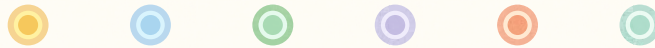


2023

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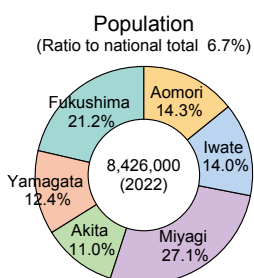
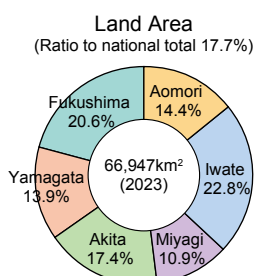
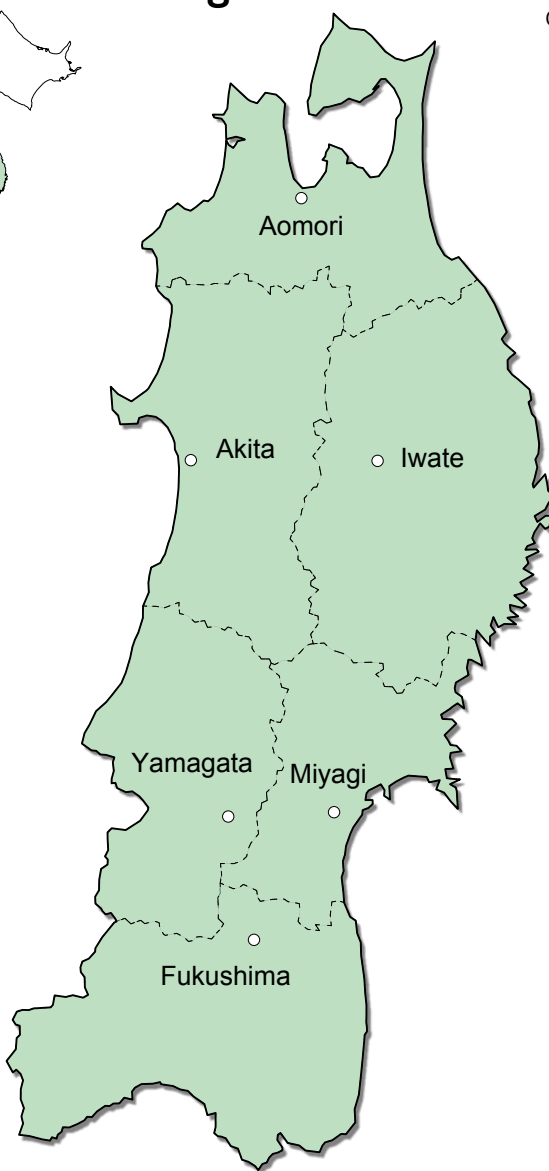
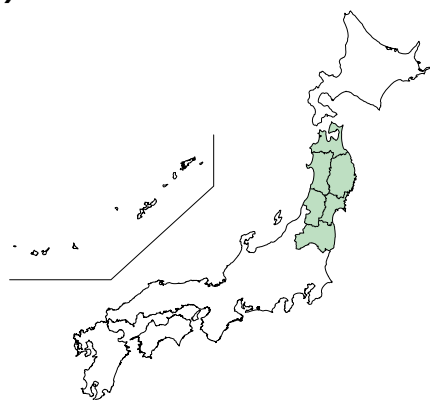
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\* Years in text and graphs throughout this document are displayed according to the Western calendar. In addition, when the name of the source material follows the Japanese calendar, the Western calendar is written in parentheses except for some parts.

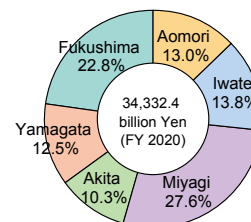
\* Due to rounding up/off, not all totals equal the sum of separate figures in tables and graphs throughout this document.

(1) Overview of the Tohoku Region

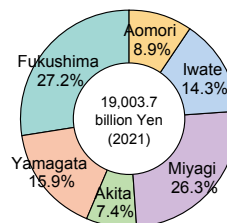
(1) Overview of the Tohoku Region



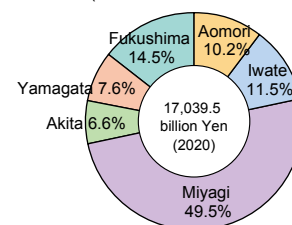
Gross Regional Domestic Product (GRDP)  
(Ratio to national total 6.4%)<sup>Note 4</sup>



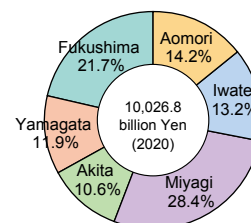
Shipment Value of Manufactured Goods  
(Ratio to national total 5.8%)



Wholesale Annual Sales  
(Ratio to national total 4.2%)



Retail Annual Sales  
(Ratio to national total 7.3%)



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, 2023 <sup>Note 1</sup>	66,947	2023 National Land Area Survey of Prefectures and Municipalities (Geospatial Information Authority of Japan)	Prefectural income per capita (Thousand yen) (FY 2020)	2,746	2020 Annual Report on Prefectural Accounts (Cabinet Office, data published by each prefecture)
Population (Thousand persons) As of October 1, 2022	8,426	Population Estimates (Ministry of Internal Affairs and Communications)	No. of business establishments (Establishments) (As of June 1, 2021) <sup>Note 3</sup>	407,488	2021 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)	3,715	
GRDP (Nominal) (Hundred million yen) (FY 2020)	343,324	2020 Annual Report on Prefectural Accounts (Cabinet Office, data published by each prefecture)	Shipment value of manufactured goods (Hundred million yen) (2021)	190,037	2022 Census of Economic Structure (Ministry of Economy, Trade and Industry)
Primary industry <sup>Note 2</sup>	8,173		Wholesale sales value (Hundred million yen) (2020)	170,395	2021 Economic Census for Business Activity (Ministry of Internal Affairs and Communications and Ministry of Economy, Trade and Industry)
Secondary industry <sup>Note 2</sup>	94,499				
Tertiary industry <sup>Note 2</sup>	241,184				
No. of municipalities As of August 1, 2023	77 cities 116 towns 34 villages	Number of Municipalities by Prefecture (Ministry of Internal Affairs and Communications)	Retail sales value (Hundred million yen) (2020)	100,268	

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.

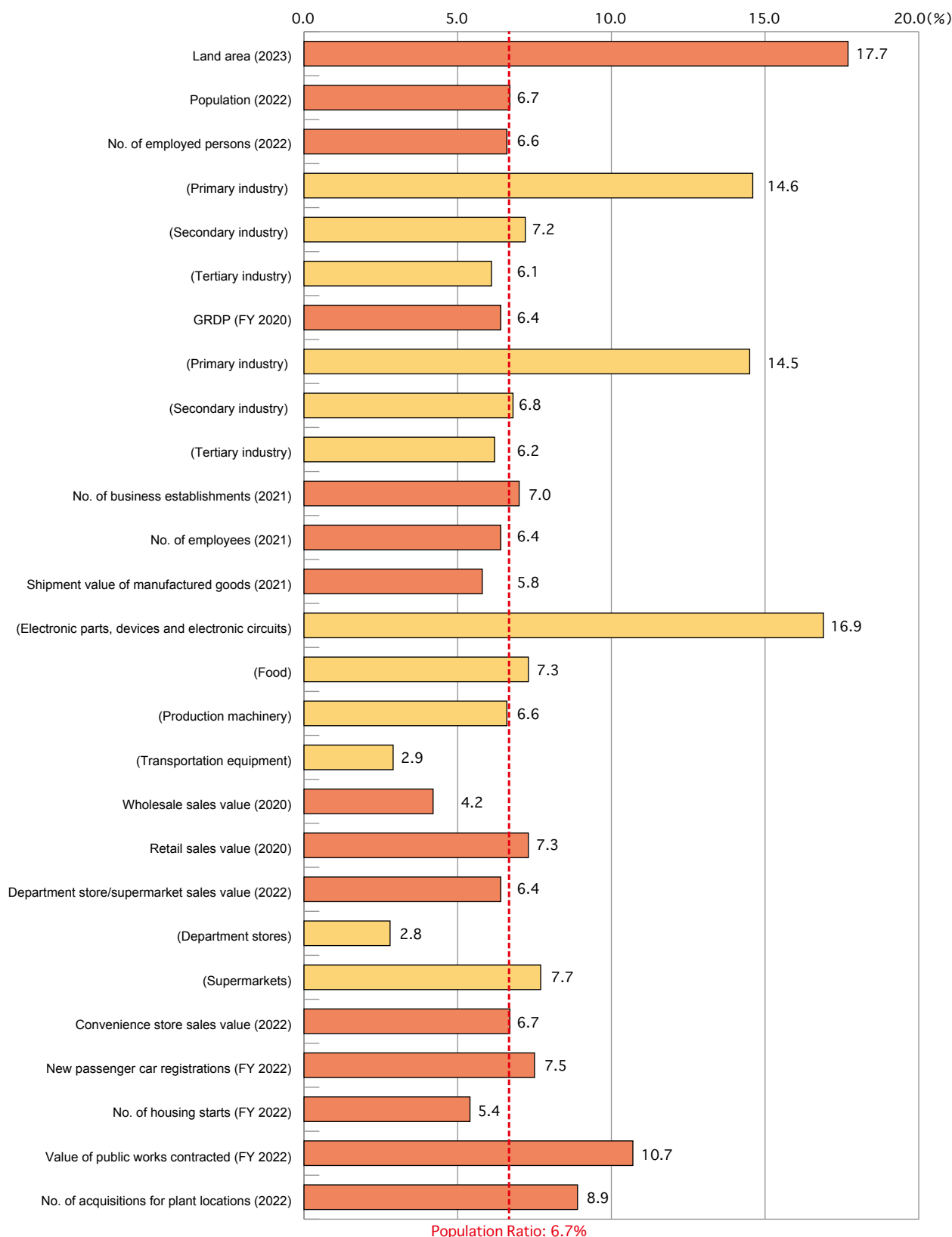
Note 3: The number of business establishments includes only the number of private business establishments.

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 6.7%, while electronic parts, devices and circuits are at a high level in the manufacturing sector.

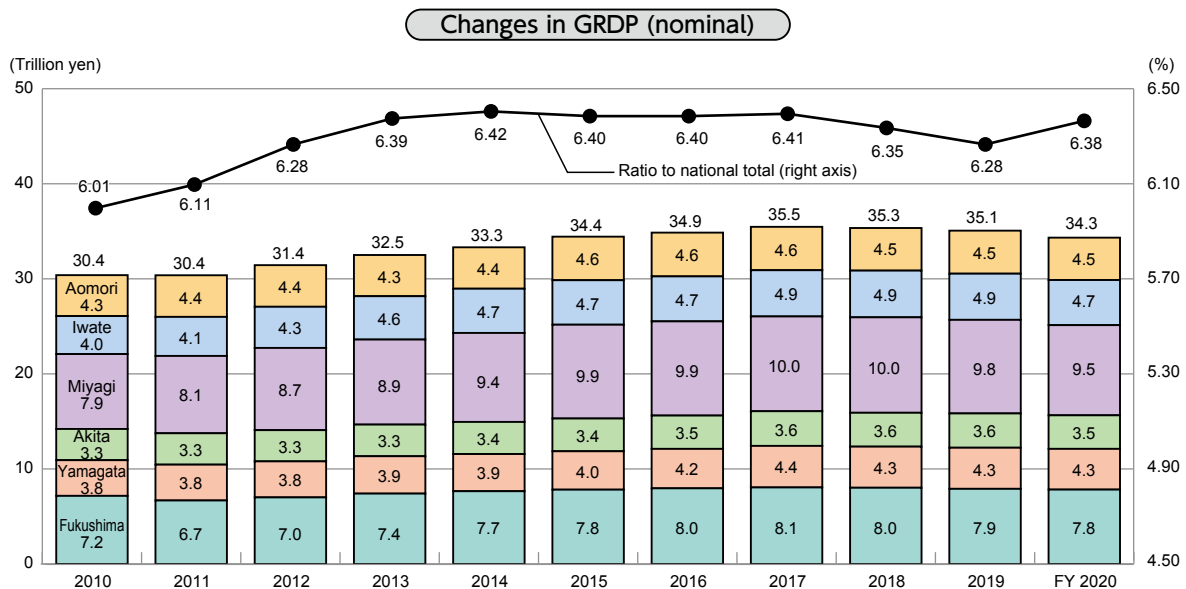


Note: The number of employees is based on the Labor Force Survey 2022 (Ministry of Internal Affairs and Communications)

# (1) Gross Product

The Gross Regional Domestic Product (GRDP) is 34.3 trillion yen, or 6.38% of the national total.

- In the fiscal year 2020, the Tohoku region's nominal GRDP was 34,332.4 billion yen, down 2.1% compared to the previous fiscal year, and 6.38% of the national total. In terms of Gross Product by prefecture, Aomori and Yamagata prefectures remained unchanged from the previous year, while Iwate, Miyagi, Akita, and Fukushima prefectures decreased from the previous year.



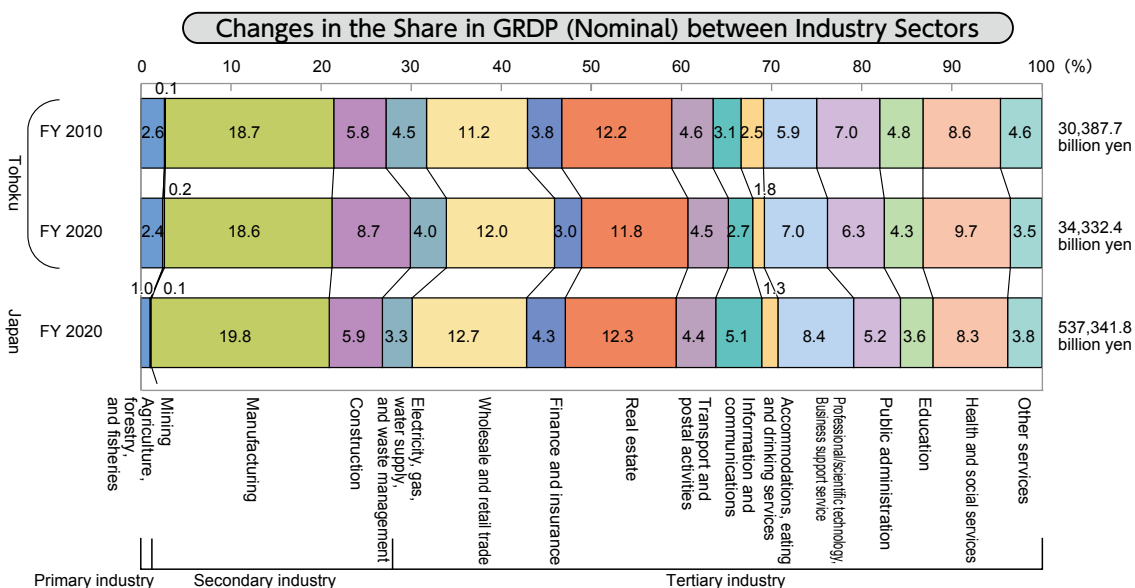
Note 1: With the System of Prefectural Accounts, the figures are retroactively revised for each previous fiscal year in conjunction with the latest fiscal year's estimates.

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 2020 by industry classification, primary industries accounted for 2.4%, secondary industries for 27.5%, and tertiary industries for 70.1%. Share of the construction industry rose to 8.7%, up 2.9 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 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

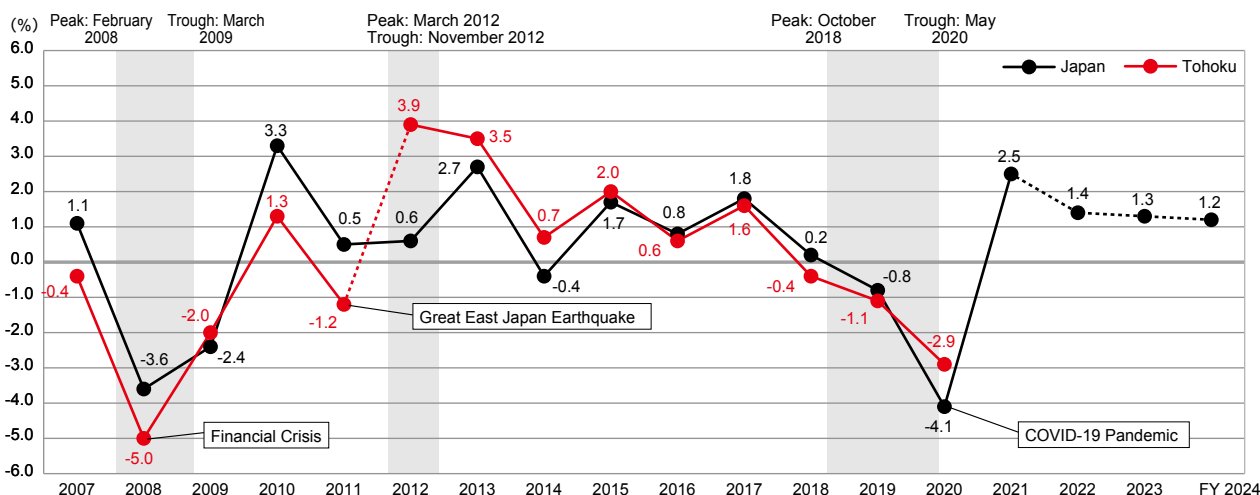
(2) Real Economic Growth Rate

## (2) Real Economic Growth Rate

The real economic growth rate was -2.9% and has been negative for three consecutive years.

- The Tohoku region's real economic growth rate in the fiscal year 2020 was -2.9% (cf. -4.5% for Japan), the third consecutive year of negative growth. However, this exceeded the national growth rate.

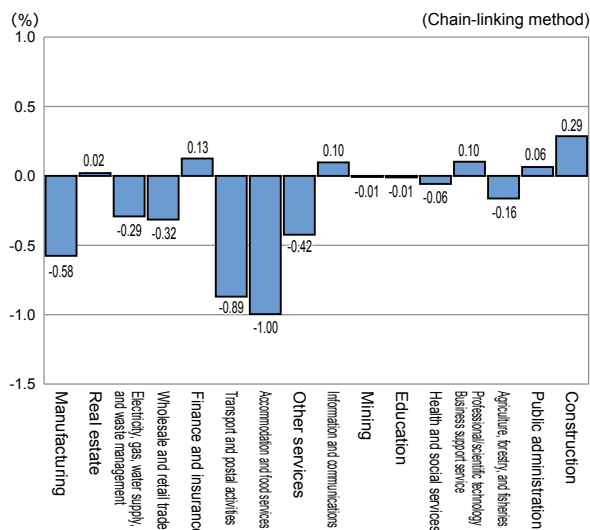
Changes in the Real Economic Growth Rate in the Tohoku Region (Chain-linking Method)



- 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 2022, 2023 and 2024 are taken from the *Mid-Year Economic Projection for FY 2023* released by the Cabinet Office on July 20, 2023.
  - 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 2021 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

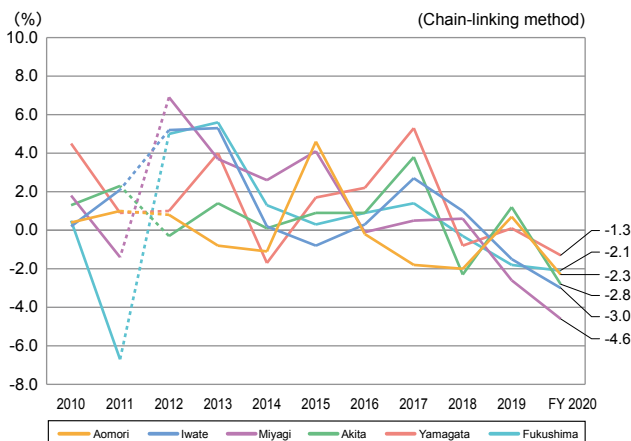
- In terms of the contribution to real economic growth in FY 2020 by economic activity (by industry), the "Construction" and "Finance and insurance" sectors made positive contributions of 0.29% and 0.13%, respectively, while the "Accommodation and food services" sector made a negative contribution of 1.00%.
- Looking at the real economic growth rate by prefectures in the Tohoku region, all six prefectures in the Tohoku region posted negative growth rates. When compared to the fiscal year 2019, the growth rate turned to negative in Aomori, Akita, and Yamagata prefectures. Iwate, Miyagi, and Fukushima prefectures continue to show negative trends.

