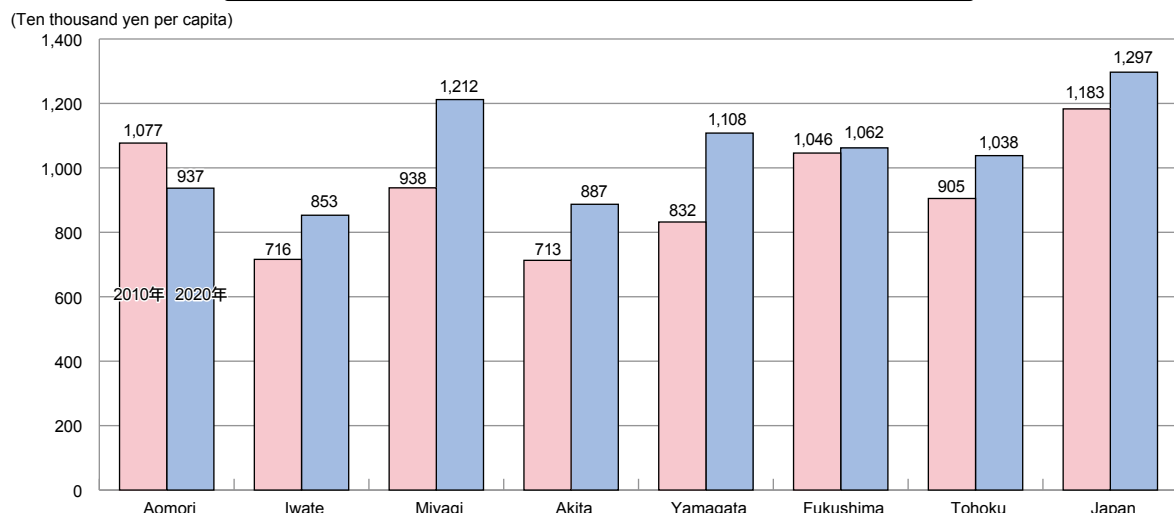
Note: In accordance with the revision of the Japan Standard Industrial Classification, the industrial classification for industrial statistics was also revised from the 2008 survey.

The figures for the manufacture of information and communication electronics equipment sector in 2016, 2017 and 2018 are totals of five prefectures because Aomori Prefecture does not disclose information.

Source: *Economic Census for Business Activity* (business establishments with 4 or more employees), *Census of Manufacture* (business establishments with 4 or more employees)

- The value-added productivity in the Tohoku region in 2020 is 10.38 million yen per capita, while the national figure is 12.97 million yen per capita. This is a level of 80.0 relative to the nation as a whole (=100), exceeding the 76.5 level in 2010 before the Great East Japan Earthquake. (Reference: 68.8 as of 2011)

Value-added Productivity by Region (Manufacturing Industry Total)



Note: Value-added productivity is the value-added amount per employee (Ten thousands yen per capita).

The number of employees for value-added productivity in 2020 is calculated using figures as of June 1, 2021.

Source: *Economic Census for Business Activity* (business establishments with 4 or more employees), *Census of Manufacture* (business establishments with 4 or more employees)

## (1) Manufacturing

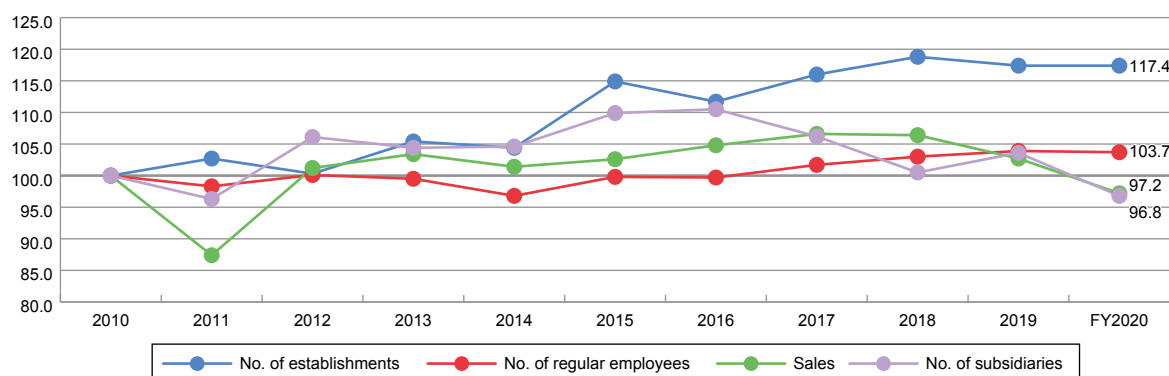
## (v) Manufacturing Companies Headquartered in the Tohoku Region

Profitability increased, total capital per company increased, and the ratio of R&D expenses to net sales remained unchanged.