Contribution to the Real Economic Growth Rate in FY 2020 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*

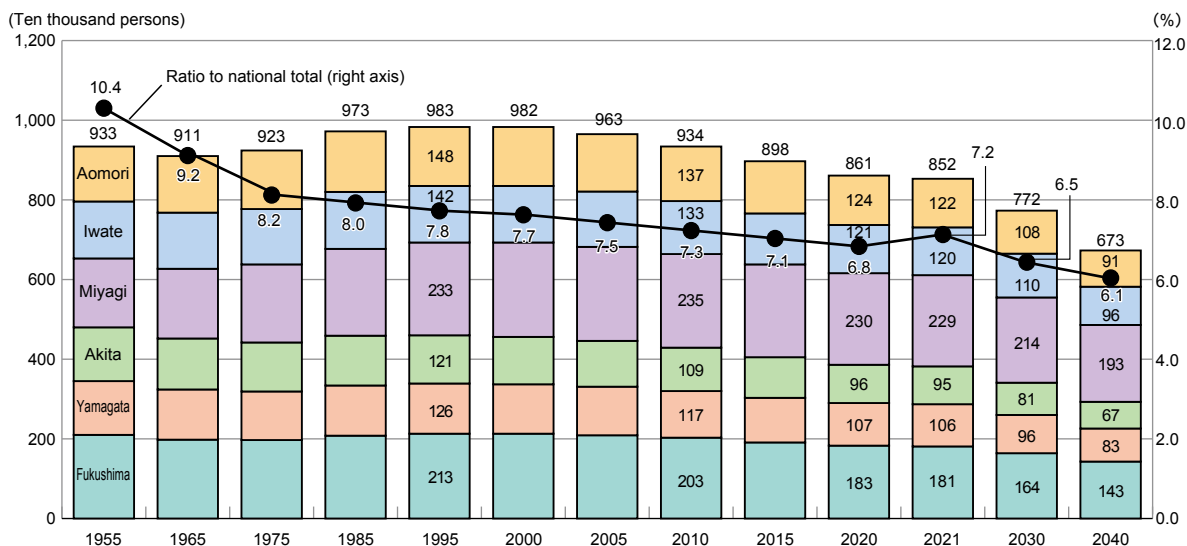


### (3) Population

The productive-age population in the Tohoku region is projected to shrink by 31.0% in 2040 compared to 2021.

- In 2021, the Tohoku region had a population of 8.52 million, accounting for 7.2% of the national population (119.13 million). Tohoku's population is projected to decrease 21.0% to 6.73 million in 2040 compared to 2021, 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.

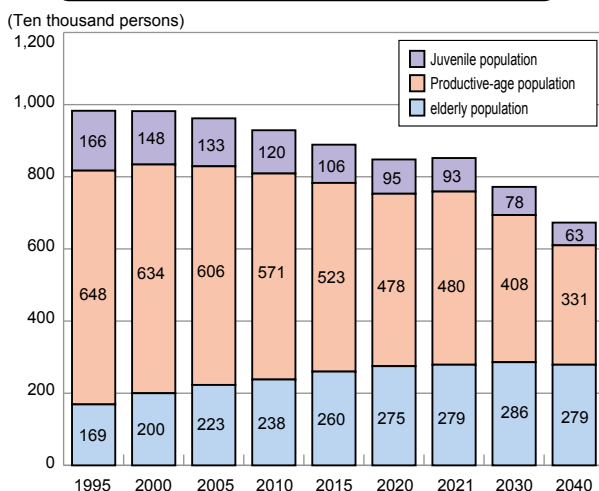
Source: 1955-2020 : *Population Census of Statistics Bureau of Japan*

2021: *Population Estimates*, Ministry of Internal Affairs and Communications

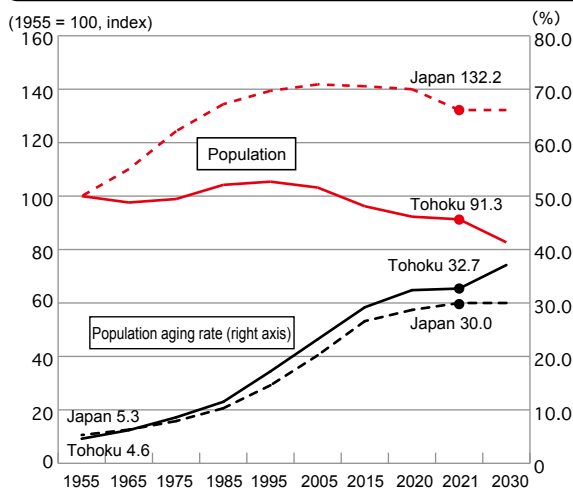
2030 and beyond : *Population Projections by Prefecture*, the National Institute of Population and Social Security Research (Projection from March 2018)

- 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 30.1% from 2021, the juvenile population (aged 0-14) is projected to be 630,000, down 32.5%, while the elderly population (aged 65 or older) is projected to be 2.79 million, up 1.0%. The population is declining and aging ahead of the rest of the country.

Population Trends in Three Age Groups



Changes in the Population and the Population Aging Rate



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

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

2021: *Population Estimates*, Ministry of Internal Affairs and Communications

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

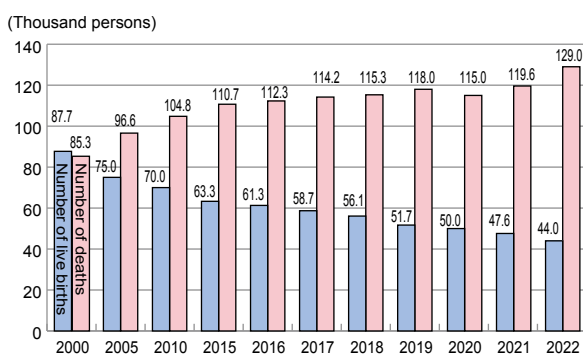
(4) Demographics

## (4) Demographics

Tohoku's natural population decline and social decline rise to 85,000 and 21,100, respectively.

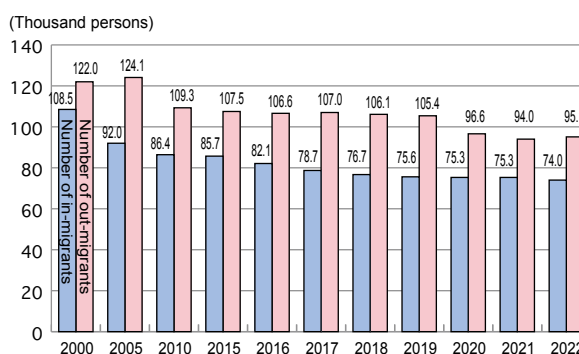
- In 2022, the number of births in the Tohoku region was 44,000, down 3,600 from the previous year, and the number of deaths was 129,000, up 9,400 from the previous year, resulting in a natural decline (births - deaths) of 85,000, up from 72,000 in the previous year.
- In 2022, the number of people moving in from outside the Tohoku region was 74,000, down 1,300 from the previous year, and the number of people moving out of the Tohoku region was 95,100, up 1,100 from the previous year, resulting in a social decline (moving in - moving out) from 18,700 in the previous year to 21,100.
- Looking at the 141,700 out-migrants from Tohoku prefectures by destination, 46,600 moved within the Tohoku region and 95,100 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



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

Changes in In-migrants and Out-migrants



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 (2022)

		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		1,609	3,135	874	359	531	6,508	14,116	8,050	20,624
	Iwate	1,613		4,764	912	432	719	8,440	11,493	6,742	19,933
	Miyagi	2,010	3,226		1,507	2,687	3,748	13,178	30,388	17,914	43,566
	Akita	770	1,020	2,338		500	433	5,061	8,245	5,055	13,306
	Yamagata	345	465	3,641	491		1,007	5,949	9,591	5,593	15,540
	Fukushima	447	651	5,053	418	904		7,473	21,302	12,312	28,775
	Inside Tohoku total	5,185	6,971	18,931	4,202	4,882	6,438	46,609	95,135	55,666	141,744
Outside Tohoku total	11,062	8,584	25,597	6,146	6,898	15,685	73,972				
Of which, Tokyo area	5,783	4,797	13,396	3,567	3,644	8,365	39,552				
In-migrants total		16,247	15,555	44,528	10,348	11,780	22,123	120,581			

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)

## (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 407,488 private business establishments, or 7.0% of the national total of 5,844,088 business establishments (7.4% in 2016). The number of the establishments decreased 1.7% from the previous 2016 survey. Akita, Yamagata and Iwate, in particular, saw significant decreases of 5.2%, 4.9% and 4.4% respectively.
- In 2021, the number of employees in the Tohoku region was 3,714,603, accounting for 6.4% of the national total of 57,949,915 (6.6% in the previous survey). This is a 0.3% decrease from the previous survey (2016), with a particularly large decrease in Akita (3.6%).

## Numbers of Private Business Establishments and Employees by Prefecture

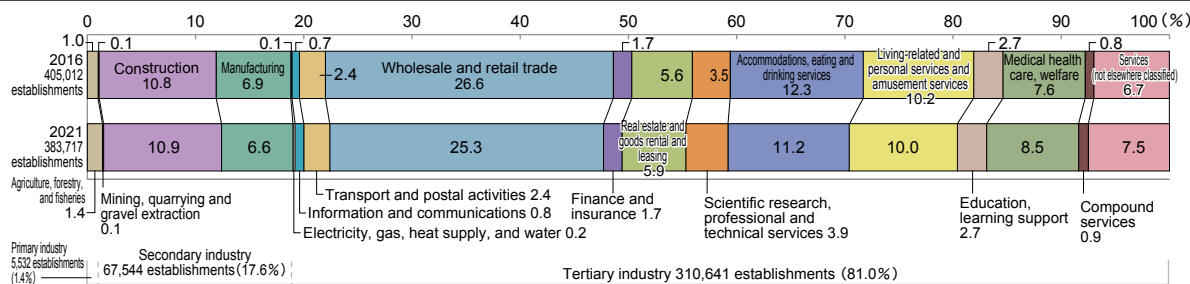
	No. of establishments				No. of employees			
	2016	2021	Ratio to the previous census (%)	Ratio to national total (%)	2016	2021	Ratio to the previous census (%)	Ratio to national total (%)
Aomori	59,069	57,973	- 1.9	1.0	498,988	498,418	- 0.1	0.9
Iwate	59,451	56,850	- 4.4	1.0	525,264	518,167	- 1.4	0.9
Miyagi	102,026	104,258	2.2	1.8	1,006,886	1,031,186	2.4	1.8
Akita	49,432	46,884	- 5.2	0.8	413,719	398,671	- 3.6	0.7
Yamagata	56,551	53,779	- 4.9	0.9	475,435	465,796	- 2.0	0.8
Fukushima	88,128	87,744	- 0.4	1.5	806,130	802,365	- 0.5	1.4
Tohoku	414,657	407,488	- 1.7	7.0	3,726,422	3,714,603	- 0.3	6.4
Japan	5,578,975	5,844,088	4.8	100.0	56,872,826	57,949,915	1.9	100.0

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

Source: 2016 Economic Census for Business Activity and 2021 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 25.3%, followed by “accommodations, eating and drinking services” at 11.2% and “construction” at 10.9%. The tertiary industry occupied a significant share at 81.0%. In comparison to 2016, “medical, healthcare and welfare” increased its share by 0.9 percentage points, while “wholesale and retail trade” decreased shares by 1.3 percentage points.

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

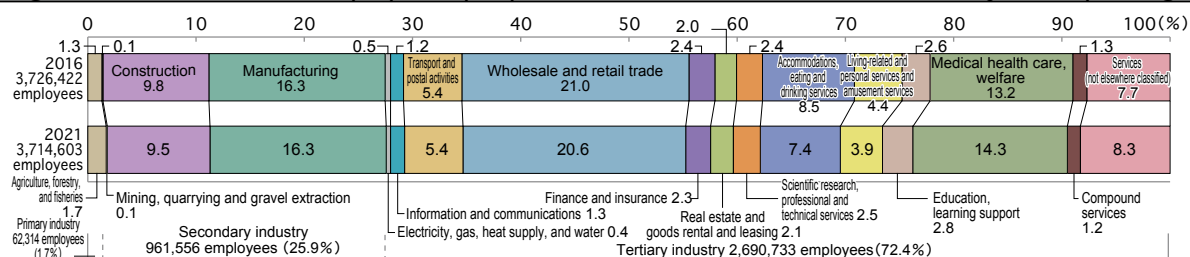


Note: The number of business establishments by industry includes only those for which numerical data for necessary items were obtained.

Source: 2016 Economic Census for Business Activity and 2021 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 25.9%, and tertiary industries for 72.4%. Compared to 2016, “medical care and welfare” expanded by 1.1 percentage points, while “Accommodations, eating and drinking services” shrank by 1.1 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.

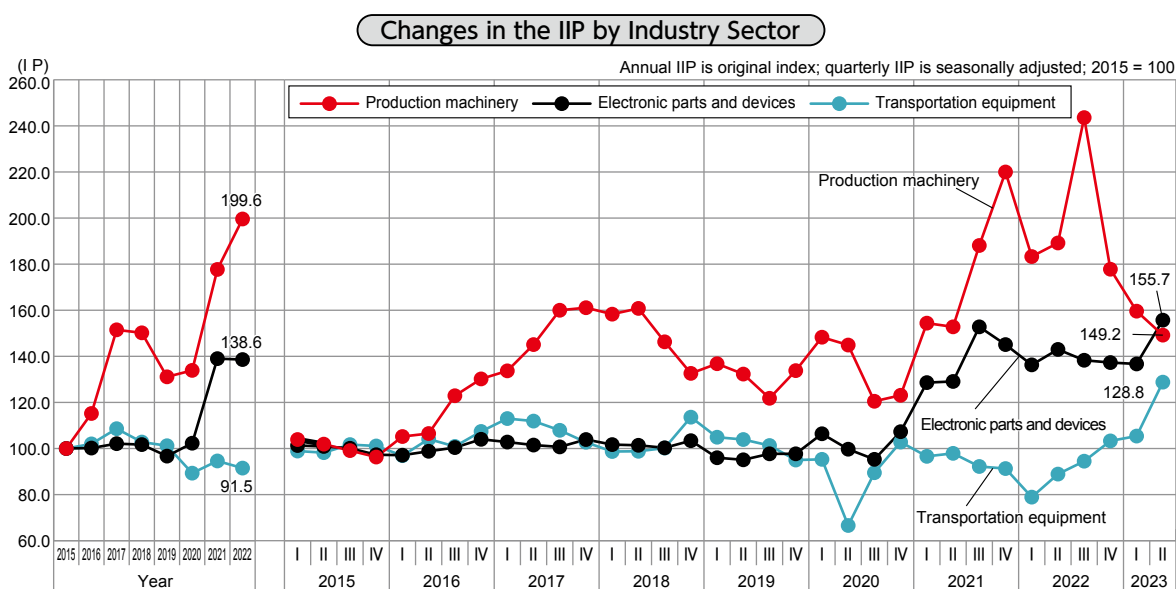
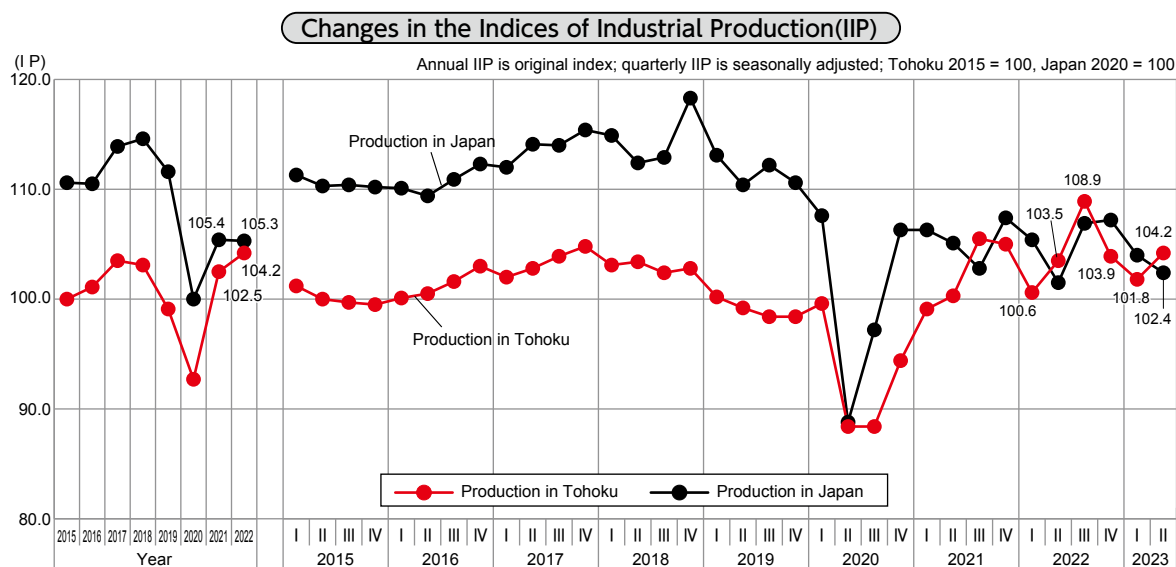
Source: 2016 Economic Census for Business Activity and 2021 Economic Census for Business Activity

(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 2022 (2015=100) rose 1.7% from the previous year to 104.2. The production machinery and food industries contributed to this trend of recovery.
- Looking at the quarterly production index (seasonally adjusted index: 2015=100) for 2022, the first quarter declined 4.2% from the previous quarter to 100.6. Contributors to this decline included the production machinery, electronic parts and devices, and transportation equipment industries. In the second quarter, it rose 2.9% to 103.5. The electronic parts and devices, transportation equipment, and food industries contributed to this rise. In the third quarter, it rose 5.2% to 108.9. The production machinery, chemical/petroleum products and information and communications machinery contributed to this rise. In the fourth quarter, it declined 4.6% to 103.9. The production machinery, chemical/petroleum products and other industries contributed to this decline.
- The production index for the first quarter of 2023 declined 2.0% from the previous quarter to 101.8. The food and production machinery industries contributed to this decline. The second quarter rose 2.4% to 104.2. The electronic parts and devices and transportation equipment industries contributed to this rise.



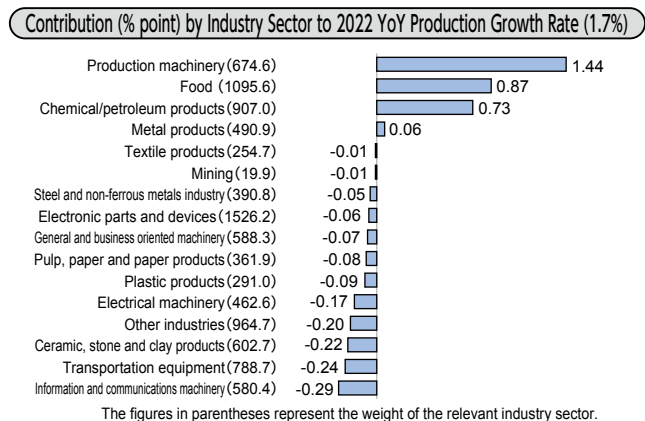
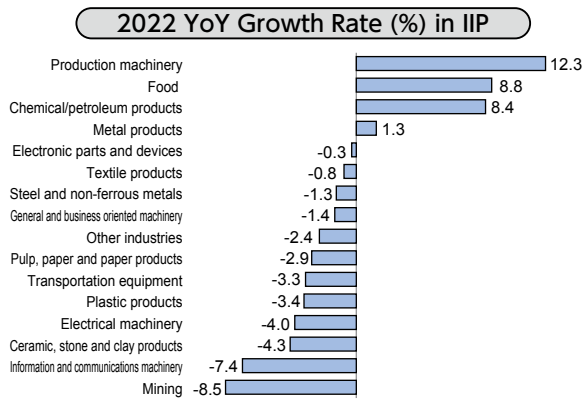
Note 1: Production indexes for Japan was prepared by the Ministry of Economy, Trade and Industry, while production indices for Tohoku was prepared by the Tohoku Bureau of Economy, Trade and Industry

Note 2: The 2020 standard is used nationwide and the 2015 standard for Tohoku. Tohoku is annually adjusted for 2022.

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

(6) Industrial Production

- Looking at the year-on-year growth rate (1.7%) of the production index in 2022 by industry sector, industries that increased include the production machinery (+12.3%) and the food (+8.8%) industries. The industries that experienced declines included the mining (-8.5%) and the information and communications machinery (-7.4%) industries.
- Looking at the contribution of each industry sector to the year-on-year growth rate (1.7%) of the production index in 2022, the production machinery (1.44) and the food industries (0.87) contributed to the overall increase. On the other hand, the information and communications machinery (-0.29) and the transportation equipment (-0.24) industries negatively contributed.