● Number of Business Establishments and Regular Employees per Company

In FY2020, the number of factories, sales offices, etc. per company in the manufacturing industry (756 companies) headquartered in the Tohoku region was 3.632 (0.0% YoY), the number of full-time employees was 248.2 (-0.3% YoY), sales were 7.568 billion yen (-5.3% YoY), and the number of owned subsidiary companies was 0.647 (-6.6% YoY).

Changes in the Number of Business Establishments, Regular Employees, Sales, and Subsidiaries per Manufacturing Company (Index of FY2010=100)



Number of Business Establishments and Other Indicators per Manufacturing Company

	No. of establishments		No. of regular employees (Persons)		Sales (Hundred million yen)		No. of subsidiaries	
	Tohoku	Japan	Tohoku	Japan	Tohoku	Japan	Tohoku	Japan
FY 2018	3.674	5.965	246.7	415.4	82.82	227.86	0.671	3.946
FY 2019	3.631	5.938	248.8	414.9	79.94	217.28	0.692	3.900
FY 2020	3.632	5.981	248.2	418.6	75.68	203.99	0.647	3.961
Fiscal YoY change (%)	0.0	0.7	- 0.3	0.9	- 5.3	- 6.1	- 6.6	1.6

Note 1: The Basic Survey of Japanese Business Structure and Activities applies to companies with 50 or more employees and a capital amount or equity investment amount of 30 million yen or more.

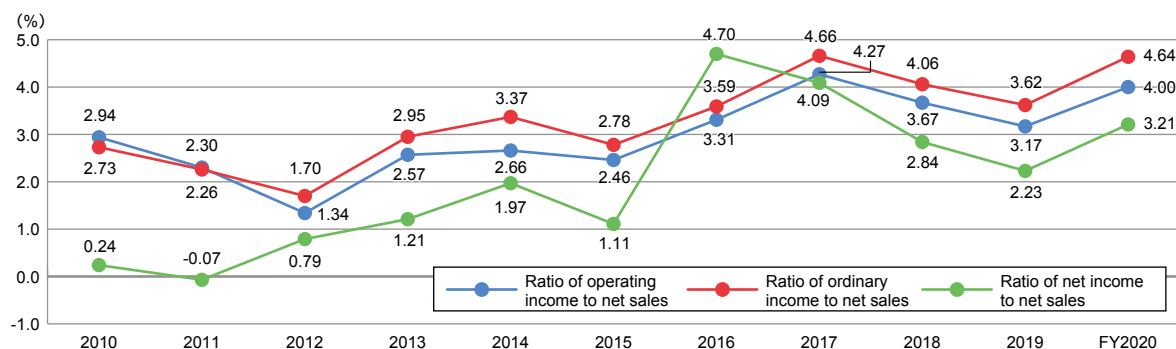
Note 2: The number of owned subsidiaries per company is calculated by the number of subsidiaries / total number of companies.

Source: Basic Survey of Japanese Business Structure and Activities, Ministry of Economy, Trade and Industry

● Ratio of Operating Income to Net Sales, etc.

The ratio of operating income to net sales for manufacturing companies headquartered in the Tohoku region was 4.00% (up 0.83 points from the previous year), ordinary income to net sales was 4.64% (up 1.02 points from the previous year), and net income to net sales was 3.21% (up 0.98 points from the previous year).

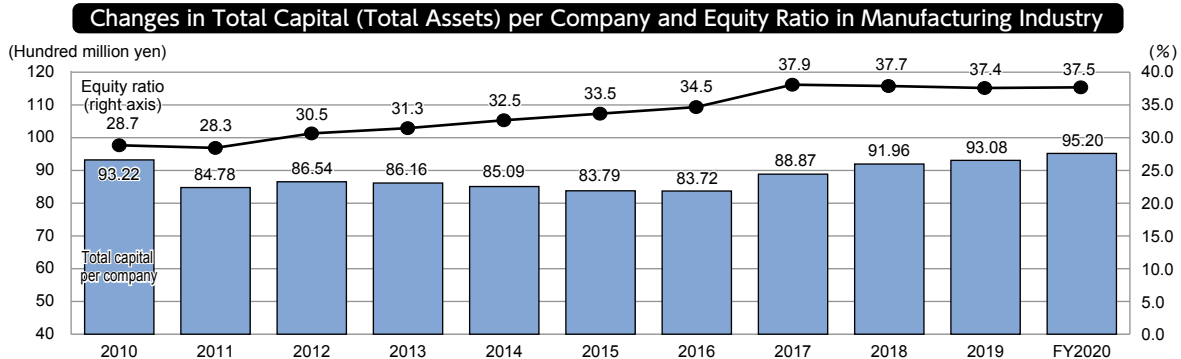
Changes in Ratios of Operating Income, Ordinary Income and Net Income to Net Sales in Manufacturing Companies



Source: Basic Survey of Japanese Business Structure and Activities, Ministry of Economy, Trade and Industry

### ● Equity Ratio, etc.

Total capital per manufacturing companies headquartered in the Tohoku region was 9,520 billion yen (up 2.3% from the previous year) and net assets were 3,571 billion yen (up 2.6% from the previous year), for an equity ratio of 37.5%, up 0.1 percentage points from the previous year.



### Average Ratio of Operating Income to Net Sales and Other Indicators per Company in the Manufacturing Industry

	Ratio of operating income to net sales (%)		Ratio of ordinary income to net sales (%)		Ratio of net income to net sales (%)		Total capital (Hundred million yen)		Net assets (Hundred million yen)		Equity ratio (%)	
	Tohoku	Japan	Tohoku	Japan	Tohoku	Japan	Tohoku	Japan	Tohoku	Japan	Tohoku	Japan
FY 2018	3.67	4.81	4.06	7.27	2.84	5.20	91.96	275.4	34.70	141.7	37.7	51.4
FY 2019	3.17	3.62	3.62	6.04	2.23	3.34	93.08	266.9	34.80	136.0	37.4	50.9
FY 2020	4.00	3.43	4.64	6.53	3.21	4.80	95.20	287.4	35.71	145.3	37.5	50.6
Fiscal YoY change	0.83	- 0.19	1.02	0.49	0.98	1.46	2.3	7.7	2.6	6.9	0.1	- 0.4

Note 1: Fiscal YoY change for total capital and net assets represents the change from the previous fiscal year (%)

Note 2: Equity ratio = Net assets (Equity)/Total capital. Generally, the higher this ratio, the lower the debt.

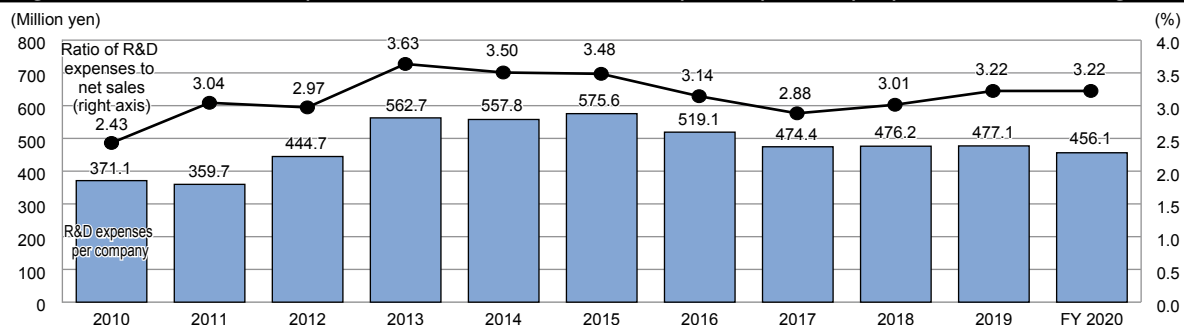
Source: Basic Survey of Japanese Business Structure and Activities, Ministry of Economy, Trade and Industry

### ● Research and Development (R&D)

Of the 756 manufacturing companies headquartered in the Tohoku region, 191 companies reported R&D expenses, 25.3% of the total (48.0% for the whole country).

The ratio of R&D expenses to net sales was 3.22%, the same as the previous year. In addition, R&D expenses per company were 456.1 million yen, down 4.4% from the previous year.

### Changes in the Ratio of R&D expenses to net sales and the R&D Expenses per Company in the Manufacturing Industry



### Current R&D Expenses in Manufacturing Companies

	No. of companies that reported to the Basic Survey of Japanese Business Structure and Activities		No. of companies that reported their R&D expenses				Ratio of R&D expenses to net sales (%)		R&D expenses per company (million yen)	
	Tohoku	Japan	Tohoku		Japan		Tohoku	Japan	Tohoku	Japan
			No. of companies	Response ratio (%)	No. of companies	Response ratio (%)				
FY 2018	773	12,826	197	25.5	6,160	48.0	3.01	4.83	476.2	1,943.7
FY 2019	770	12,712	207	26.9	6,086	47.9	3.22	5.08	477.1	1,959.0
FY 2020	756	12,771	191	25.3	6,133	48.0	3.22	5.48	456.1	1,967.9
Fiscal YoY change	- 14	59	- 16	- 1.6	47	0.1	0.00	0.40	- 4.4	0.5

Note: Fiscal YoY change in R&D expenses per company represents the change from the previous fiscal year (%)

Source: Basic Survey of Japanese Business Structure and Activities, Ministry of Economy, Trade and Industry