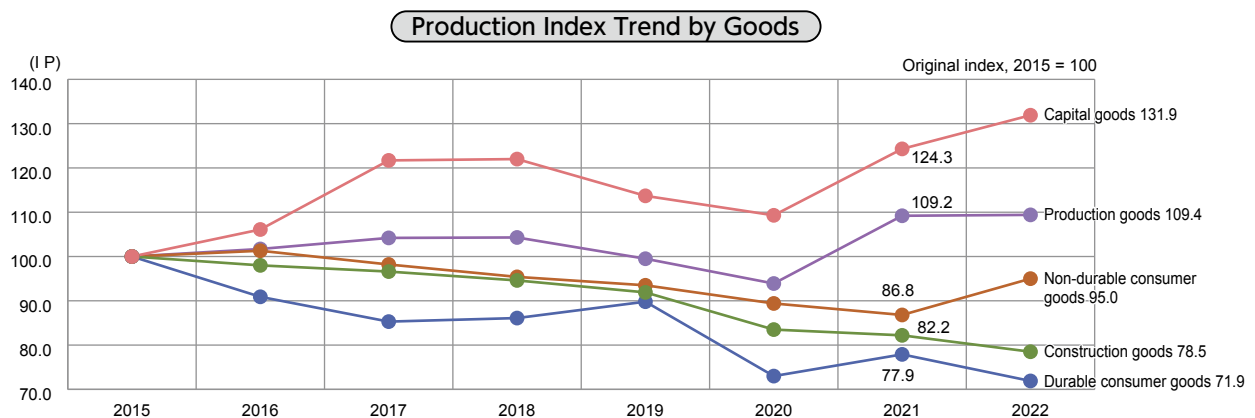


Note: Weight: Composition of each industry as a percentage of the total (total industrial production = 10000)

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 2022 production index by goods, capital goods rose 6.1% from the previous year to 131.9, construction goods declined 4.5% to 78.5, durable consumer goods declined 7.7% to 71.9, non-durable consumer goods increased 9.4% to 95.0 and production goods increased 0.2% to 109.4.



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

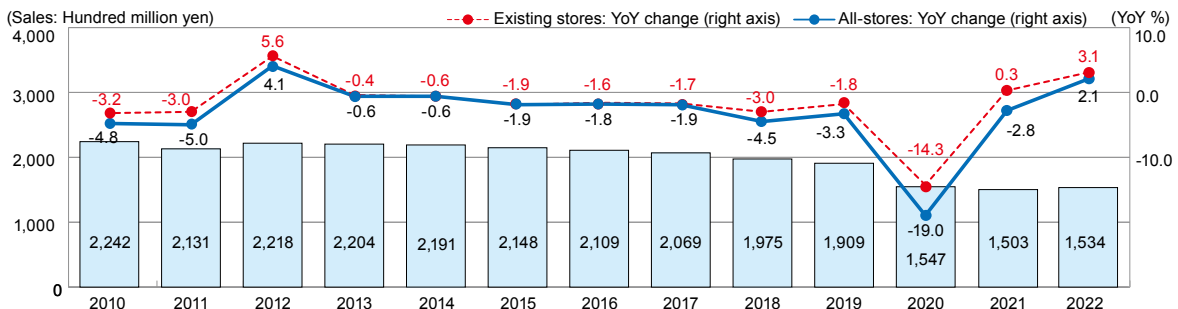
(7) Retail Trade

(7) Retail Trade

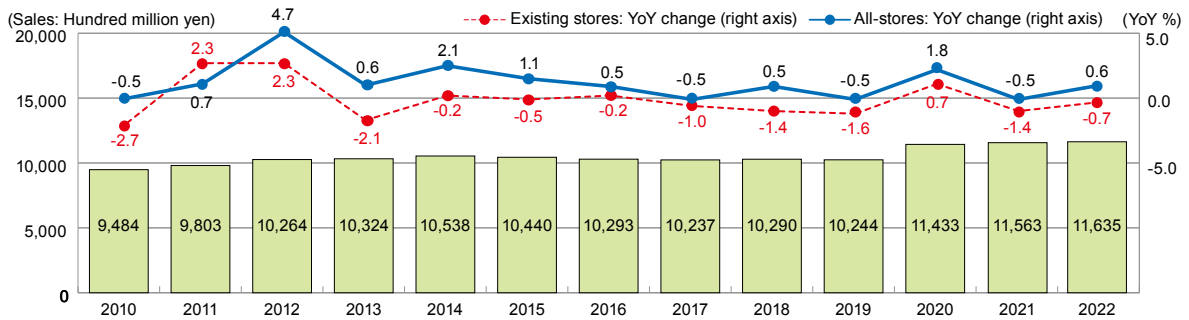
Retail trade is showing signs of recovery.

- In 2022, the sales of all the department stores and supermarkets in the Tohoku region totaled 1,316.9 billion yen, 6.4% of the national ratio and 0.8% higher than the previous year, the first year-on-year increase in six years. Meanwhile, sales at existing stores shrank 0.3% year-on-year, declining for ten consecutive years.
- In terms of year-on-year comparison of sales by store type (on an all-store basis) in 2022, department store sales recorded 153.4 billion yen. This was 2.8% of the national total and a 2.1% increase from the previous year, the first year-on-year increase in ten years. The total sales for supermarkets increased for the first time in two years to 1,163.5 billion yen, 7.7% of the national total and a 0.6% increase from the previous year.

Department Store Sales and Year-on-Year Trends



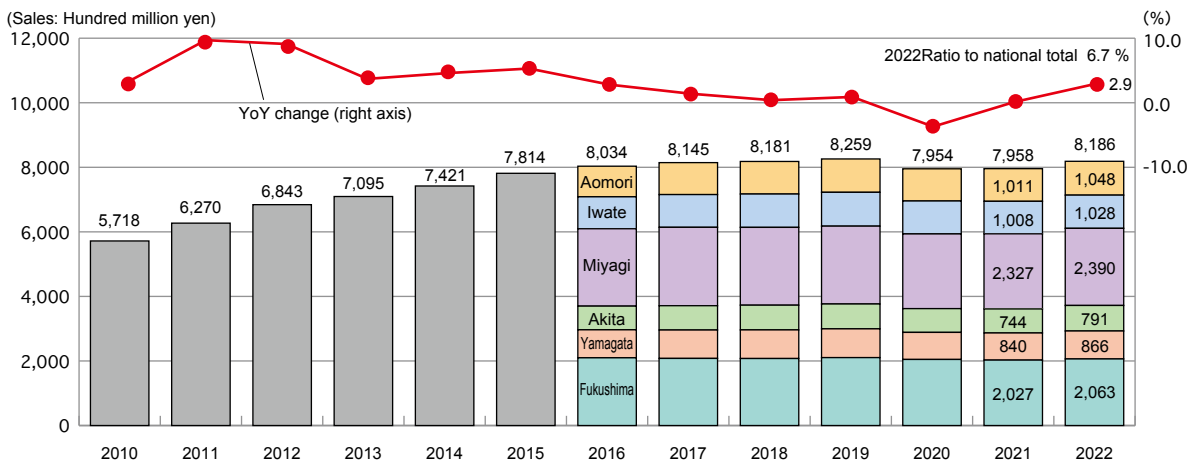
Supermarket Sales and Year-on-Year Trends



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

- In 2022, convenience store sales in the Tohoku region totaled 818.6 billion yen for all stores. The figure was 6.7% of the Japan total and 2.9% up from the previous year, marking the second consecutive year of year-on-year growth.

Convenience Store Sales and Year-on-Year Trends



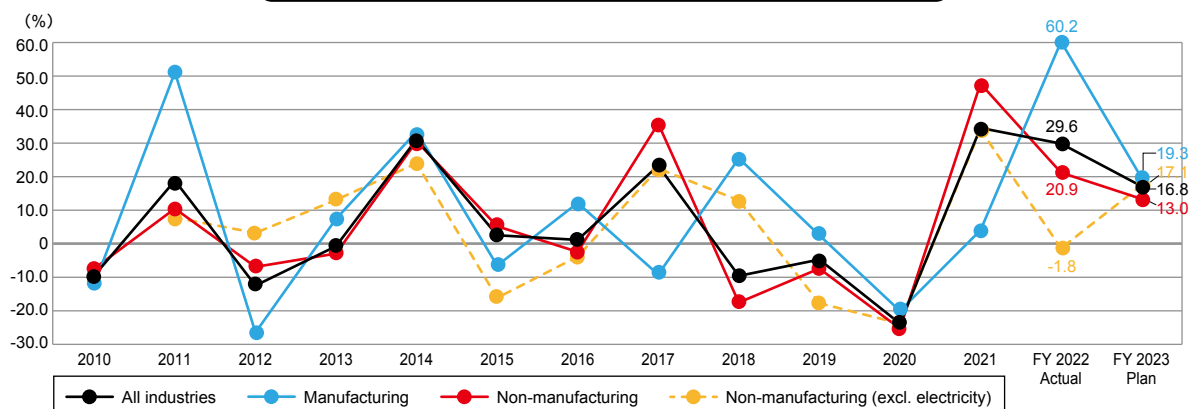
Note 1: Since July 2015, the sales by prefecture have been disclosed.  
 Note 2: Sales figures are partially adjusted for linkage factors (prior to December 2011).  
 Source: *the Current Survey of Commerce* by the Ministry of Economy, Trade and Industry

## (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 FY2023 (survey in June 2023) is 506.9 billion yen, an increase of 16.8% year-on-year. The manufacturing industry plans to increase by 19.3%, and the non-manufacturing industry plans to increase by 13.0% (non-manufacturing industry excluding electric power is plans to increase by 17.1%).
- Capital investment in FY2022 increased by 29.6% in all industries. The manufacturing sector grew 60.2% over the previous year due to an increase in electrical machinery and chemicals. The non-manufacturing sector increased 20.9% from the previous year due to factors like an increase in electric power (the non-manufacturing sector, excluding electric power, decreased 1.8% from the previous year), despite a decrease in transport.

YoY Changes in Capital Spending in the Tohoku Region



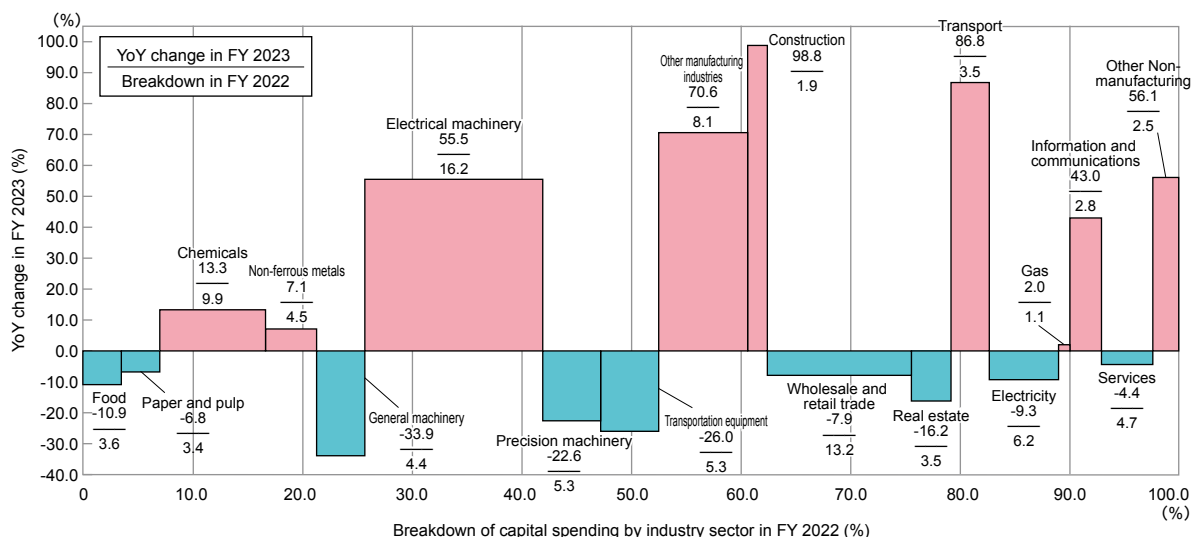
Note 1: The publicly released data (for the seven Tohoku prefectures including Niigata Prefecture) were recalculated for the six Tohoku prefectures. The same shall apply hereinafter.

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 year-on year change in FY2023 capital investment plans by industry sector, in the manufacturing sector there will be declines in transportation equipment and precision machinery for which construction of new factories has been completed. However, demand is expected to increase for electrical machinery to build or expand factories in response to the global spread of electric vehicles (EVs) and the rising demand for semiconductors. Demand is also expected to increase in other manufacturing industries conducting renewal investments and research and development. The non-manufacturing sector plans to grow in such areas as transport and construction due to new sales and transportation offices construction and relocation being expected.

Capital Spending Trends (FY 2023 Plan)



Source: Survey on Planned Capital Spending (by Region) for Fiscal Year 2023, Development Bank of Japan

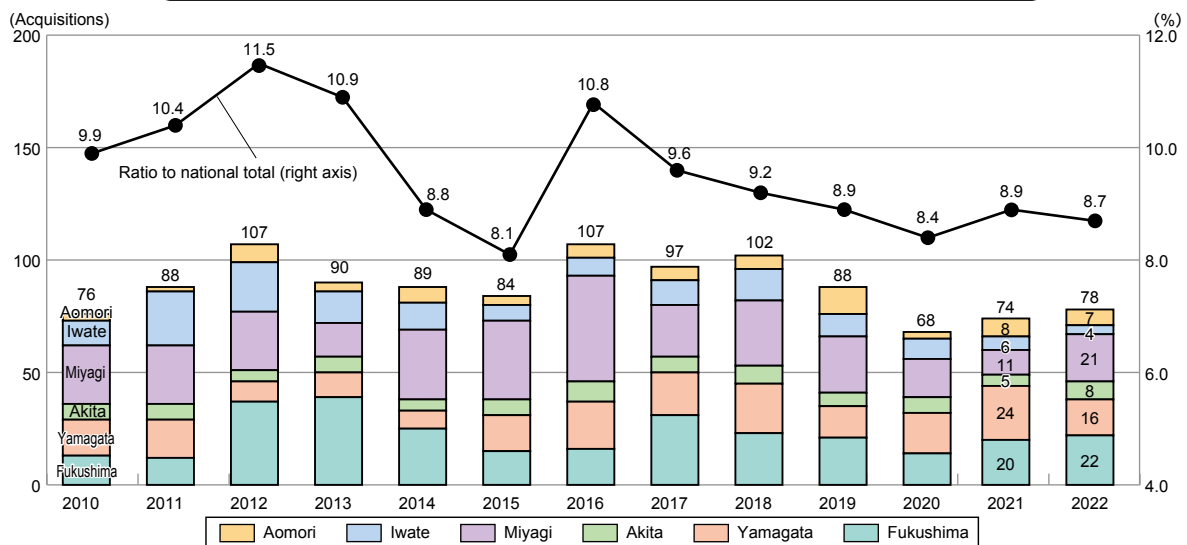
(9) Acquisition of Plant Locations

### (9) Acquisition of Plant Locations

Number of acquisition for plant locations increased for two consecutive years.

- In 2022, the acquisition for plant locations (manufacturing) in the Tohoku region increased for two consecutive years, up 4 (5.4%) from the previous year to 78. The national ratio fell 0.2 points from the previous year to 8.7%.
- By prefecture, in descending order of number of locations, 22 in Fukushima (20 in the previous year), 21 in Miyagi (11 in the previous year), 16 in Yamagata (24 in the previous year), 8 in Akita (5 in the previous year), 7 in Aomori (8 in the previous year), and 4 in Iwate (6 in the previous year).
- Looking at the changes in the number of acquisitions, the number reached the 70s in 2009, the year after the financial crisis. However, this number, including relocations, increased after the Great East Japan Earthquake in 2011 due to support for disaster-stricken areas. After that, the number dropped in 2020 due to the global economic crisis caused by the spread of the COVID-19 infection. However, it is recovering.

Changes in th Number of Acquisitions for Plant Locations (manufacturing)



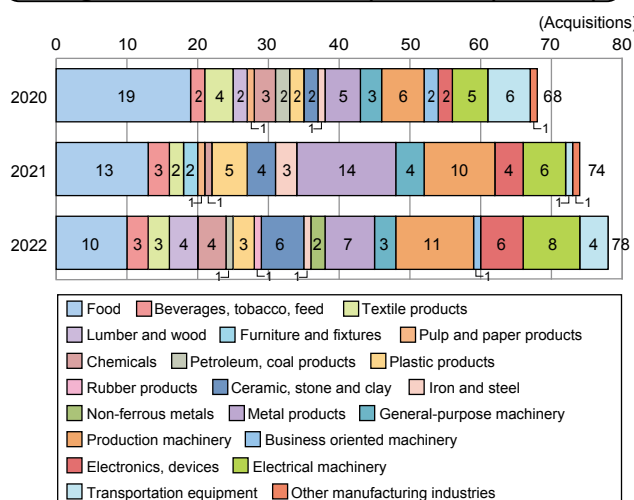
Note 1: Electricity, gas, and heat supply industries and laboratories are excluded.

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.

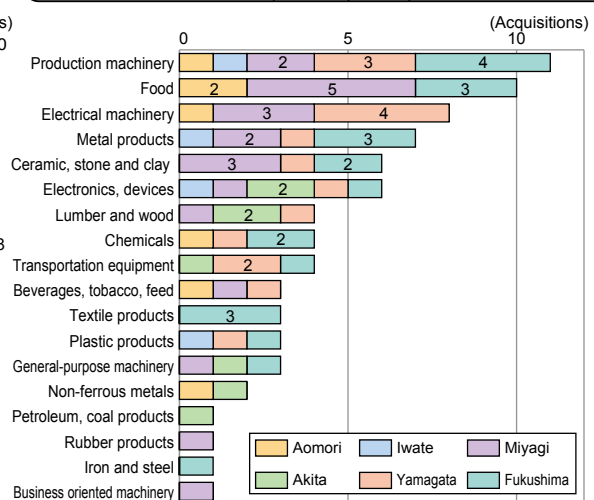
Source: *Plant Location Acquisition Trend*, Ministry of Economy, Trade and Industry

- By industry, in descending order of the number of acquisitions, production machinery accounted for 11, food for 10, electrical machinery for 8, and metal products for 7. By prefecture in descending order of the number of acquisitions, Miyagi Prefecture had 5 acquisitions in food, Fukushima Prefecture had 4 in production machinery, and Yamagata Prefecture had 4 in electrical machinery.

Changes in the Number of Acquisitions by Industry



Distribution of Plant Location Acquisitions by Industry Sector and Prefecture (2022)



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

Source: *Plant Location Acquisition Trend*, Ministry of Economy, Trade and Industry

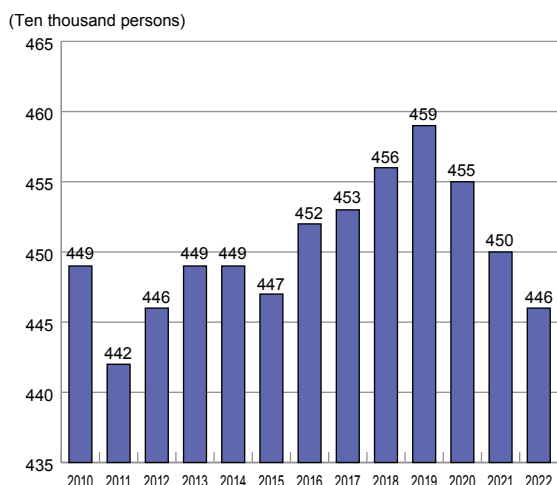


# (10) Labor Force Population

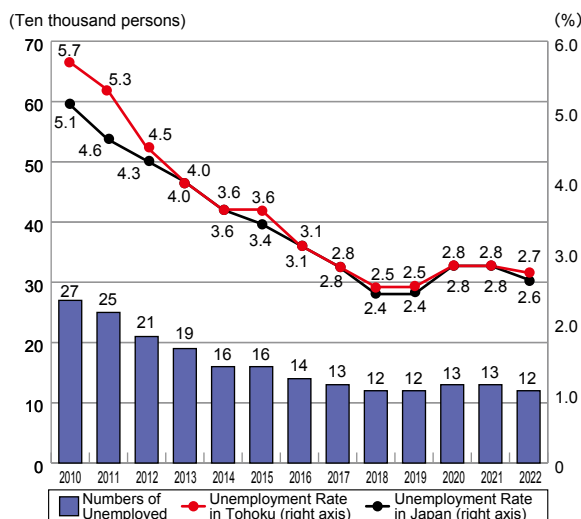
The number of people employed is 4.46 million, and the number of unemployed is 120,000.

- In 2022, the number of people employed in the Tohoku region was 4.46 million, which had declined for three consecutive years, while the number of totally unemployed persons remained at a low level of 120,000. The unemployment rate was 2.7%, falling below that of the previous year.

Number of employed



Changes in the Numbers of Unemployed and the Unemployment Rate



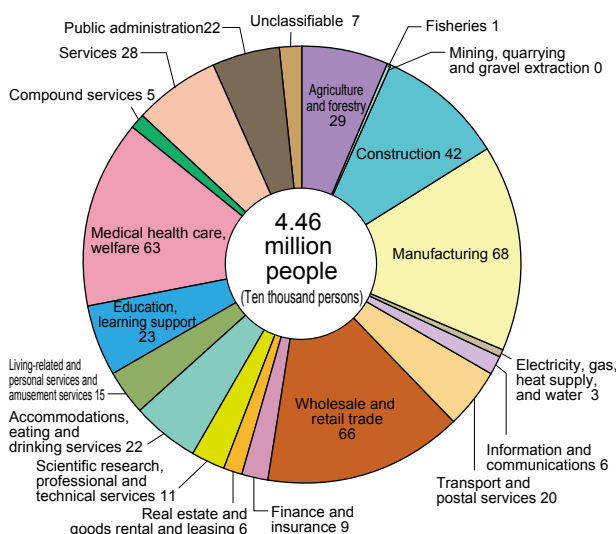
Note: The figure for 2011 is a supplementary estimate made because of the impact of the Great East Japan Earthquake.

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

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

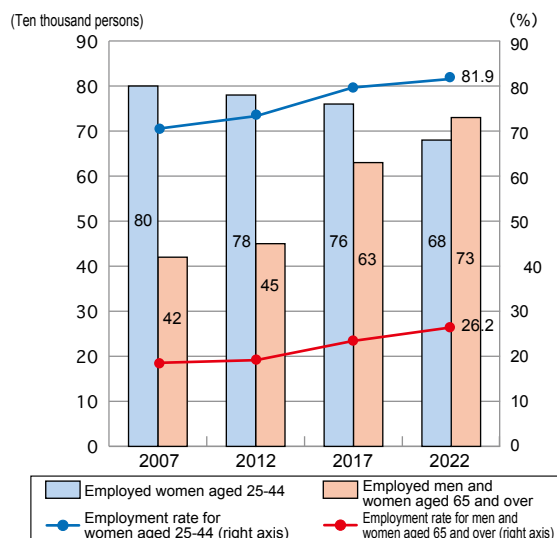
- By industrial sector, the largest number of people employed was seen in “manufacturing” at 680,000 (15.2%), followed by “wholesale and retail trade” at 660,000 (14.8%), “medical health care, welfare” with 630,000 (14.1%), “construction” with 420,000 (9.4%), and then “agriculture and forestry” with 290,000 (6.5%).
- 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 (2022)



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)



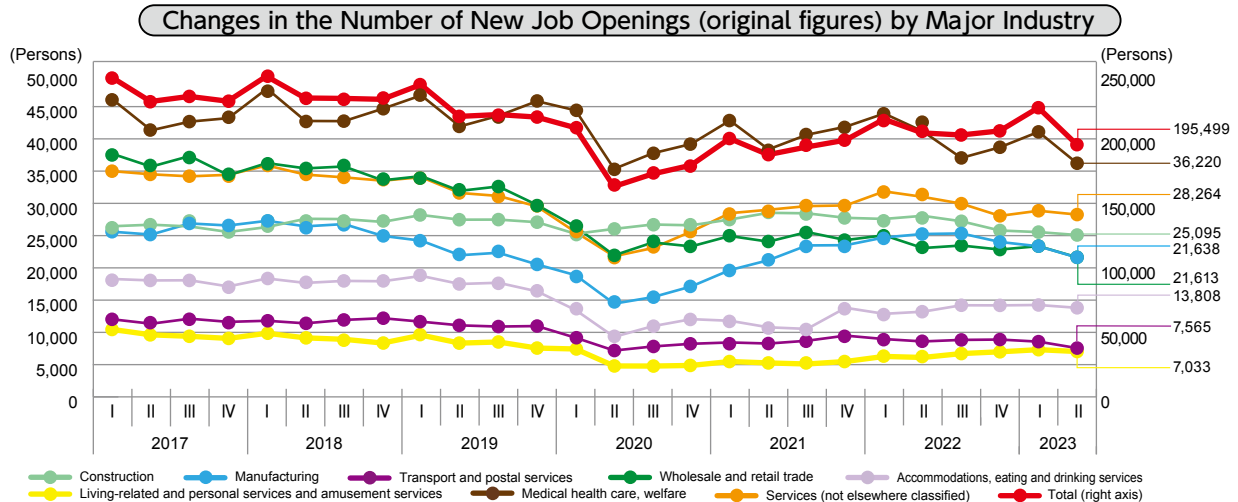
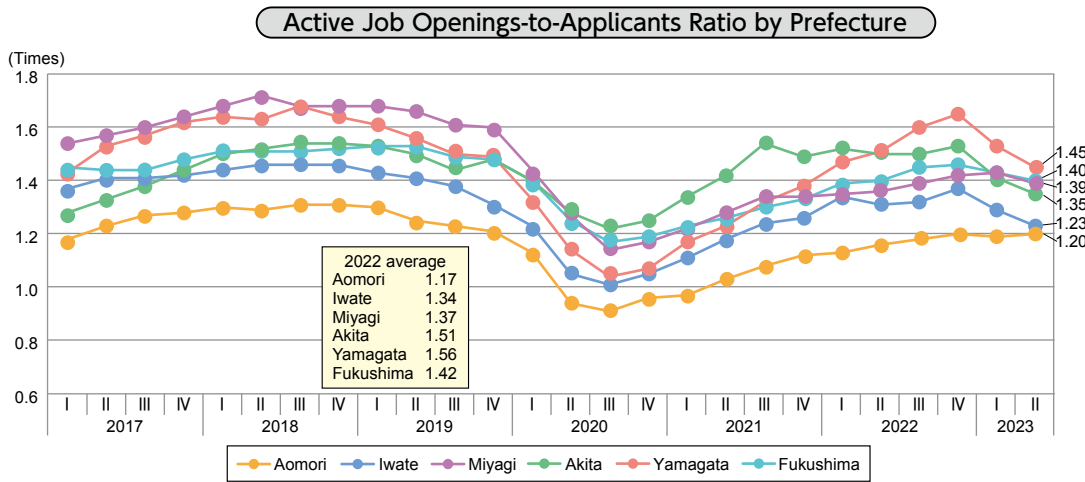
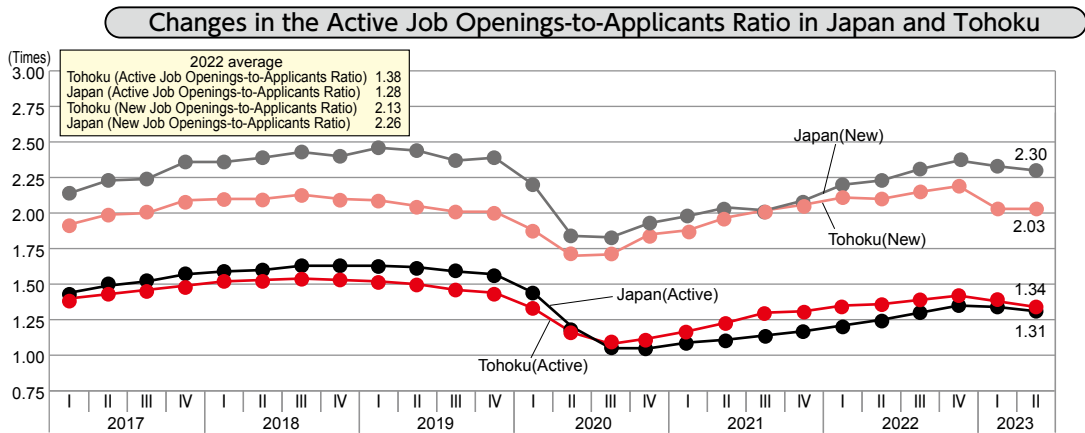
Source: Labor Force Survey, Ministry of Internal Affairs and Communications

(11) Employment

(11) Employment

Both the 2022 average active job openings-to-applicants and the new job openings-to-applicants ratios increased from the previous year, showing signs of recovery from the impact of COVID-19.

- The 2022 average active job openings-to-applicants ratio for the Tohoku region was 1.38 (1.28 for the nation), and the average new job openings-to-applicants ratio was 2.13 (2.26 for the nation), up from the previous year, with some signs of a pickup from the impact of COVID-19.
- By prefecture, the average active job openings-to-applicants ratio in 2022 was 1.17 in Aomori, 1.34 in Iwate, 1.37 in Miyagi, 1.51 in Akita, 1.56 in Yamagata, and 1.42 in Fukushima.
- Looking at the changes in the number of new job openings (original figures) by major industry, manufacturing and services industries (those not classified elsewhere) are showing signs of recovery, while the recovery in wholesale and retail trade, and accommodation, eating and drinking services is sluggish.



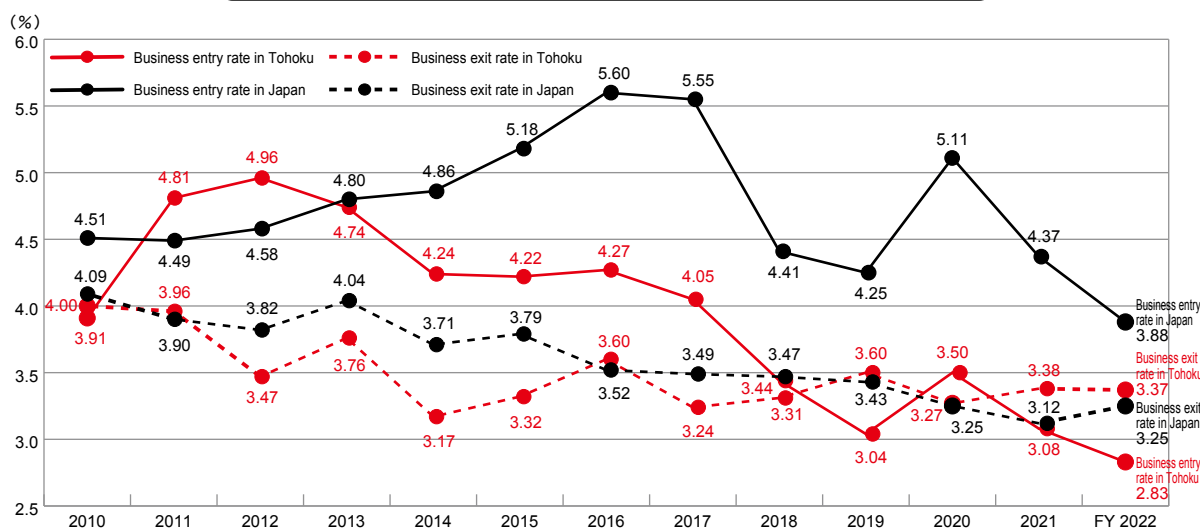
Source: *Employment Referrals for General Workers*, Ministry of Health, Labour and Welfare

## (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 FY2022 was 2.83%, 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 3.88%.
- The exit rate for the Tohoku region was 3.37%, down from the previous year, while the national rate was 3.25%, showing an upward trend.

Changes in Business Entry and Exit Rates in Japan and Tohoku



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 (%)

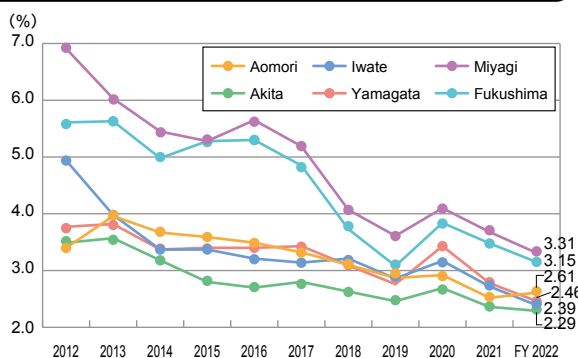
Exit rate = Number of closed establishments in the relevant fiscal year of employment insurance / Number of applicable establishments at the end of the previous fiscal year × 100 (%)

※ 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

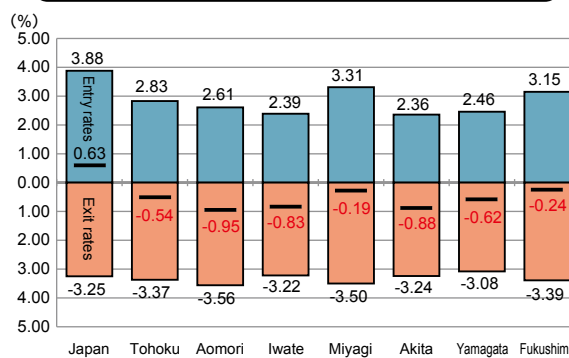
- Looking at the business entry rate in FY2022 by prefecture, it has gone into decline in five prefectures in Tohoku excluding Aomori. Looking at the difference between the business entry rate and the exit rate, the entry rate is 0.63 points higher than the exit rate nationally, but it is 0.54 points lower in Tohoku. In all six prefectures in Tohoku, the entry rate falls short of the exit rate.

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 2022



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

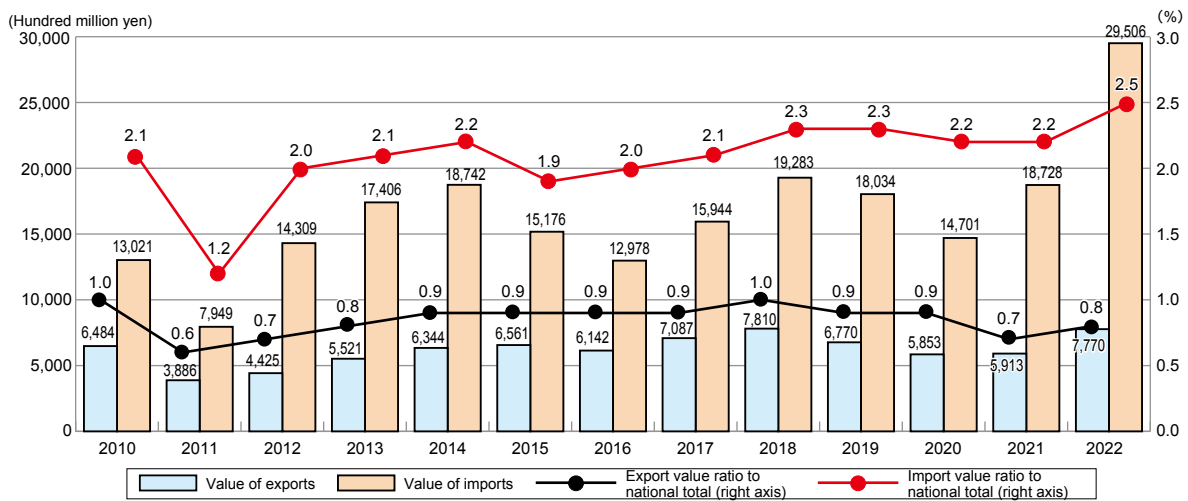
(13) Internationalization

(i) Trade

Exports and imports increase for two consecutive years

- In 2022, exports from the Tohoku region totaled 777 billion yen, up 31.4% from the previous year, increase for two consecutive years, due to an increase in batteries and accumulators despite a decrease in office machines. Imports totaled 2,950.6 billion yen, up 57.6% from the previous year, increase for two consecutive years, due to an increase in coal and liquefied natural gas despite a decrease in organic chemicals and other materials. As a percentage of the national total, exports account for 0.8% (0.7% in 2021) and imports account for 2.5% (2.2% in 2021).

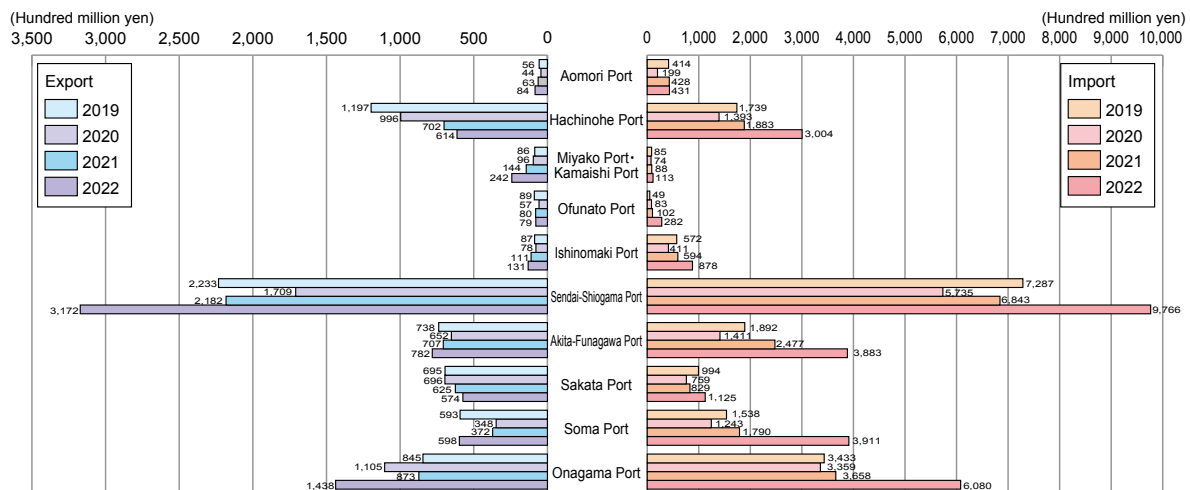
Changes in the Value of Exports and Imports Handled in the Tohoku Region



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 major port in the Tohoku region, the top three largest export ports in descending order are Sendai-Shiogama Port, Onahama Port, and Akita-Funagawa Port, while the top three import ports in descending order are Sendai-Shiogama Port, Onahama Port, and Soma Port. Compared to the previous year, exports decreased at Hachinohe Port, Sakata Port, and other ports, but increased at Sendai-Shiogama Port, Onahama Port, Soma Port and other ports, while imports increased at Sendai-Shiogama Port, Onahama Port, Soma Port and other ports.

2019/2022 Trade Value by Port in the Tohoku Region

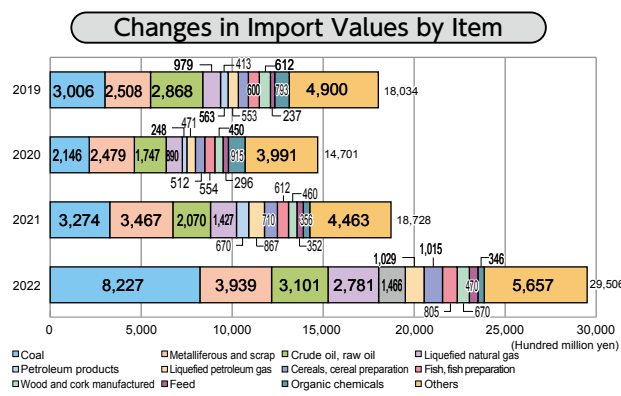
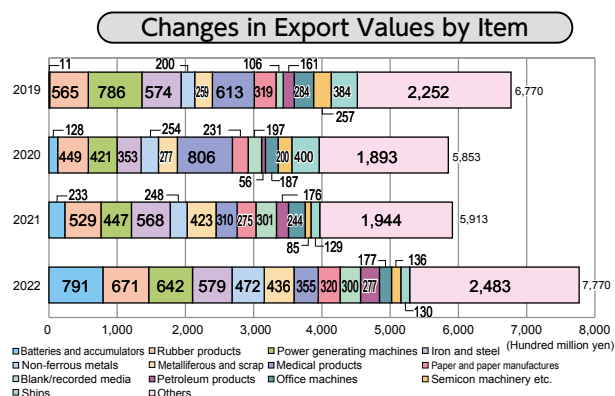
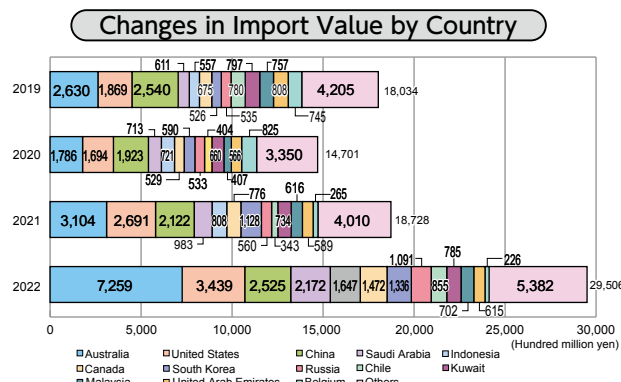
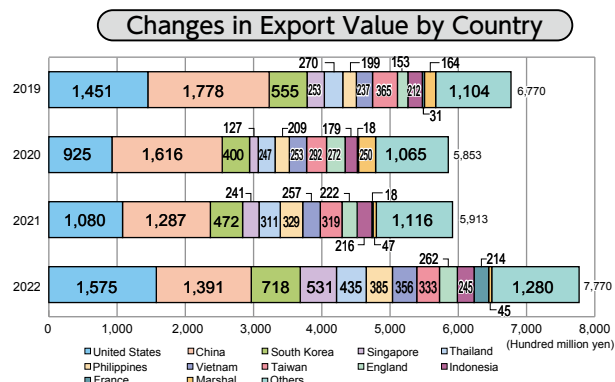


Note: Figures for Aomori Airport, Akita Airport, Sendai Airport, Fukushima Airport, and Kesennuma Port are not included. Figures for Miyako Port and Kamaishi Port are combined.