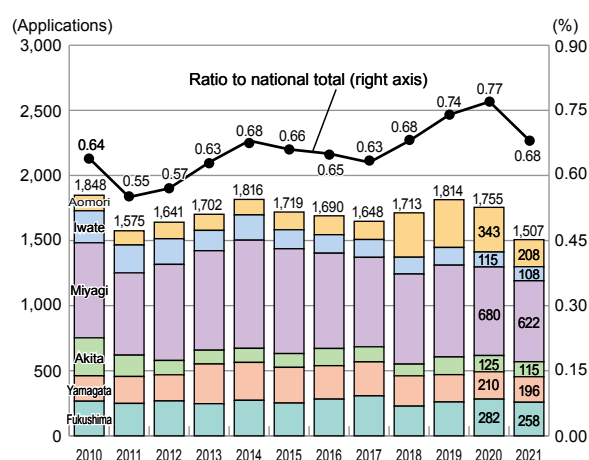
## (1) Manufacturing

## (vi) Industrial Property Rights

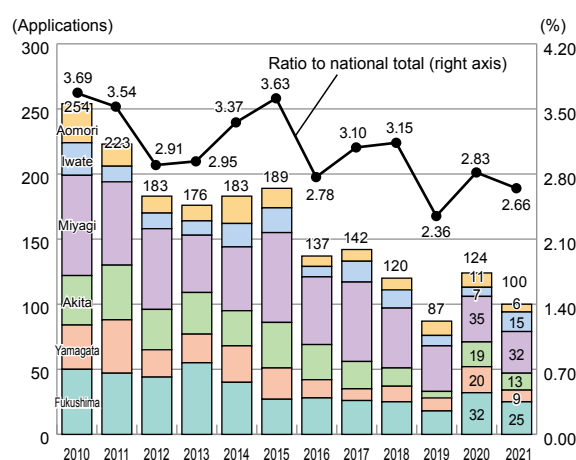
Industrial property applications increased for designs and trademarks, but decreased for patents and utility models.

- In 2021, the number of applications for industrial property rights in the Tohoku region was 1,507 for patents, 100 for utility models, 402 for designs, and 2,631 for trademarks, showing an increase for designs and trademarks and a decrease for patents and utility models compared to the previous year.
- Compared to the national average, designs and trademarks are on the increase, while patents and utility models are on the decrease.
- Compared to the previous year, the number of patent applications by prefecture shows a decrease in all six Tohoku prefectures. The number of cases for utility models increased in Iwate Prefecture; for designs, in Aomori, Miyagi, and Akita prefectures; and for trademarks, in Aomori, Miyagi, Akita, and Fukushima prefectures.

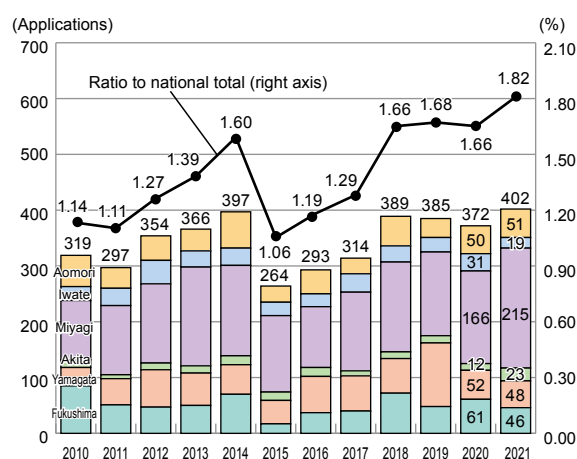
Changes in the Number of Patent Applications



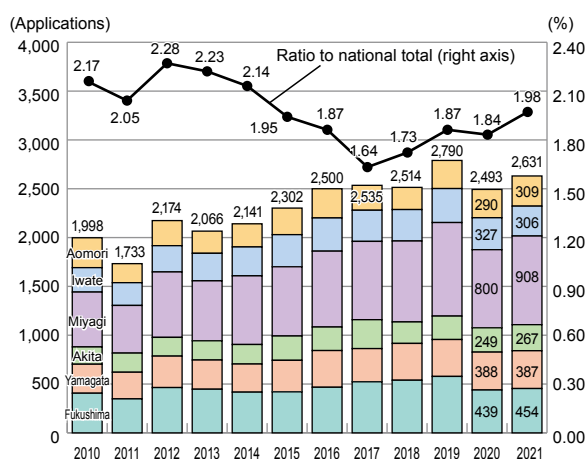
Changes in the Number of Utility Model Applications