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

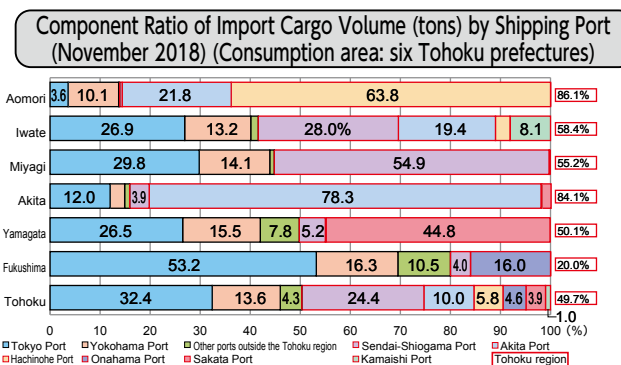
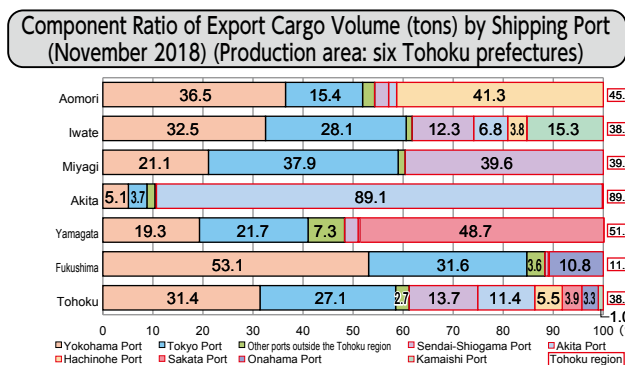
Source: Compiled by processing Overview of Trade in the Tohoku Region, Yokohama Customs, and Trade Statistics of Japan, Ministry of Finance Japan

- As for trading partner countries, the major export destinations from the Tohoku region are the United States, China, and South Korea, while the major origin countries of imports are Australia, the United States and China. Compared to the previous year, exports to the United States, Singapore, South Korea and other countries increased, and imports from Australia, Indonesia, Canada, and other countries increased.
- Looking at the value of exports and imports by item, exports were dominated by batteries, rubber products, and power generating machines, while imports were dominated by coal, metalliferous and scrap, and crude and raw oil. Compared to the previous year, exports of batteries, non-ferrous metals, and power generating machines increased and imports of coal, liquefied natural gas, crude and raw oil, and petroleum products 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. By prefecture, ports located outside the Tohoku region were used for a large proportion of both export and import cargoes for Fukushima Prefecture. Whereas ports located inside the Tohoku region were used for a large proportion of both export and import cargoes for Akita Prefecture and also for a large proportion of import cargo for Aomori Prefecture.



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

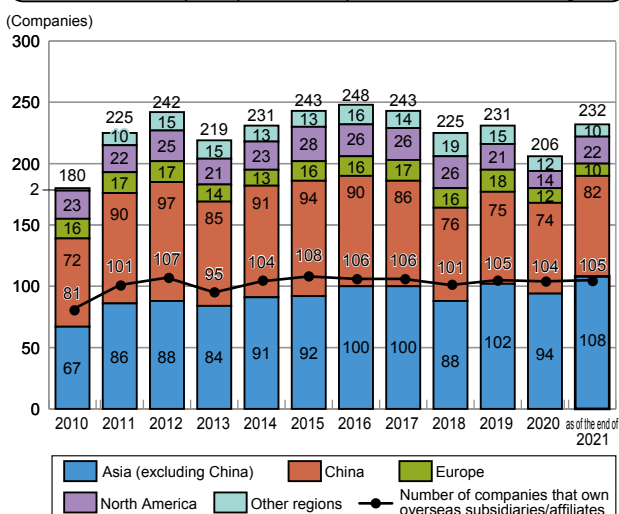
(13) Internationalization

(ii) Internationalization of Corporate Activities

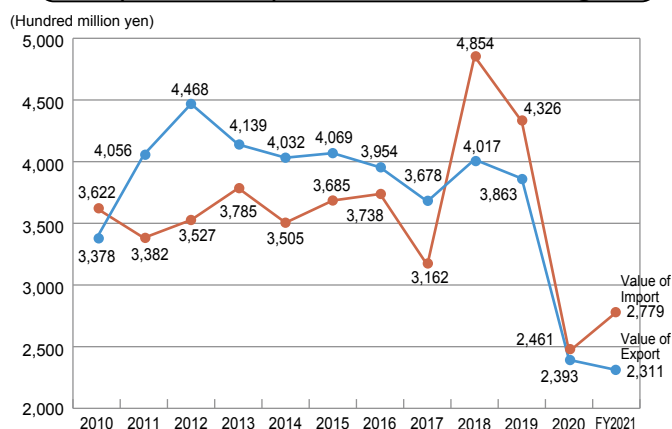
Number of overseas subsidiaries of firms headquartered in the Tohoku region and imports increased, while exports declined.

- Of the firms headquartered in Tohoku in FY2021 (1,781 responding firms), 105 firms had subsidiaries or affiliates overseas.
- The number of overseas subsidiaries or affiliates of firms headquartered in Tohoku is 232. According to the details by location, the largest number of overseas subsidiaries or affiliates is 108 (component ratio 46.6%) in Asia (excluding China), followed by 82 (35.3%) in China, and 22 (9.5%) in North America.
- Looking at overseas transactions (FY2021) by firms headquartered in the Tohoku region, the value of exports of goods (186 firms responded) was 231.1 billion yen. Meanwhile, the value of imports of goods (209 firms responded) was 277.9 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



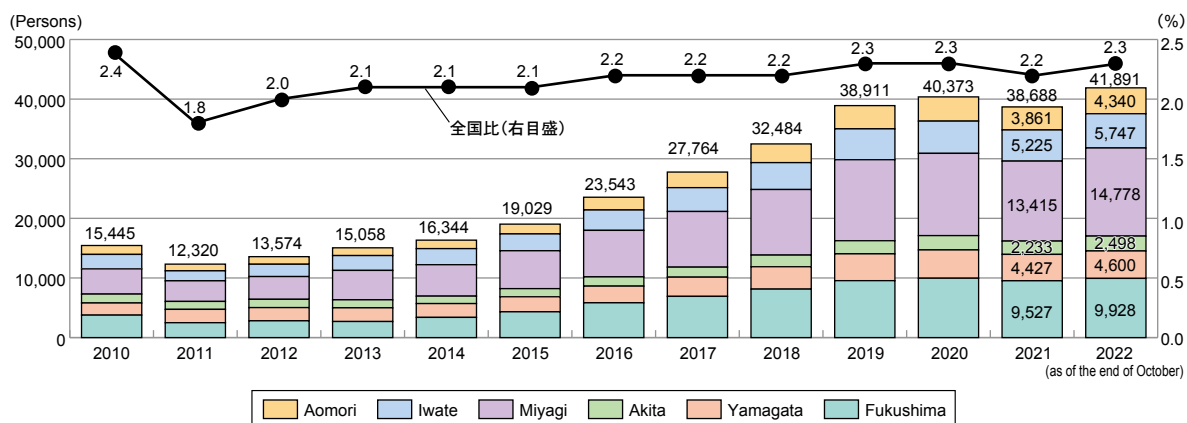
Note 1: The *Basic Survey of Japanese Business Structure and Activities* targets companies that own a business establishment engaging in mining, manufacturing, electricity and gas, wholesale, retail, and services with 50 or more employees and a capital or equity investment, amounting to 30 million yen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

Note 2: In principle, a parent company shall hold more than 50% of voting rights in its overseas subsidiaries, and between 20-50% of voting rights in its overseas affiliates.

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 2022 was 41,891, an 8.3% increase from the end of the same month last year and 2.3% higher from the national level. By prefecture, Miyagi Prefecture had 14,778, followed by Fukushima Prefecture with 9,928.

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

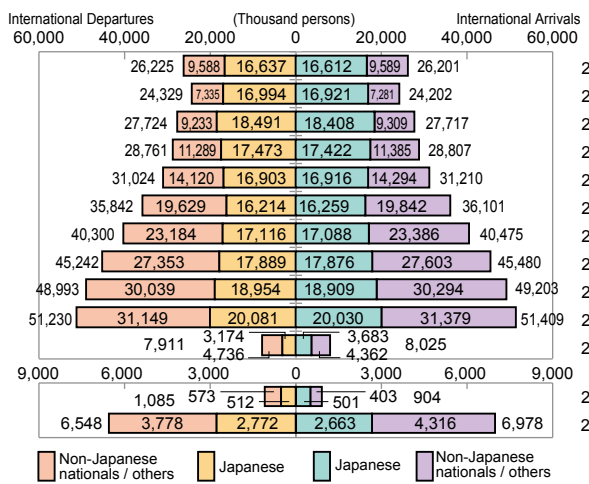


### (iii) International Arrivals/Departures and Foreign Residents

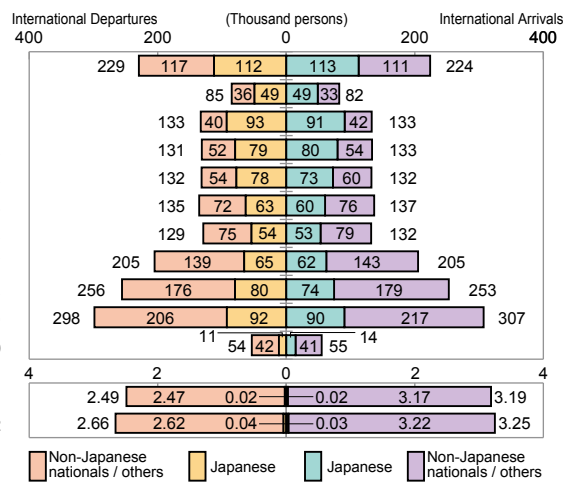
Among the international arrivals and departures via ports and airports in the Tohoku region, the decline in the number of non-Japanese nationals continues due to the spread of the COVID-19. On the other hand, the number of foreign residents has begun to increase.

- In 2022, 5,906 people entered and departed from ports and airports in the Tohoku region, up 4.0% from 5,677 in 2021, but down 99.0% from 605,553 in 2019, representing a significant decrease in both Japanese and foreign arrivals and departures.  
The ratio of foreign arrivals and departures through ports and airports in the Tohoku region to the national total is 0.04%.

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



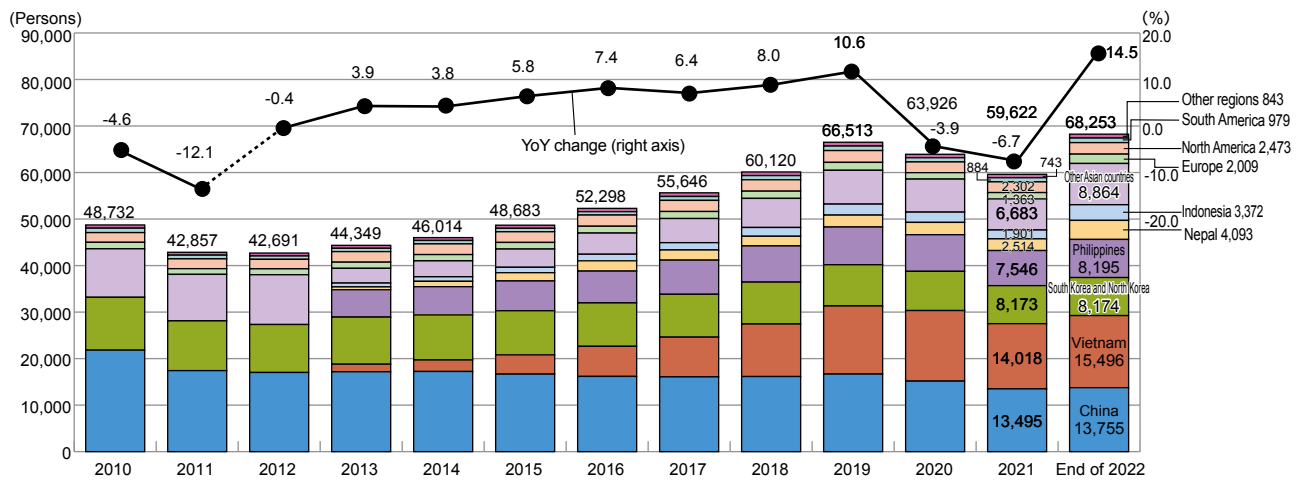
Changes in International Arrivals and Departures through Ports and Airports in Tohoku



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

- The number of foreigners residing in the Tohoku region at the end of 2022 was 68,253, an increase of 14.5% year-on-year. By nationality, Vietnam accounted for the largest number of residents with 15,496, or 22.7% of the total. China followed with 13,755 (20.2%), the Philippines with 8,195 (12.0%) and South Korea and North Korea with 8,174 (12.0%).

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

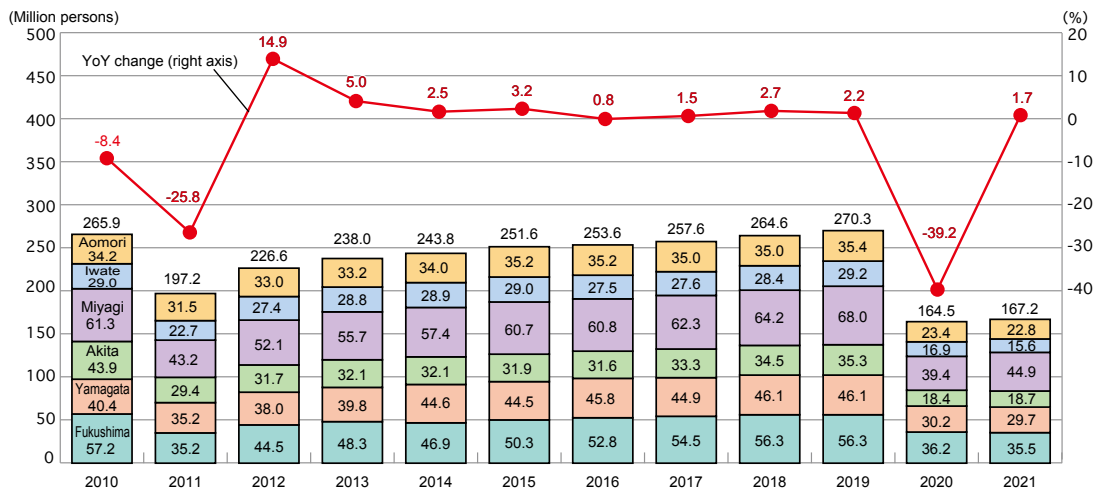
(14) Tourism

(i) Domestic Tourism

The total number of inbound tourists remained low 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, but the number increased for eight consecutive years thereafter. However, it declined considerably again in 2020 due to the spread of the COVID-19 and other factors. It was 167.25 million in 2021.

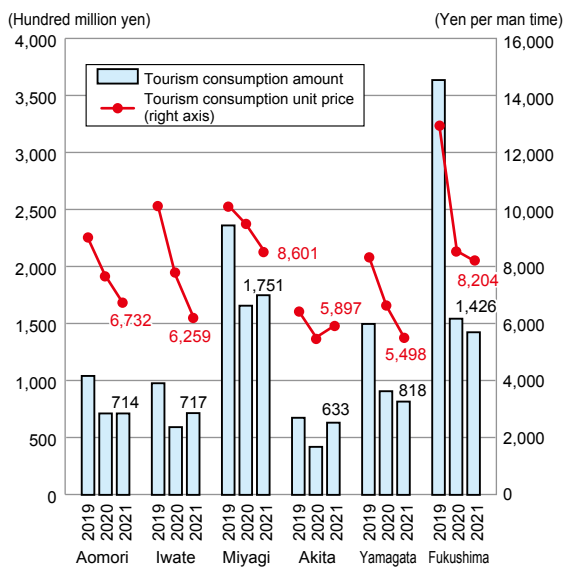
Changes in the Number of Inbound Tourists to the Tohoku Region



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

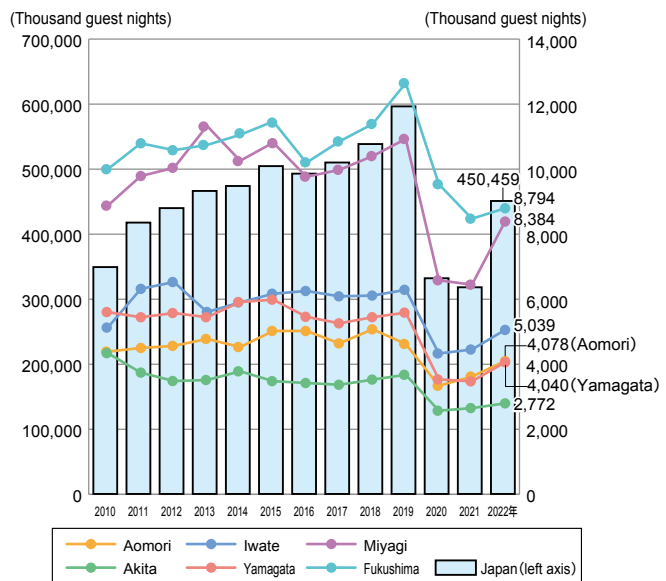
- Comparing the tourism consumption amount and tourism consumption unit price in 2021 with the previous year, the tourism consumption amount increased in Aomori Prefecture, Iwate Prefecture, Miyagi Prefecture, and Akita Prefecture, and tourism consumption unit price increased in Akita Prefecture.
- The total number of overnight stays in each prefecture in 2022 increased in all six prefectures.

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.  
Source: Tourist Statistics, Japan Tourism Agency

Changes in the Total Number of Overnight Guests in Each Prefecture

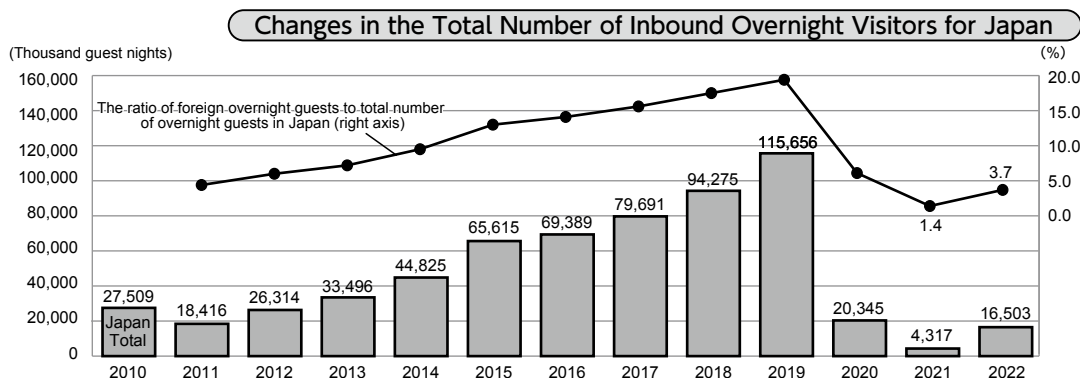
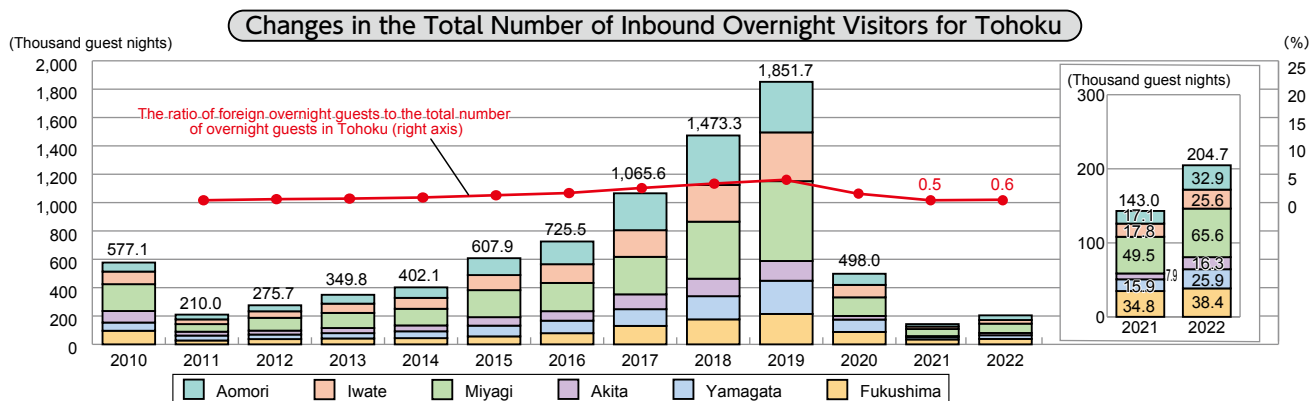


Note 1: Estimated values such as the total number of guests at all accommodation facilities.  
Note 2: For the period from January to March 2010, the number of visitors represents those staying overnight at accommodations with 10 or more employees.  
Source: Overnight Travel Statistics, Japan Tourism Agency

## (ii) International Inbound Tourism

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

- In 2022, the total number of foreign overnight stays in the Tohoku region was 205,000, up 43.2% from the previous year (a decrease of 88.9% from 2019). The national total was also up 282.3% from the previous year (a decrease of 85.3% from 2019).