Changes in the Number of Design Applications



Changes in the Number of Trademark Applications



Source: Japan Patent Office Annual Report, Japan Patent Office



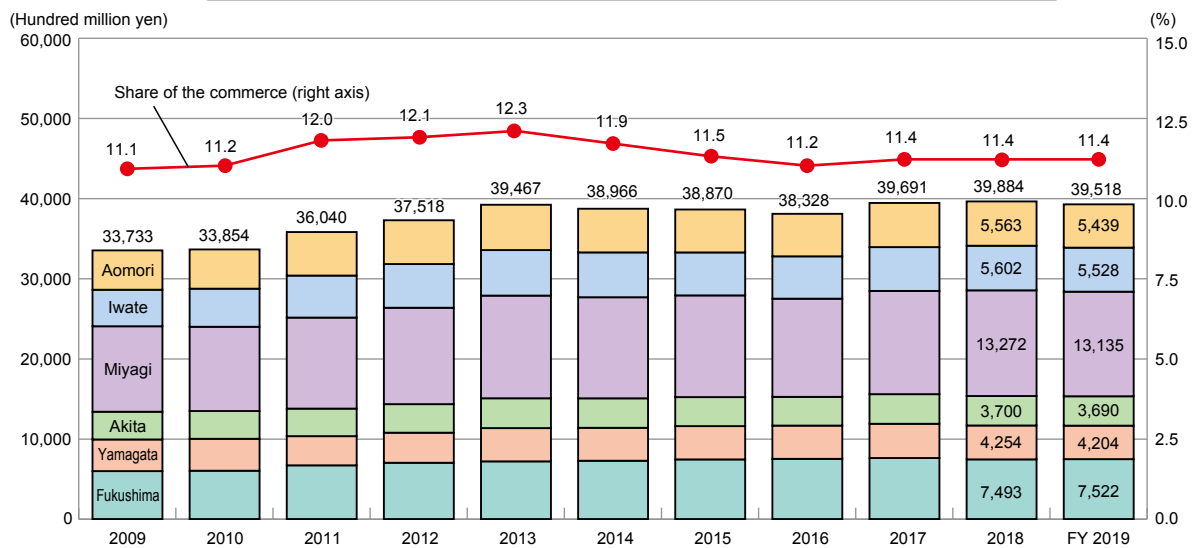
## (2) Commerce

### (i) Overview

**Gross Regional Domestic Product (GRDP), number of establishments, and number of employees in the wholesale and retail industries both declined.**

- The GRDP of commerce in the Tohoku region in FY 2019 was 3,951.8 billion yen, down 0.9% from the previous year, the first decline in three years.
- The ratio of GRDP to total gross industrial product (nominal) in the Tohoku region remained unchanged at 11.4%.
- In terms of total production by prefecture, Fukushima Prefecture saw an increase from the previous year.

**Changes in Gross Production (Nominal) of Commerce (Wholesale and Retail)**



Note: 2011 is the base coefficient for FY 2010 and earlier, and 2015 is the base coefficient for FY 2011 and later.

Source: Prefectural Accounts

- In 2021, the total number of establishments in the wholesale and retail industry in the Tohoku region was 95,049 (7.9% of the national total, down 11.9% from the 2016 survey) and the number of employees was 754,252 (6.6% of the national total, down 3.4% from the 2016 survey).
- In the wholesale and retail trade, both the number of establishments and the number of employees decreased.

**Changes in Number of Establishments and Employees in Wholesale and Retail Trade**

	No. of business establishments (establishments)				No. of employees total (persons)			
	2016	2021	Ratio to the previous census (%)	Ratio to national total (%)	2016	2021	Ratio to the previous census (%)	Ratio to national total (%)
Aomori	15,799	13,870	-12.2	1.2	112,419	106,686	-5.1	0.9
Iwate	15,404	13,411	-12.9	1.1	108,508	103,399	-4.7	0.9
Miyagi	27,102	24,361	-10.1	2.0	225,169	221,498	-1.6	1.9
Akita	13,034	11,203	-14.0	0.9	86,407	81,777	-5.4	0.7
Yamagata	14,496	12,599	-13.1	1.0	93,586	88,526	-5.4	0.8
Fukushima	22,064	19,605	-11.1	1.6	154,720	152,366	-1.5	1.3
Tohoku	107,899	95,049	-11.9	7.9	780,809	754,252	-3.4	6.6
Japan	1,355,060	1,200,507	-11.4	100.0	11,843,869	11,476,947	-3.1	100.0

Note 1: Number of establishments and employees as of June 1, 2016 and June 1, 2021, respectively.

Note 2: The comparison to the previous census for the number of establishments and employees are for 2016-2021.

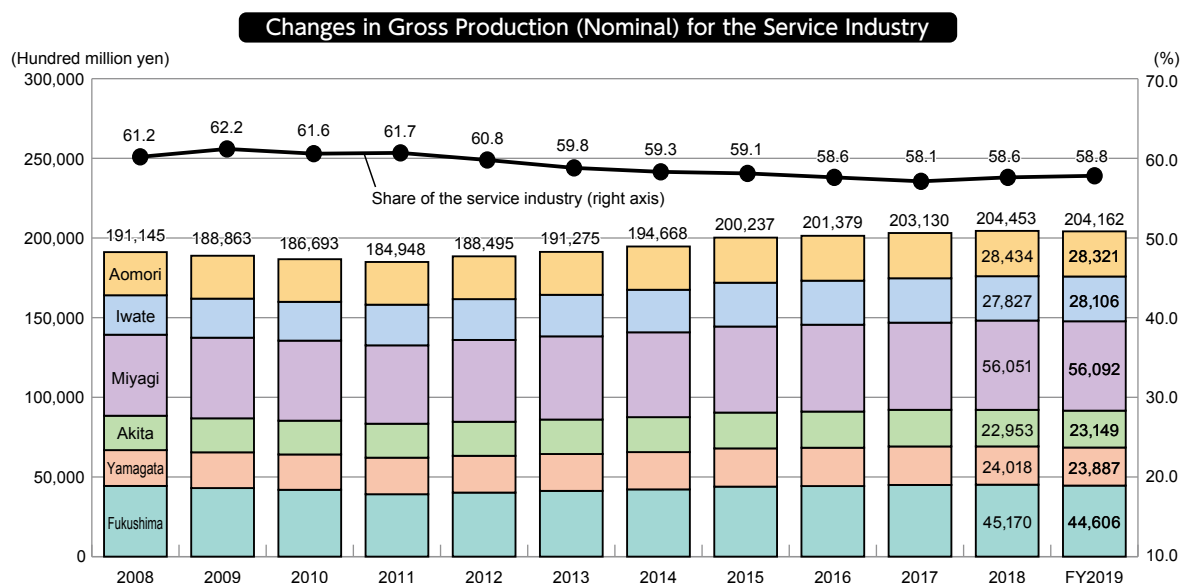
Source: Table 1: 2016 Economic Census for Business Activity, Table 1-2: Preliminary Report, 2021 Economic Census for Business Activity

## (3) Service Industry

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**Gross regional domestic product (GRDP) of the service sector declined for the first time in eight years.**

- In FY 2019, the GRDP of the service sector in the Tohoku region was 20,416.2 billion yen, down 0.1% from the previous year, the first decline in eight years.
- The share of the service industry's GRDP (nominal) in the total gross regional product of all industries in the Tohoku region was 58.8%, an increase of 0.2 percentage points from the previous year.

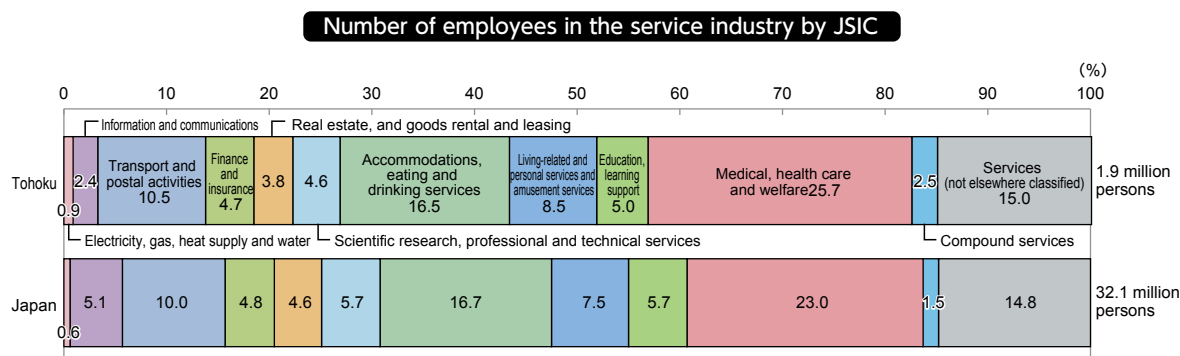


Note 1: The service industries in the above graph include electricity, gas and water supply, and waste management service; transport and postal services; accommodation and food service; information and communications; finance and insurance; real estate; professional/scientific technology; business support services; public administration; education; health and social services; and other services.

Note: 2011 is the base coefficient for FY 2010 and earlier, and 2015 is the base coefficient for FY 2011 and later.

Source: Prefectural Accounts

- The number of service industry employees in the Tohoku region (as of June 1, 2016) was 1.9 million. The ratio by JSIC (Japan Standard Industrial Classification) shows that, "medical, health care and welfare" accounted for the highest percentage at 25.7%, followed by "accommodations, eating and drinking services" at 16.5% and "services (not elsewhere classified)" at 15.0%.
- Compared to Japan, the Tohoku region has a large share of employees in "medical, health care and welfare" and a small share in "information and communications."



Note: The service industries in the above graph refer to the major group categories of industries in the Japan Standard Industry Classification (revised in October 2013), from "Division F - Electricity, gas, heat supply and water" to "R - Services, n. e. c." The graph excludes employees engaged in "I - Wholesale and retail trade."

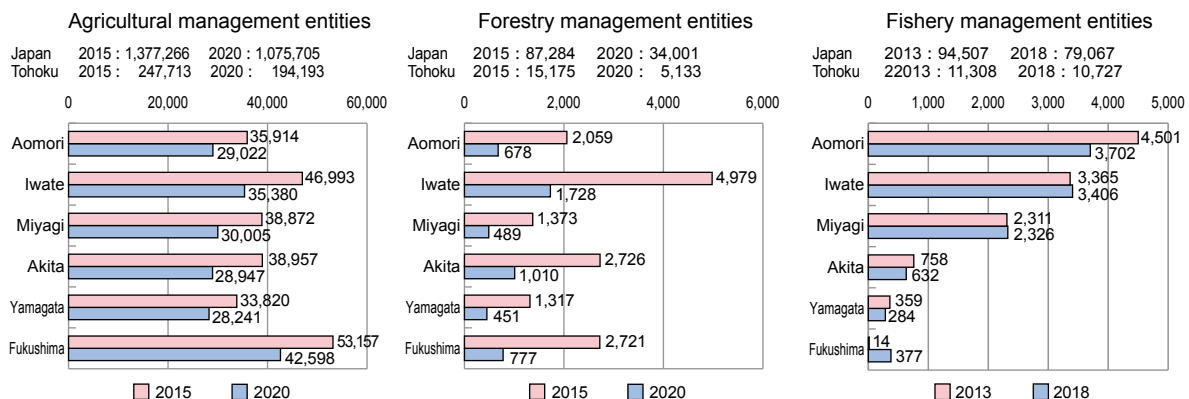
Source: 2016 Economic Census for Business Activity