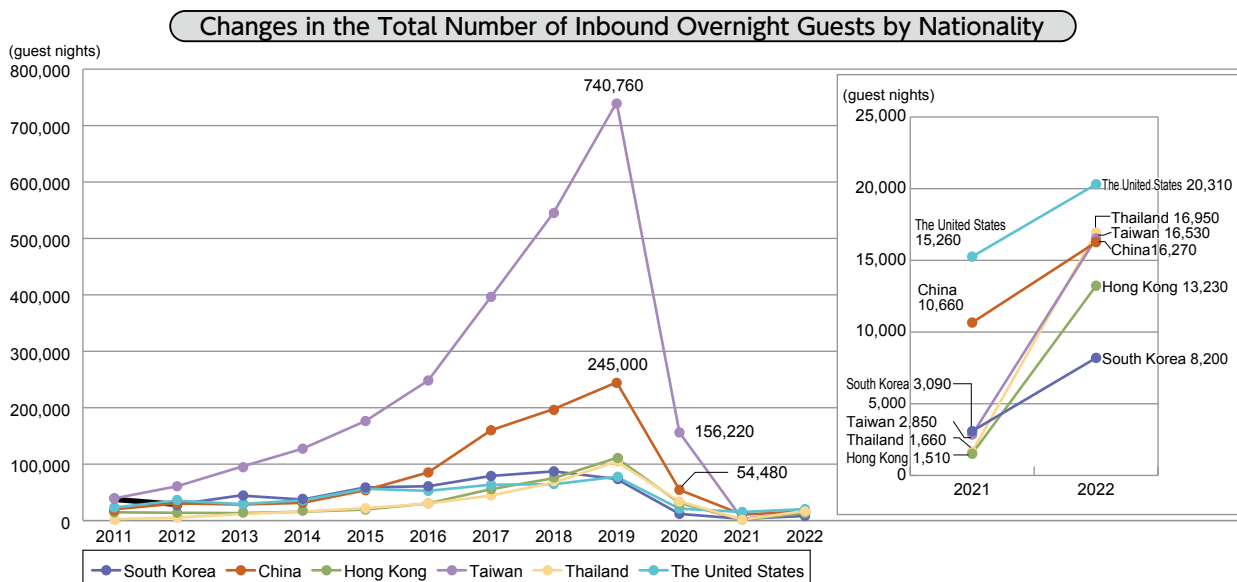


Note 1: Estimated values such as the total number of guests at all accommodation facilities.

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

- The number of overnight visitors by nationality in the Tohoku region decreased in 2020 and 2021 due to the impact of COVID-19 and other factors. In 2022, the number of overnight visitors from the U.S. increased 33.1% to about 20,310, from Thailand increased 921.1% to about 16,950, from Taiwan increased 480.0% to about 16,530, from China increased 52.6% to about 16,270, from Hong Kong increased 776.2% to about 13,230, and from South Korea increased 165.4% to about 8,200.



Note: Accommodation facilities with 10 or more employees.

Source: *Overnight Travel Statistics*, Japan Tourism Agency

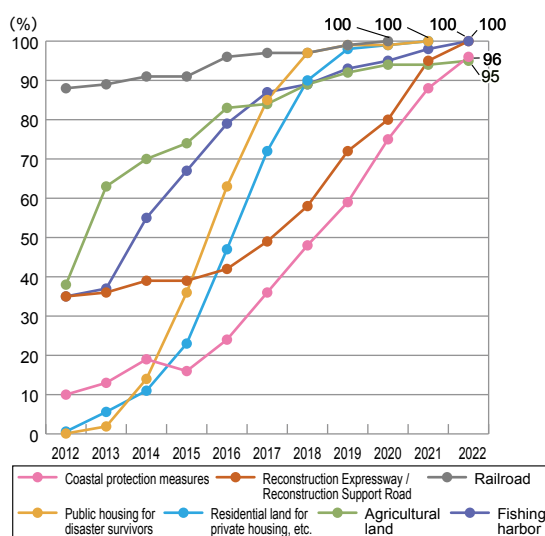
(15) Reconstruction-Related Trends

### (15) Reconstruction-Related Trends

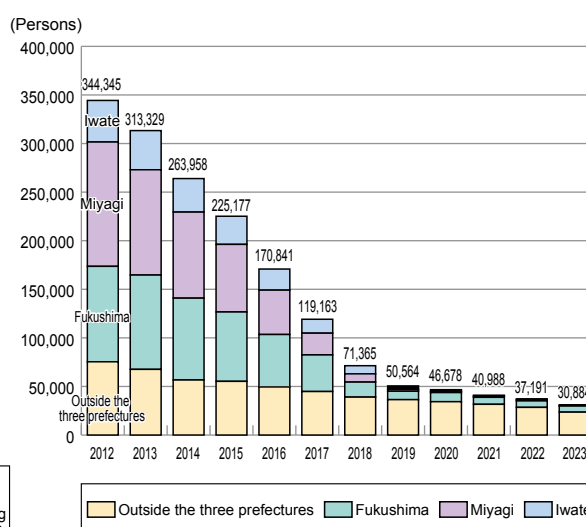
Steady progress has been made in the development of public infrastructure. Shipment of manufactured goods is generally falling below those of the previous year.

- As of the end of September 2022, the progress of full-scale restoration and reconstruction of public infrastructure was 100% complete for reconstruction expressways/reconstruction support roads, railroads, public housing for disaster survivors, residential land for private housing, and fishing harbors. It was also 95% complete for coastal protection measures and agricultural lands.
- The number of evacuees decreased from more than 340,000 in March 2012 to about 31,000 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 11,758 (20.7% of the prefecture total), down 2.9% from the 2016 survey, and the number of employees was 99,640 (17.4%), up 10.2%. Compared to the 2009 survey, the number of respondents decreased by 24.5% and 10.1%, respectively. Similarly, the number of businesses in the 14 coastal municipalities of Miyagi Prefecture was 23,861 (24.4%), up 1.3% from the 2016 survey, and the number of employees was 239,405 (21.3%), up 11.4%. Compared to the 2009 survey, the number of respondents decreased by 24.5% and 11.0%, 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	56,822	-15.5	-1.3	-2.7	-	605,948	509,979	525,264	572,412	-5.5	12.2	9.0	-
Of which 12 municipalities	14,716	11,089	12,226	11,758	-24.5	9.4	-2.9	20.7	110,827	78,410	90,396	99,640	-10.1	27.1	10.2	17.4
<b>Miyagi</b>	110,209	92,769	97,974	97,957	-11.1	5.6	-0.0	-	1,120,793	955,780	1,006,886	1,124,402	0.3	17.6	11.7	-
Of which 14 municipalities	31,598	20,500	23,559	23,861	-24.5	16.4	1.3	24.4	269,109	191,077	214,880	239,405	-11.0	25.3	11.4	21.3
<b>Fukushima</b>	102,063	86,170	85,960	84,633	-17.1	-1.8	-1.5	-	943,465	782,816	806,130	873,877	-7.4	11.6	8.4	-
<b>Tohoku</b>	470,282	404,616	405,012	396,903	-15.6	-1.9	-2.0	-	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	5,288,891	-12.5	-3.0	-1.0	-	62,860,514	55,837,252	56,872,826	62,427,908	-0.7	11.8	9.8	-

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

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

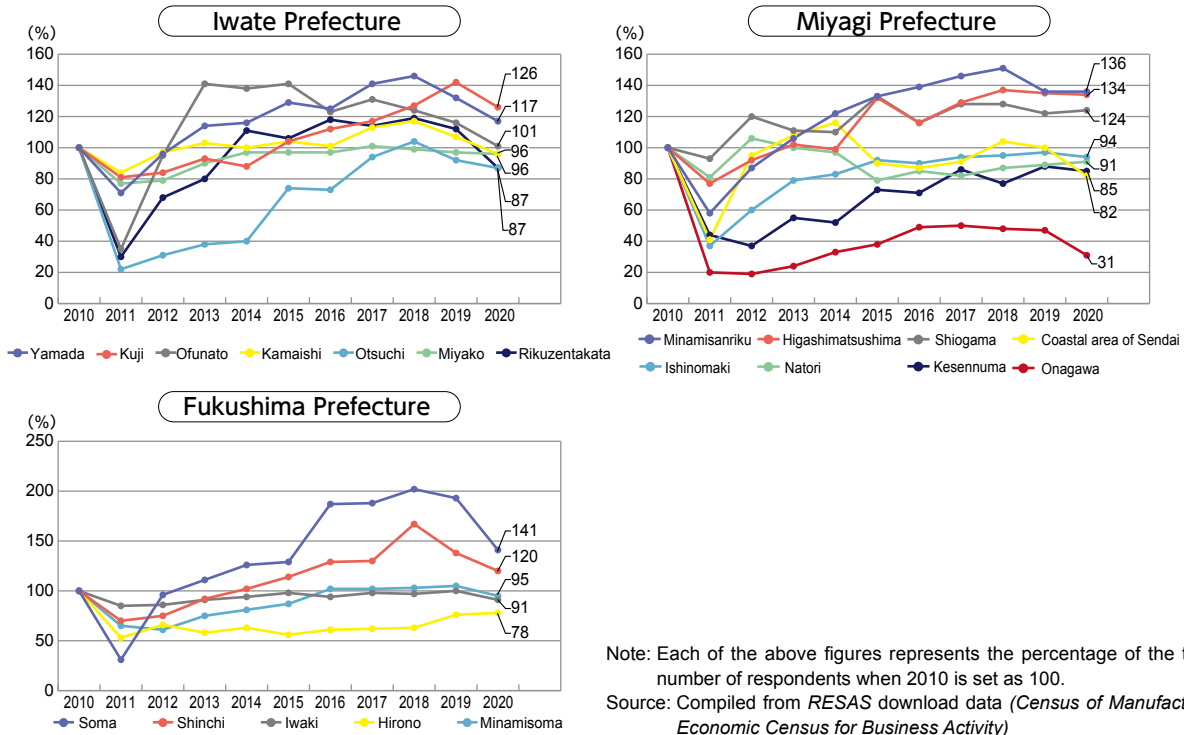
Note 3 : In the 2012, 2016, and 2021 surveys, all or part of the areas of Tamura City, Minamisoma City, Kawamata Town, Naraha Town, Tomioka Town, Kawauchi Village, Okuma Town, Futaba Town, Namie Town, Katsurao Village, and Iitate Village in Fukushima Prefecture were excluded from the survey.

Source: *Economic Census for Business Frame for 2009, Economic Census for Business Activity for 2012, 2016 and 2021*

(15) Reconstruction-Related Trends

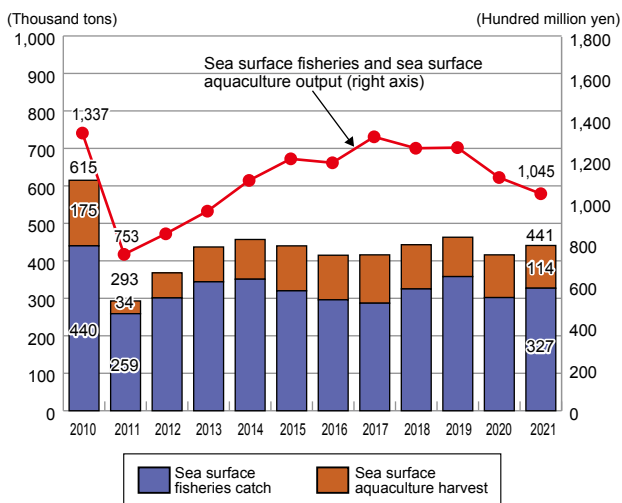
- While the value of manufactured goods shipments in the coastal areas of the three affected prefectures is recovering when compared to immediately after the Great East Japan Earthquake, in 2020 it generally fell below the previous year.

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

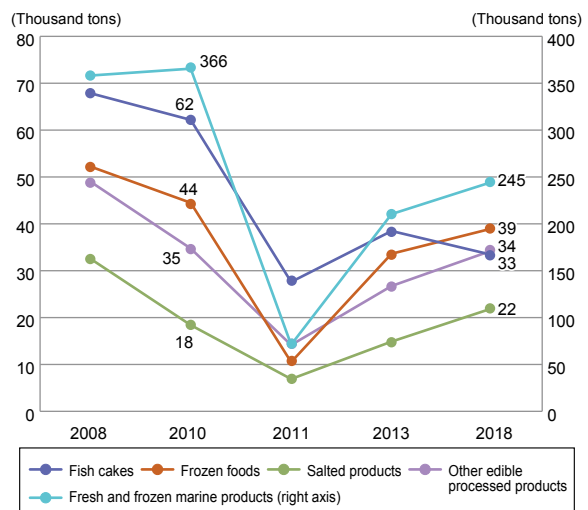


- In 2021, the sea surface fisheries catch in the three affected prefectures of Iwate, Miyagi, and Fukushima was 327,000 tons, and the sea surface aquaculture harvest in the two affected prefectures of Iwate and Miyagi was 114,000 tons. In addition, the value of production decreased for the second consecutive year to 104.5 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



Changes in Production of Processed Marine Products 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

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.

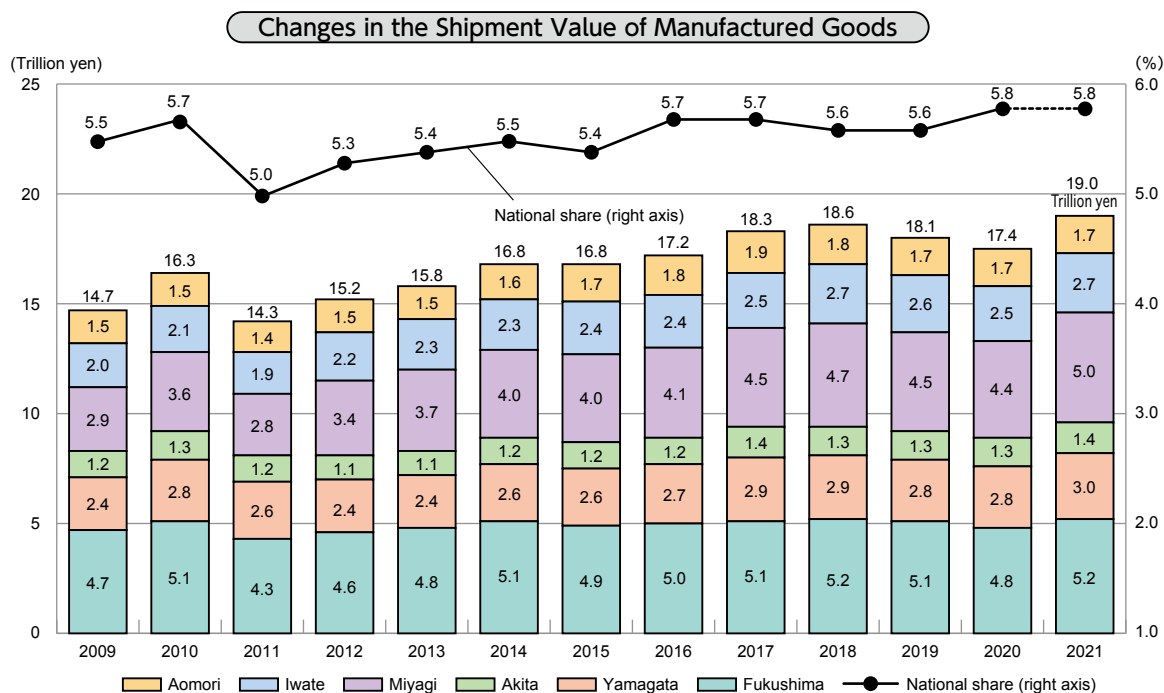
(1) Manufacturing

(1) Manufacturing

(i) Overview

Shipment value of manufactured goods was 19,003.7 billion yen.

- In 2021, the shipment value of manufactured goods, etc. in the Tohoku region (all business establishments) totaled 19,003.7 billion yen. The region's share of the national total was 5.8%.



Note: The figures for 2020 or before are obtained by totaling the numbers of business establishments with 4 or more employees, but the figure for 2021 is obtained by totaling the numbers of all business establishments. Therefore, they are not directly related.

Source: *Economic Census for Business Activity* (business establishments with 4 or more employees) and *Census of Manufacture* (business establishments with 4 or more employees), 2022 Census of Economic Structure (All business establishments)

- In terms of the number of business establishments and employees in 2022 and Shipment value of manufactured goods the value added in 2021 ranked by prefecture, Fukushima was top followed by Miyagi, Yamagata, Iwate, and 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)			
	2021	Composition (%)	2022	Composition (%)	2021	Composition (%)	2022	Composition (%)	2020	Composition (%)	2021	Composition (%)	2020	Composition (%)	2021	Composition (%)
Aomori	1,272	9.9	1,500	9.9	55,763	9.9	55,145	9.7	1,676,471	9.6	1,694,693	8.9	522,756	9.0	539,336	8.5
Iwate	1,866	14.6	2,114	14.0	84,349	15.0	85,720	15.0	2,494,299	14.3	2,713,266	14.3	719,913	12.3	827,836	13.0
Miyagi	2,593	20.2	3,115	20.6	111,794	19.9	116,223	20.4	4,357,999	25.0	5,003,379	26.3	1,354,445	23.2	1,429,407	22.5
Akita	1,535	12.0	1,775	11.7	58,468	10.4	60,648	10.6	1,307,827	7.5	1,405,723	7.4	518,560	8.9	570,595	9.0
Yamagata	2,277	17.8	2,701	17.9	97,429	17.3	98,272	17.2	2,832,284	16.2	3,023,933	15.9	1,079,592	18.5	1,117,674	17.6
Fukushima	3,279	25.6	3,904	25.8	154,274	27.4	155,061	27.2	4,766,985	27.3	5,162,740	27.2	1,638,642	28.1	1,861,338	29.3
Tohoku	12,822	7.2	15,109	6.8	562,077	7.5	571,069	7.4	17,435,865	5.8	19,003,734	5.8	5,833,908	6.0	6,346,186	6.0
Japan	176,858		222,770		7,465,556		7,714,495		302,003,273		330,220,006		96,825,529		106,614,034	

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

Note 2: The component ratio of each prefecture is the ratio to the Tohoku region. Tohoku is the ratio to the national total.

Source: *Economic Census for Business Activity* (business establishments with 4 or more employees), 2022 Census of Economic Structure (All business establishments)

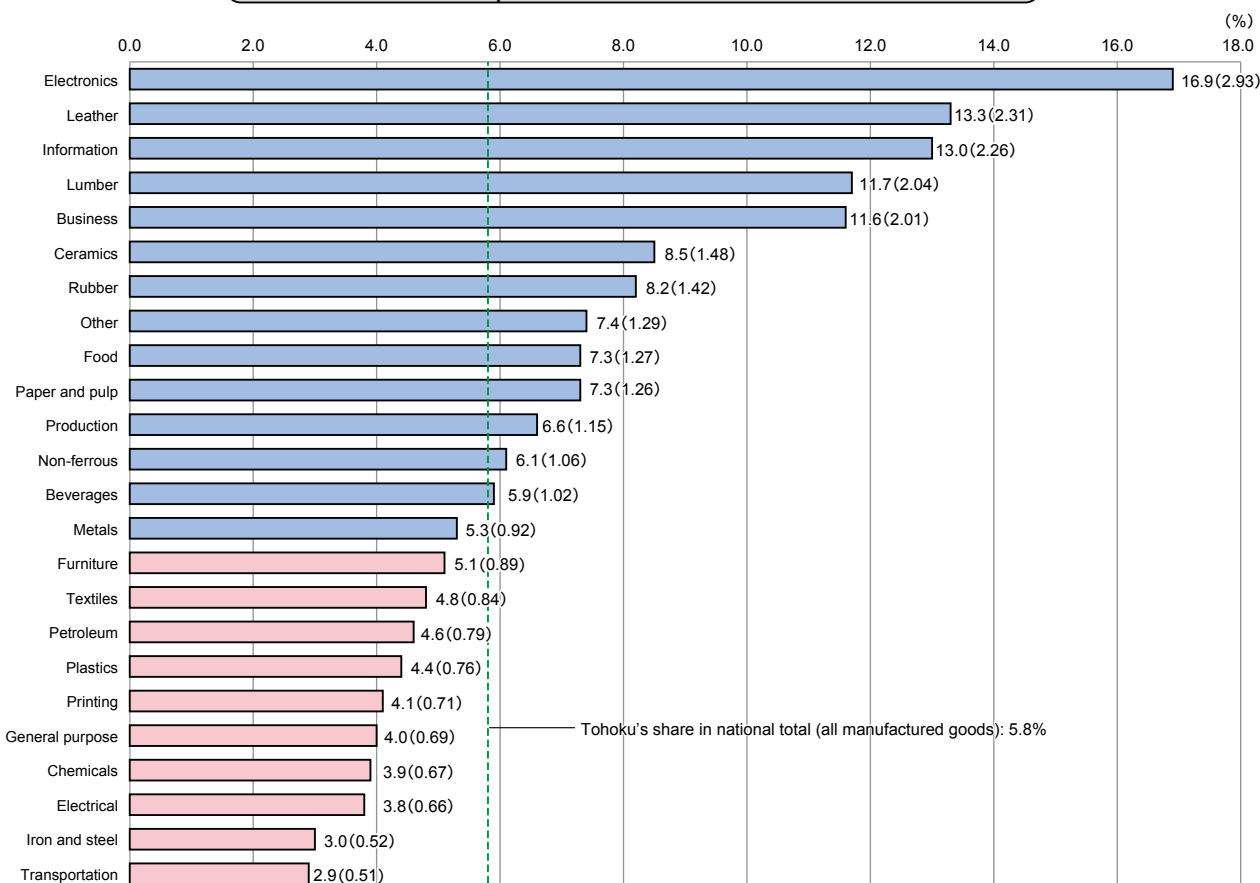


## (ii) National Share by Industry Sector

Tohoku has a high national share for electronic parts, devices, electronic circuits, leather tanning, leather products, fur, information and communication electronics equipment.