## (4) Agriculture, Forestry, and Fisheries

**Agriculture increased in terms of production value and ratio to national total, while forestry and fisheries decreased in terms of production value and ratio to national total.**

- In 2020, the number of agricultural management entities in the Tohoku region was 194,193 (down 21.6% from the 2015 survey, down 21.9% nationwide), and the number of forestry management entities was 5,133 (down 66.2% from the 2015 survey, 61.0% decrease nationwide), and the number of fishery management entities in the Tohoku region in 2018 was 10,727 management entities (down 5.1% from the 2013 survey, down 16.3% nationwide).

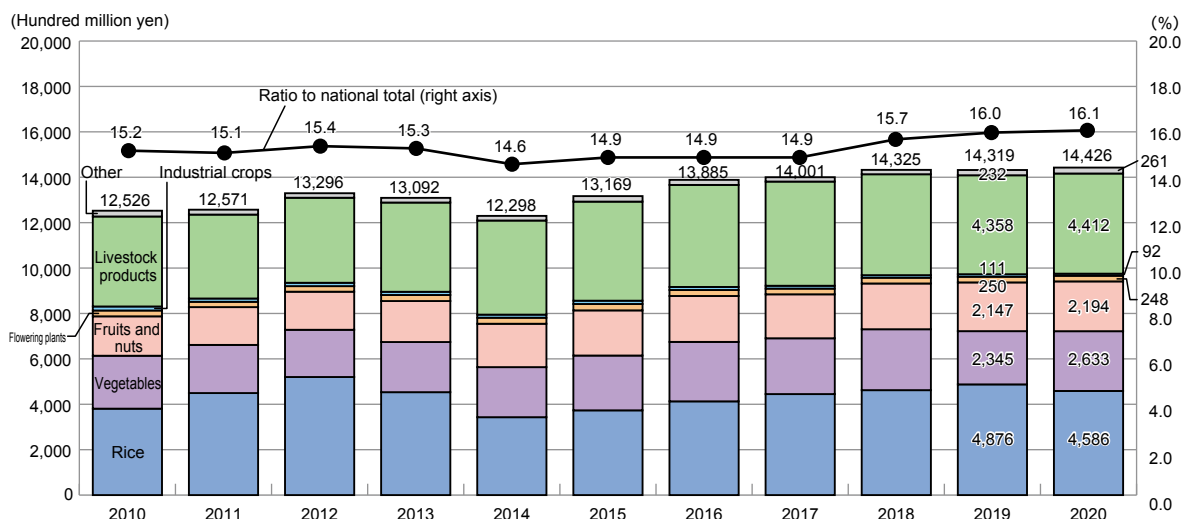
**Number of Agricultural, Forestry and Fishery Management Entities**



Source: *Census of Agriculture and Forestry* (as of February 1 each year) and *Census of Fisheries* (as of November 1 each year)

- Agricultural production value in the Tohoku region in 2020 was 1,442.6 billion yen. This represents 16.1% of the nation's total agricultural output of 8,955.7 billion yen, up 0.1 percentage points from the previous year. By item, rice accounted for the largest share of 458.6 billion yen, or 31.8% of the total agricultural output in the Tohoku region, followed by livestock with 441.2 billion yen, or 30.6% of the total.