- With regard to Tohoku's share of the Japan's shipment value of manufactured goods, etc. in 2021, by industry, 16.9% for electronic parts, devices, electronic circuits, 13.3% for leather tanning, leather products, fur, and 13.0% for information and communication electronics equipment are high, while 2.9% for transportation equipment and 3.0% for iron and steel are low.

National Share of Shipment Value of Manufactured Goods (2021)



Note: Figures in parentheses are specialization coefficient. Specialization coefficient = component ratio of Tohoku / component ratio of the nation.  
Source: 2022 Census of Economic Structure (All business establishments)

<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

### 3. Industrial Structure of the Tohoku Region

#### (1) Manufacturing

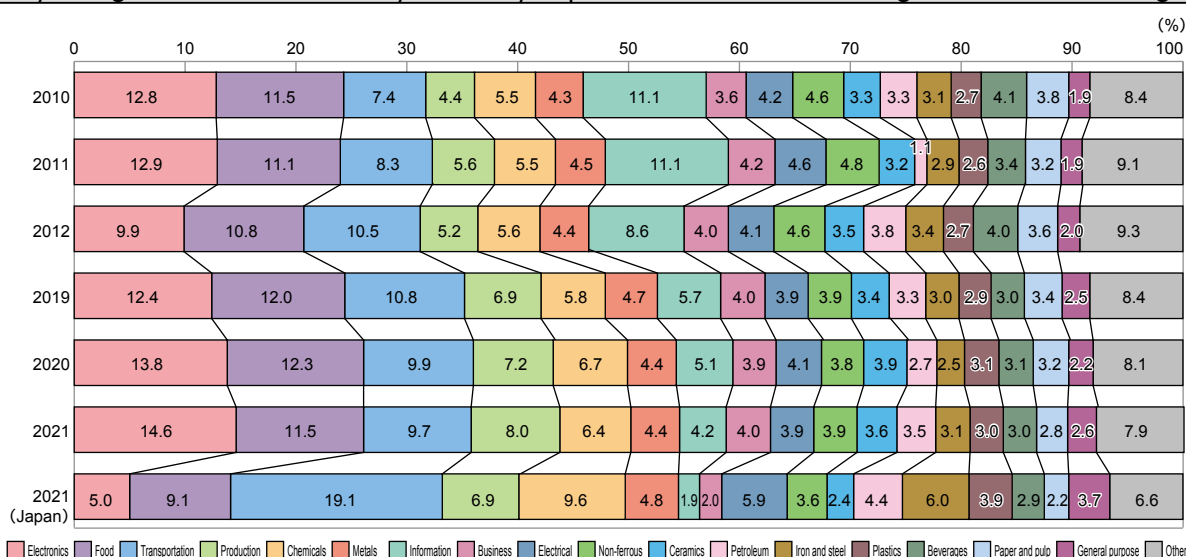
#### (iii) Shares of Industry Sectors by Year and Prefecture

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 2021, five of the 24 industries, electronic parts/devices/electronic circuits, food, transportation equipment, production machinery, chemicals account for about 50% of the total.

While nationally in Japan, the top five industries of transportation equipment, chemicals, food, production machinery, and iron and steel account for about 50% of the total.

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



Note 1: The following industry sectors make up only a small percentage in the Tohoku region compared to other sectors and are therefore classified as "Other".

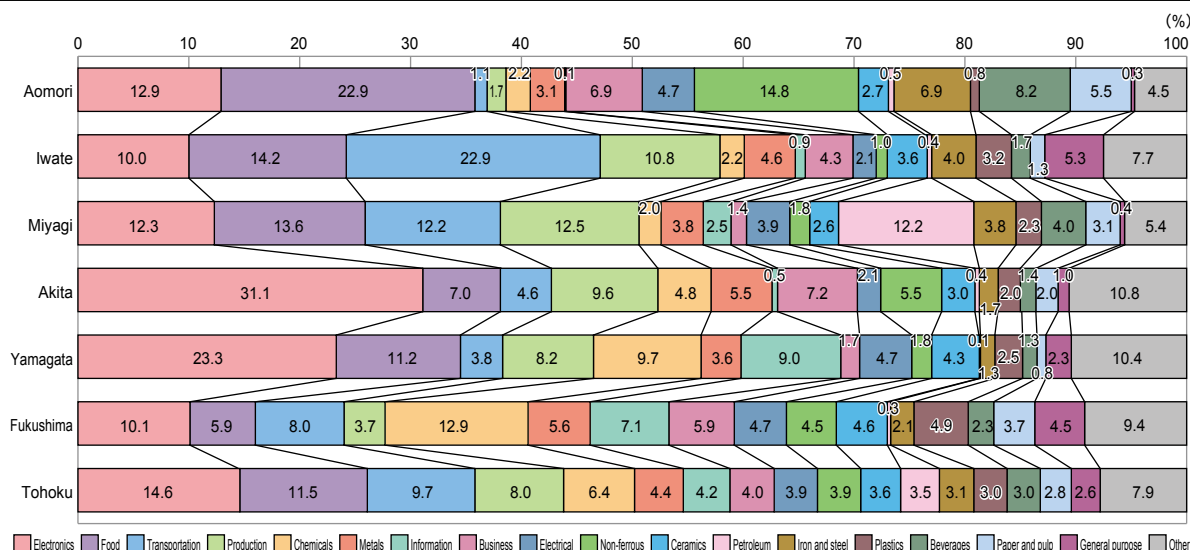
"Manufacture of textile products", "Manufacture of lumber and wood products", "Manufacture of furniture and fixtures", "Printing and allied industries", "Manufacture of rubber products", "Manufacture of leather tanning, leather products and fur skins", "Miscellaneous manufacturing industries"

Note 2: The figures for manufacture of rubber products, manufacture of leather tanning, leather products and fur skins in 2010, 2011, and 2012 are totals for the five prefectures because Aomori Prefecture does not disclose information. The disclosed figure is classified as "Other".

Source: *Economic Census for Business Activity* (business establishments with 4 or more employees), *Census of Manufacture* (business establishments with 4 or more employees) 2022 Census of Economic Structure (All business establishments)

- 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 (2021)



Source: 2022 Census of Economic Structure (All business establishments)

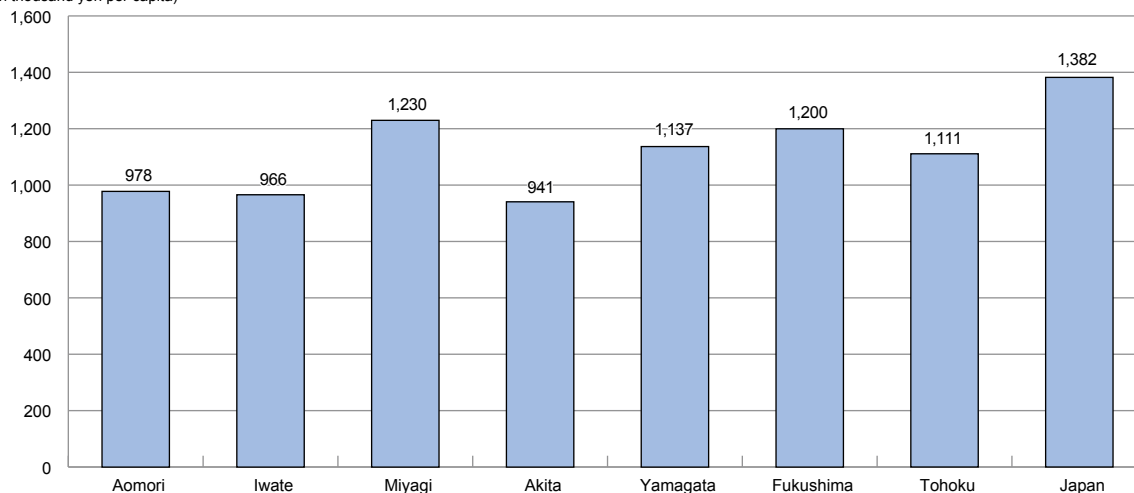
**(iv) Value-added Productivity**

Value-added Productivity is at a level of 80.4 relative to the nation as a whole (=100).

- The value-added productivity in the Tohoku region in 2021 is 11.11 million yen per capita, while the national figure is 13.82 million yen per capita.  
This is a level of 80.4 relative to the nation as a whole (=100).

**Value-added Productivity by Prefecture (Manufacturing Industry Total) (2021)**

(Ten thousand yen per capita)



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

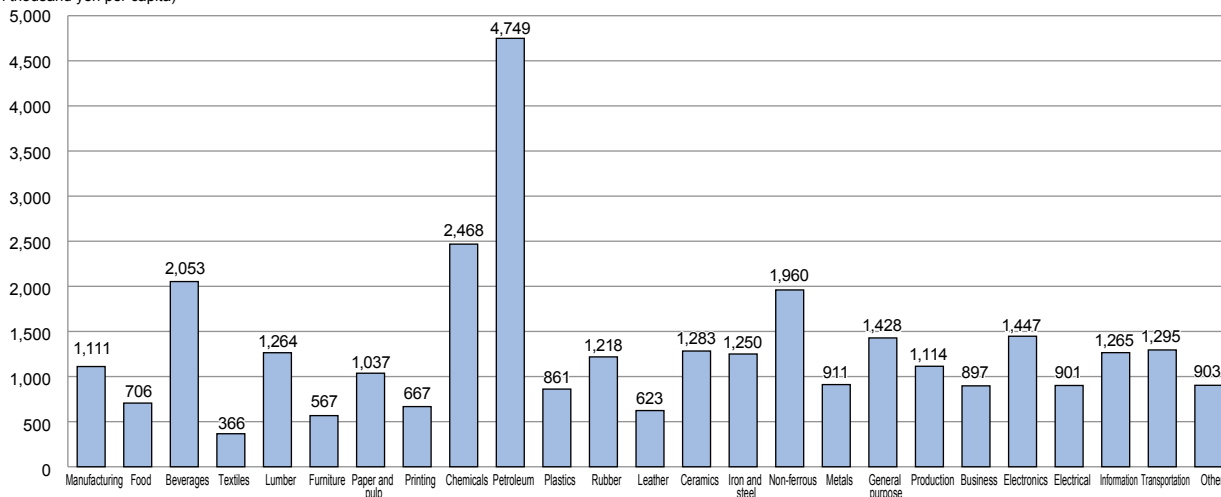
The number of employees for value-added productivity in 2021 is calculated using figures as of June 1, 2022.

Source: 2022 Census of Economic Structure (All business establishments)

- By industry, petroleum and coal products are the highest, followed by chemicals, beverages/tobacco/feed, nonferrous metals, and electronic parts/devices/electronic circuits.

**Value-added Productivity by Industry (2021)**

(Ten thousand yen per capita)



Source: 2022 Census of Economic Structure (All business establishments)

(1) Manufacturing

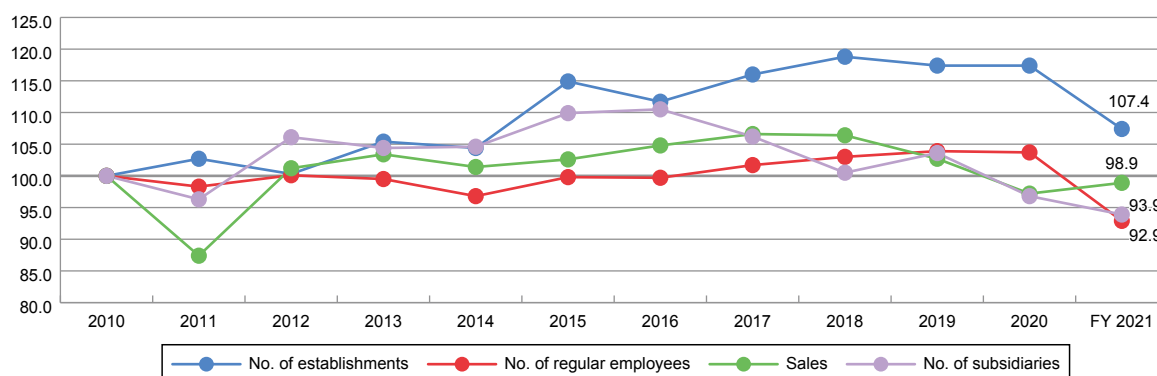
(v) Manufacturing Companies Headquartered in the Tohoku Region

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

● Number of Business Establishments and Regular Employees per Company

In FY 2021, the number of factories, sales offices, etc. per company in the manufacturing industry (827 companies) headquartered in the Tohoku region was 3.323 (-8.5% YoY), the number of full-time employees was 222.3 (-10.4% YoY), sales were 7.699 billion yen (+1.7% YoY), and the number of owned subsidiary companies was 0.628 (-3.0% 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 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
FY 2021	3.323	5.816	222.3	395.9	76.99	207.07	0.628	3.727
Fiscal YoY change (%)	- 8.5	- 2.8	- 10.4	- 5.4	1.7	1.5	- 3.0	- 5.9

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.

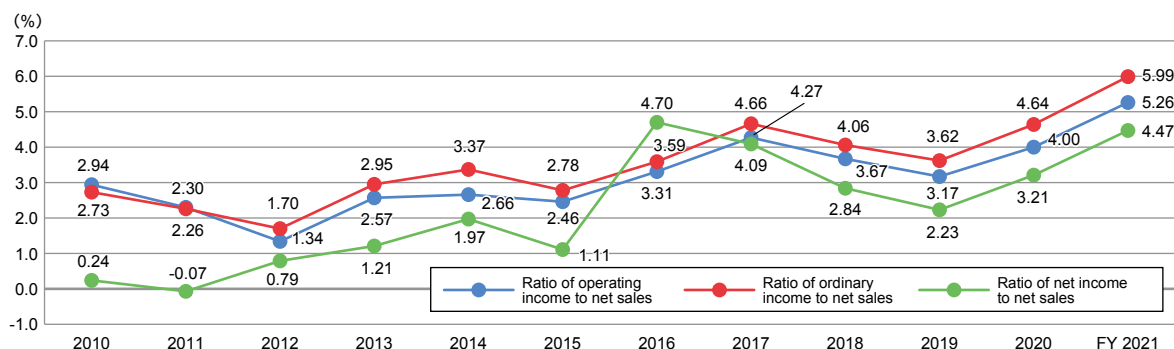
Note 2: The number of owned subsidiaries per company is calculated by the number of subsidiaries / total number of companies.

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 5.26% (up 1.26 points from the previous year), ordinary income to net sales was 5.99% (up 1.35 points from the previous year), and net income to net sales was 4.47% (up 1.26 points from the previous year).

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

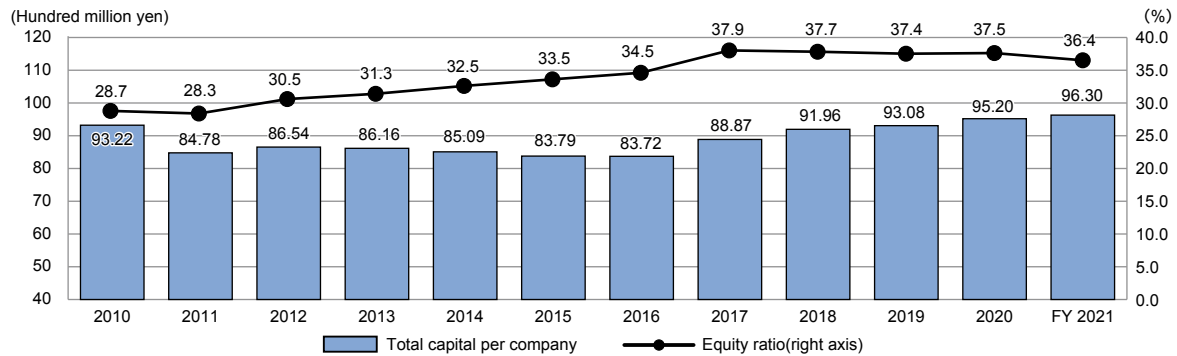


Source: Basic Survey of Japanese Business Structure and Activities, Ministry of Economy, Trade and Industry

### ● Equity Ratio, etc.

Total capital per manufacturing companies headquartered in the Tohoku region was 9.630 billion yen (up 1.2% from the previous year) and net assets were 3.509 billion yen (down 1.7% from the previous year), for an equity ratio of 36.4%, down 1.1 percentage points from the previous year.

#### Changes in Total Capital (Total Assets) per Company and Equity Ratio in Manufacturing Industry



#### 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 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
FY 2021	5.26	5.69	5.99	9.00	4.47	7.05	96.30	288.6	35.09	146.4	36.4	50.7
Fiscal YoY change	1.25	2.26	1.35	2.47	1.26	2.25	1.2	0.4	- 1.7	0.7	- 1.1	0.1

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.

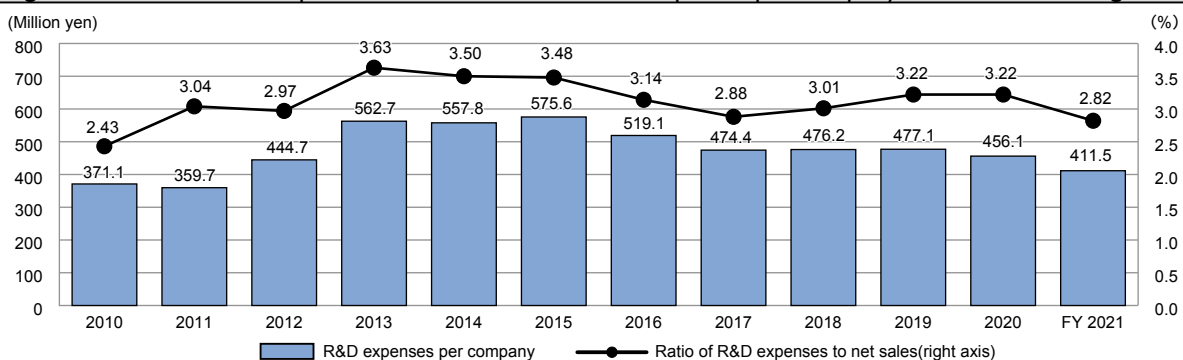
Source: Basic Survey of Japanese Business Structure and Activities, Ministry of Economy, Trade and Industry

### ● Research and Development (R&D)

Of the 827 manufacturing companies headquartered in the Tohoku region, 216 companies reported R&D expenses, 26.1% of the total (47.4% for the whole country).

The ratio of R&D expenses to net sales was 2.82%, down 0.4 percentage points from the previous year. In addition, R&D expenses per company were 411.5 million yen, down 9.8% 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 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
FY 2021	827	14,174	216	26.1	6,715	47.4	2.82	5.24	411.5	1,941.3
Fiscal YoY change	71	1,403	25	0.9	582	- 0.6	-0.40	- 0.24	- 9.8	- 1.4

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

### 3. Industrial Structure of the Tohoku Region

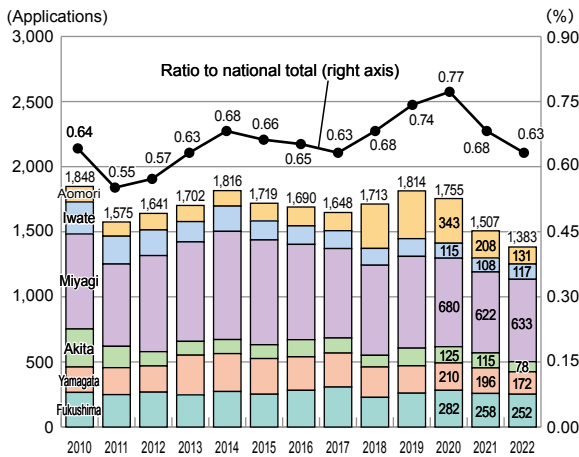
#### (1) Manufacturing

#### (vi) Industrial Property Rights

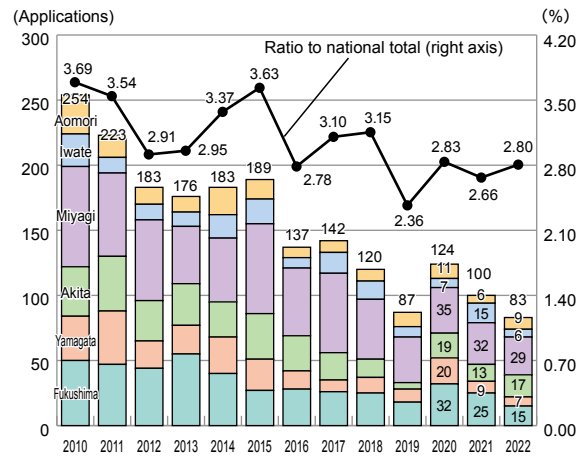
Industrial property applications decreased for patents, utility models, designs, and trademarks.

- In 2022, the number of applications for industrial property rights in the Tohoku region was 1,383 for patents, 83 for utility models, 344 for designs, and 2,395 for trademarks, showing a decrease for all compared to the previous year.
- In terms of the national share, the number of utility model applications in 2022 exceeded the previous year, while patents, designs, and trademarks fell below the previous year.
- Compared to the previous year, the number of applications by prefecture shows an increase for patents in Iwate and Miyagi; for utility models in Aomori and Akita; for designs in Miyagi; and for trademarks in Fukushima

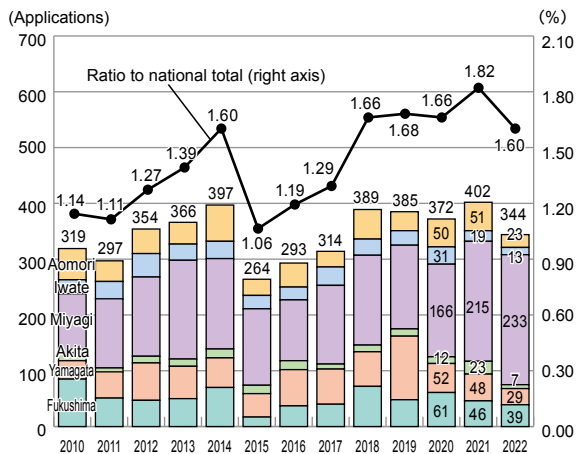
Changes in the Number of Patent Applications



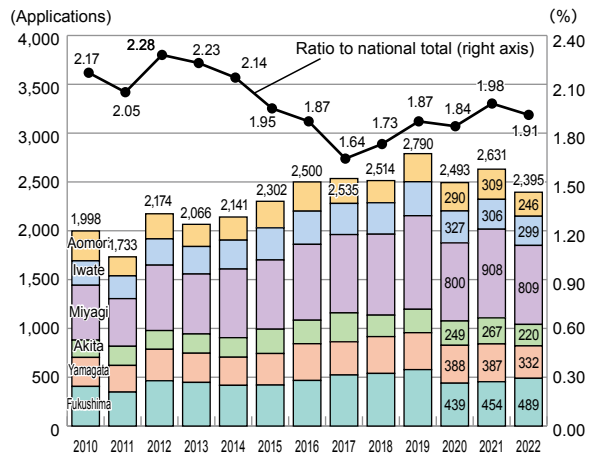
Changes in the Number of Utility Model Applications



Changes in the Number of Design Applications



Changes in the Number of Trademark Applications



Source: Japan Patent Office Annual Report, Japan Patent Office



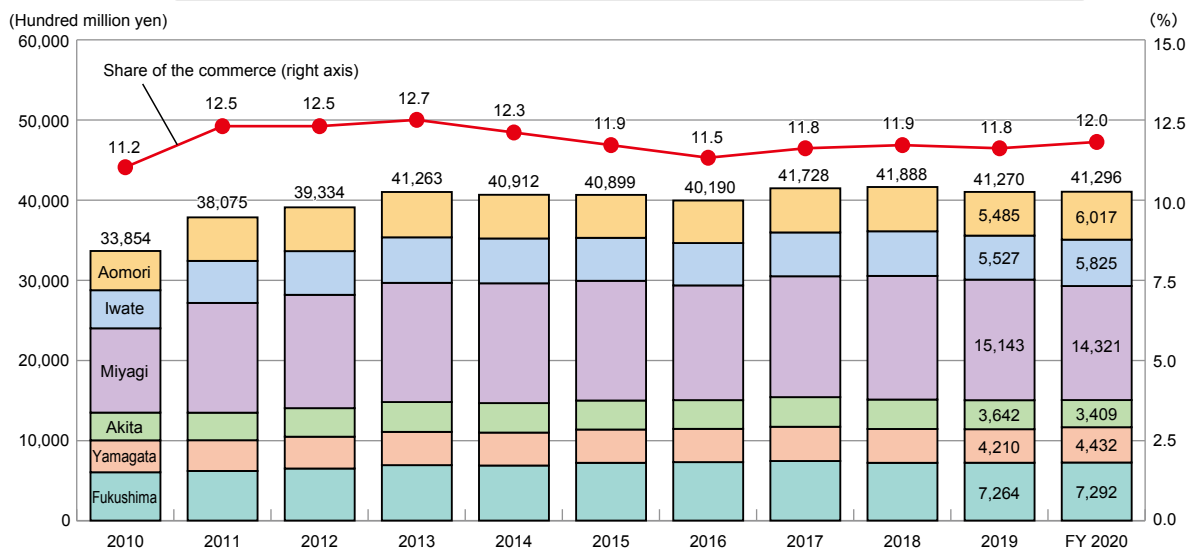
## (2) Commerce

### (i) Overview

The number of establishments, the number of employees, and annual sales of goods declined in both the wholesale and retail industries.

- The GRDP of commerce in the Tohoku region in FY 2020 was 4,129.6 billion yen, up 0.1% from the previous year, the first increase in two years.
- The ratio of GRDP to total gross industrial product (nominal) in the Tohoku region was up 0.2 percentage points to 12.0%.
- In terms of total production by prefecture, Aomori, Iwate, Yamagata, and 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 96,915 (7.9% of the national total, down 10.2% from the 2016 survey) and the number of employees was 748,307 (6.6% of the national total, down 2.2% from the 2016 survey).
- Both in the wholesale and retail trade, the number of establishments, the number of employees, and annual sales of goods decreased.

Changes in Number of Establishments, Number of Employees and Annual Sales of Goods

	Year	No. of business establishments			No. of employees total				Annual Sales of Goods (*Values for the calendar year prior to the survey year)				
		(establishments)	Ratio to national total (%)	Ratio to the previous census (%)		(persons)	Ratio to national total (%)	Ratio to the previous census (%)		(million yen)	Ratio to national total (%)	Ratio to the previous census (%)	
				Tohoku	Japan			Tohoku	Japan			Tohoku	Japan
Total of trade	2016	107,899	8.0	—	—	765,337	6.6	—	—	28,916,184	5.0	—	—
	2021	96,915	7.9	-10.2	-9.3	748,307	6.6	-2.2	-1.7	27,066,253	5.0	-6.4	-7.2
Wholesale	2016	26,654	7.3	—	—	217,845	5.5	—	—	18,596,674	4.3	—	—
	2021	24,631	7.1	-7.6	-4.4	207,100	5.4	-4.9	-2.2	17,039,465	4.2	-8.4	-8.0
Retail	2016	81,245	8.2	—	—	547,492	7.2	—	—	10,319,509	7.1	—	—
	2021	72,284	8.2	-11.0	-11.1	541,207	7.2	-1.1	-1.5	10,026,785	7.3	-2.8	-4.8

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

Note 2: Number of Annual Sales of Goods as of 2015 and 2020, respectively.

Note 3: Numbers for 2016 include establishments engaged in managerial and auxiliary economic activities, establishments whose industrial subdivision is unratable, and establishments with neither wholesale commercial sales (excluding brokerage commissions), retail commercial sales, nor brokerage commissions. The numbers for 2021 include establishments engaged in managerial or auxiliary economic activities, establishments of corporate bodies whose industrial subdivision is unratable, or establishments of sole proprietorships (including unincorporated associations) whose industrial subdivision is unratable, and establishments of corporate bodies that have neither wholesale commercial sales (excluding brokerage commissions), retail commercial sales, nor brokerage commissions.

Source: Table 1: 2016, 2021 Economic Census for Business Activity

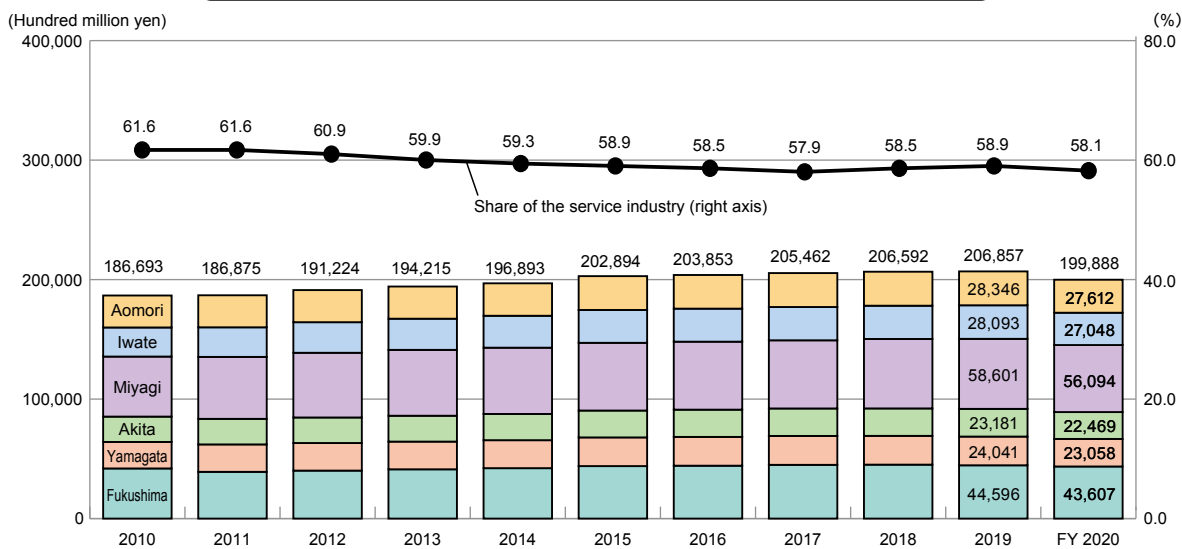
(3) Service Industry

### (3) Service Industry

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

- In FY 2020, the GRDP of the service sector in the Tohoku region was 19,988.8 billion yen, down 3.4% from the previous year, the first decline in ten years.
- The share of the service industry's GRDP (nominal) in the total gross regional product of all industries in the Tohoku region was 58.1%, a decrease of 0.8 percentage points from the previous year.

Changes in Gross Production (Nominal) for the Service Industry



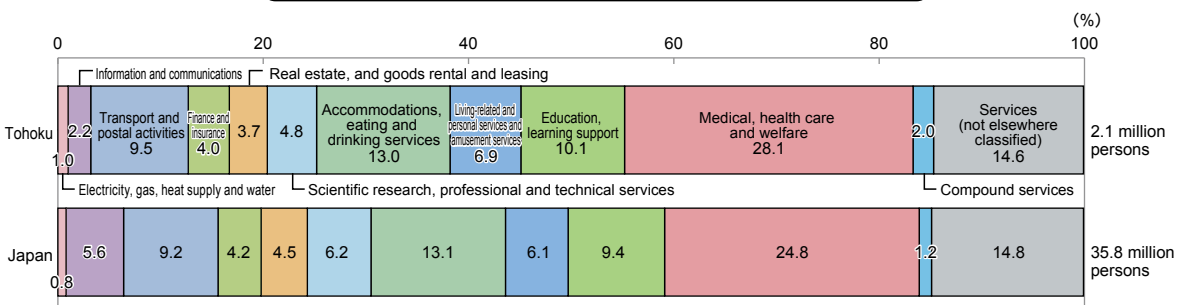
Note 1: The service industries in the above graph include electricity, gas and water supply, and waste management service; transport and postal services; accommodations, eating and drinking services; information and communications; finance and insurance; real estate; professional/scientific technology; 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, 2021) was 2.1 million. The ratio by JSIC (Japan Standard Industrial Classification) shows that, "medical, health care and welfare" accounted for the highest percentage at 28.1%, followed by "services (not elsewhere classified)" at 14.6% and "accommodations, eating and drinking services" at 13.0%.
- 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."

Number of employees in the service industry by JSIC



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."

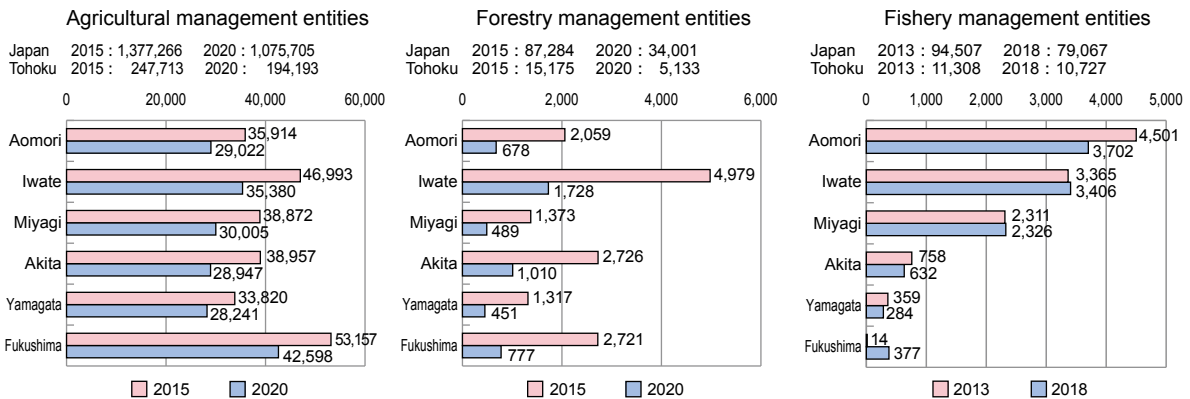
Source: 2021 Economic Census for Business Activity

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

Agriculture and fisheries decreased, while forestry increased in terms of production value.

- 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).

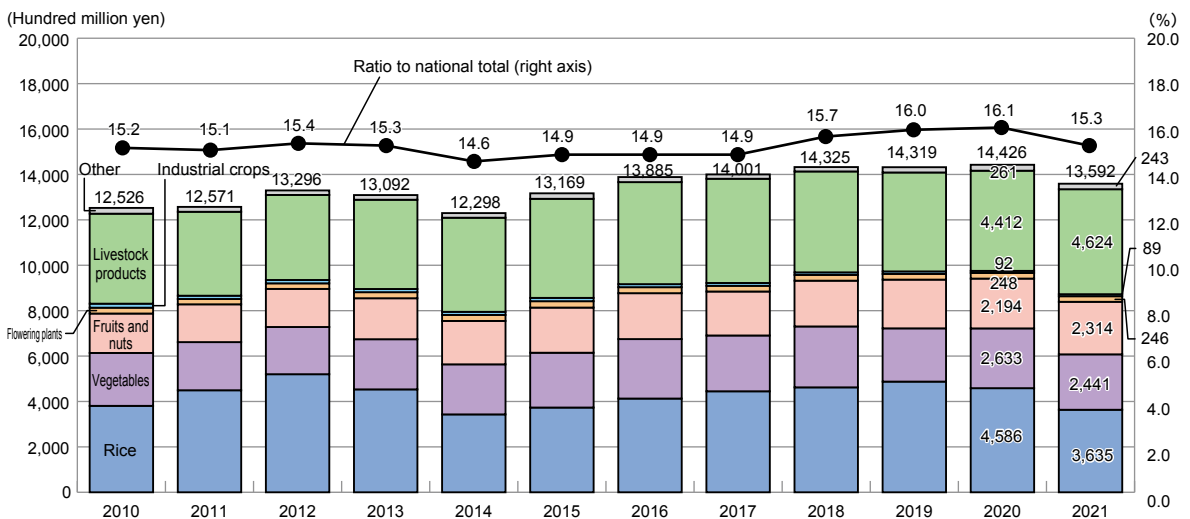
Number of Agricultural, Forestry and Fishery Management Entities



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 2021 was 1,359.2 billion yen. This represents 15.3% of the nation's total agricultural output of 8,860 billion yen, down 0.8 percentage points from the previous year. By item, livestock accounted for the largest share of 462.4 billion yen, or 34.0% of the total agricultural output in the Tohoku region, followed by rice with 363.5 billion yen, or 26.7% of the total.

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



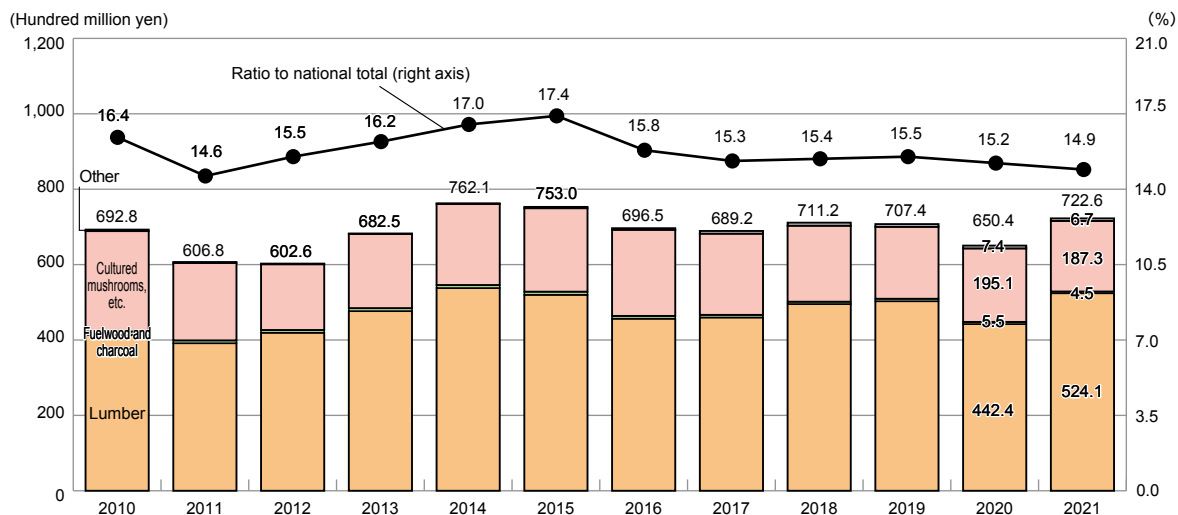
Source: Statistics of Agricultural Income Produced, Ministry of Agriculture, Forestry and Fisheries

### 3. Industrial Structure of the Tohoku Region

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

- The value of forestry production value in the Tohoku region in 2021 is estimated at 72.26 billion yen. This represents 14.9% of the national forestry production value of 483.94 billion yen, down 0.3 percentage points from the previous year. By category, lumber production accounted for 72.5% of the total forestry production value in the Tohoku region, at 52.41 billion yen, and cultivated mushroom production accounted for 25.9%, at 18.73 billion yen.

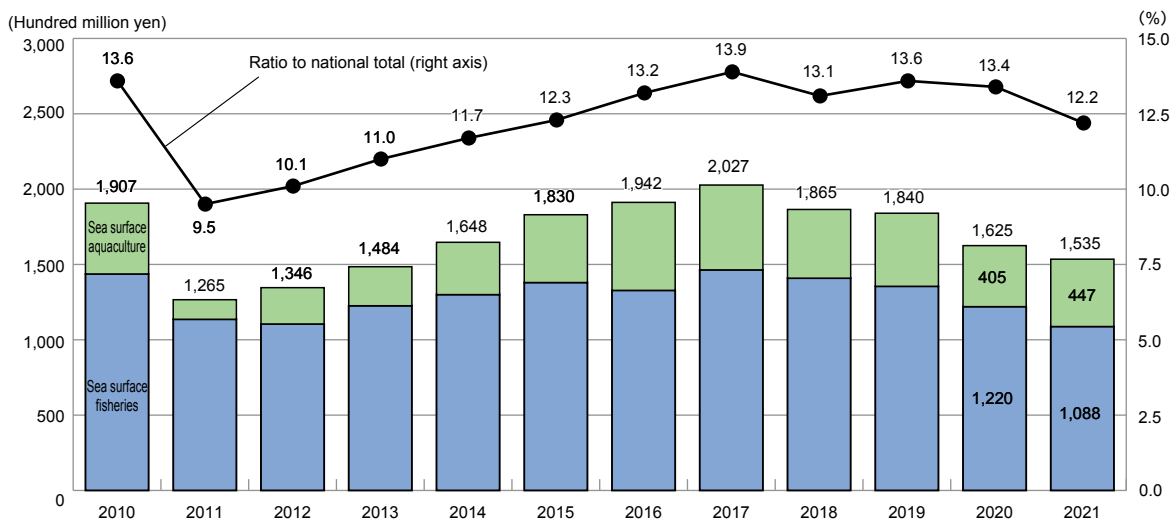
Changes in the Forestry Production Value and Ratio to National Total



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

- The value of sea surface fisheries and aquaculture production in the Tohoku region in 2021 was 153.5 billion yen. The share of the Tohoku region in the national output of 1,255.2 billion yen is 12.2%, down 1.2 percentage points from the previous year. By business category, sea surface fisheries accounted for 108.8 billion yen, and sea surface aquaculture 44.7 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



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# ECONOMIC OVERVIEW OF TOHOKU REGION



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