**Changes in the Agricultural Production Value and the Ratio to National Total**



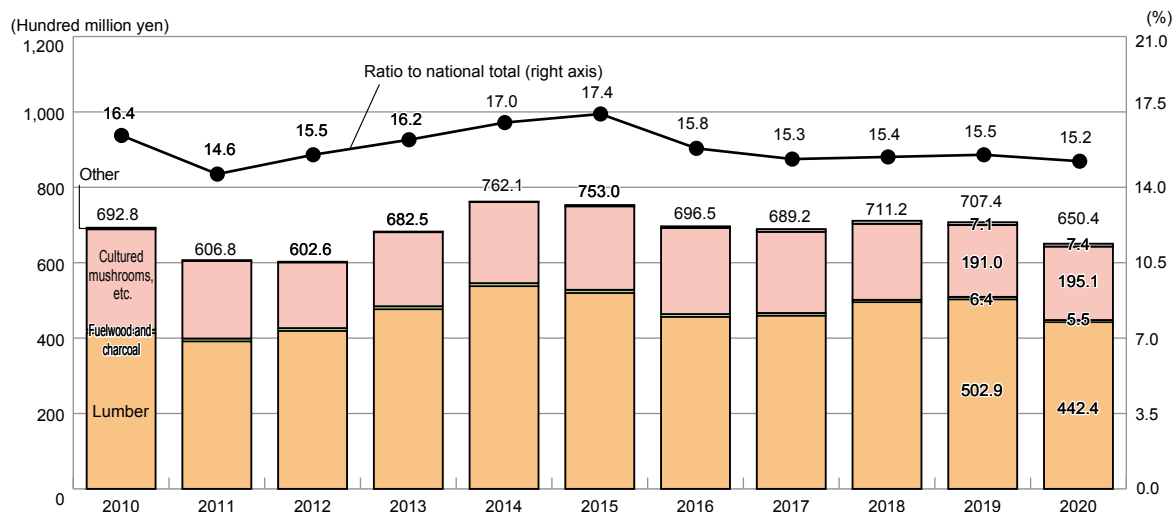
Source: *Statistics of Agricultural Income Produced*, Ministry of Agriculture, Forestry and Fisheries

### 3. Industrial Structure of the Tohoku Region

#### (4) Agriculture, Forestry, and Fisheries

- The value of forestry production value in the Tohoku region in 2020 is estimated at 65.04 billion yen. This represents 15.2% of the national forestry production value of 428.64 billion yen, down 0.3 percentage points from the previous year. By category, lumber production accounted for 68.0% of the total forestry production value in the Tohoku region, at 44.24 billion yen, and cultivated mushroom production accounted for 30.0%, at 19.51 billion yen.

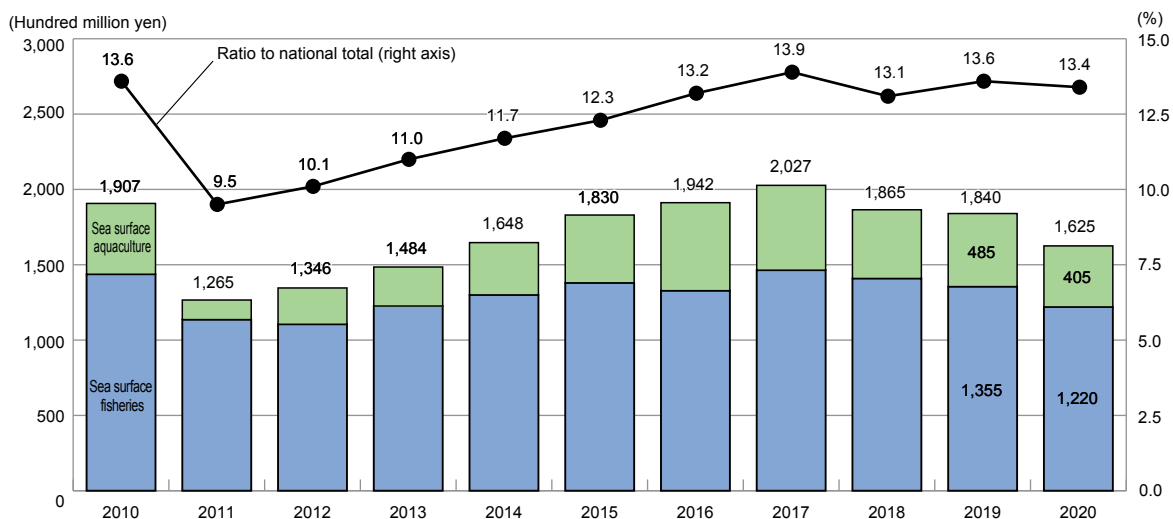
Changes in the Forestry Production Value and Ratio to National Total



Source: Gross Forestry Output, Ministry of Agriculture, Forestry and Fisheries

- The value of sea surface fisheries and aquaculture production in the Tohoku region in 2020 was 162.5 billion yen. The share of the Tohoku region in the national output of 1,210.3 billion yen is 13.4%, down 0.2 percentage points from the previous year. By business category, sea surface fisheries accounted for 122.0 billion yen, and sea surface aquaculture 40.5 billion yen.

Changes in the Value of Sea Surface Fisheries and Aquaculture Production and Comparison to Japan Total



Note: The figures for 2010 are the totals except for Akita and Yamagata as they do not disclose information for the sea surface aquaculture.

The figures for 2011, 2012 and 2013 are the totals except for Yamagata and Fukushima as they do not disclose information for the sea surface aquaculture.

The figures for 2014 and 2015 are the totals except for Yamagata as they do not disclose information for the sea surface aquaculture.

The figures for 2016 are the totals except for Yamagata as they do not disclose information for sea surface fishery and sea surface aquaculture.

Source: Fishery Output, Ministry of Agriculture, Forestry and Fisheries





2022

# **ECONOMIC OVERVIEW OF TOHOKU REGION**



**Ministry of Economy, Trade and Industry  
Tohoku Bureau of Economy, Trade and Industry**