

Regional Economic Report
April – June 2023

BANCO DE MÉXICO®

Published-General Purpose
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Outline

I. Regional Economic Report

II. Results April – June 2023

A. Economic activity

B. Inflation

C. Economic outlook

(based on data collected between June 26 and July 20, 2023)

III. Final remarks

Regional Economic Report

- The Regional Economic Report is a quarterly publication that includes Banco de México's indicators and analysis on the trends in economic activity, inflation and business agents' perspectives in Mexico's regions.

- The information presented herein is taken into account by Banco de México's Governing Board as part of the information used to evaluate the economic situation and the forecast for the national economy.

- The economic performance and inflation in the regions during Q2-2023 and the prospects of business agents surveyed between June 26 and July 20, 2023 on regional economic activity and prices over the following twelve months are analyzed herein.

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I. Regional Economic Report

II. **Results April – June 2023**

   A. **Economic activity**

   B. Inflation

   C. Economic outlook

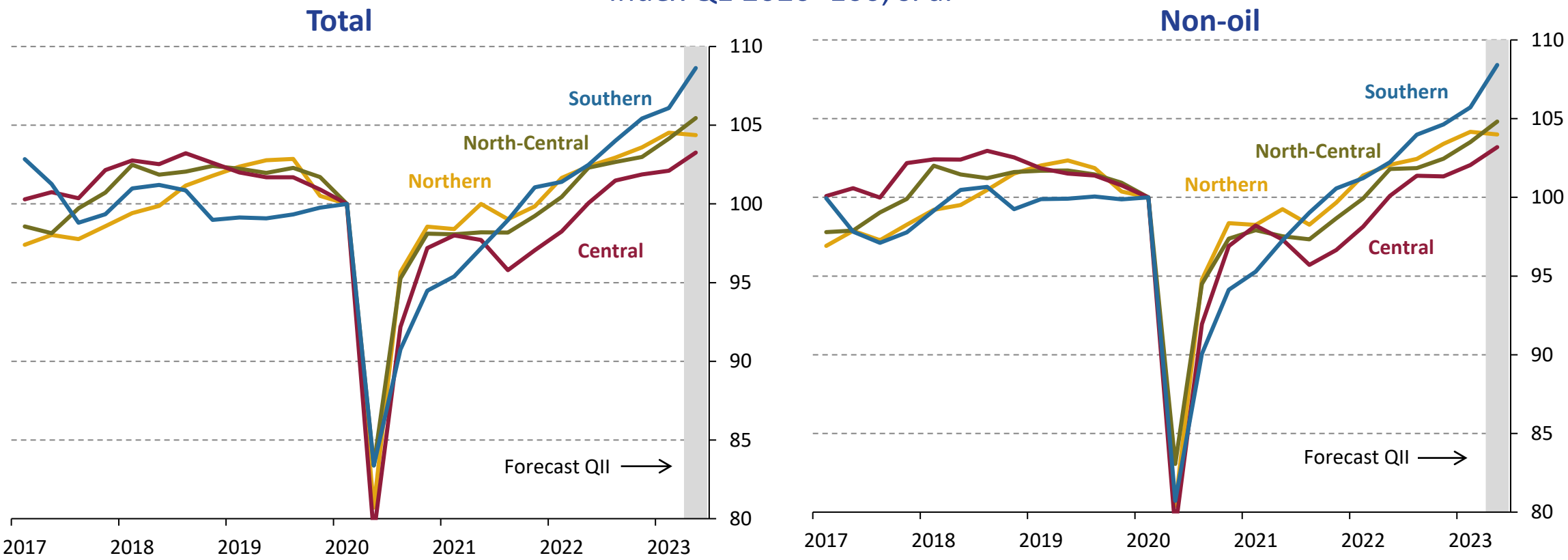
      (based on data collected between June 26 and July 20, 2023)

III. Final remarks

During Q2-2023, the Mexican economy is estimated to have continued expanding in the Central and Southern regions. The Northern region is expected to have registered a level of economic activity similar to that of the previous quarter.

Quarterly Indicator of Regional Economic Activity

Index Q1 2020=100, s. a.



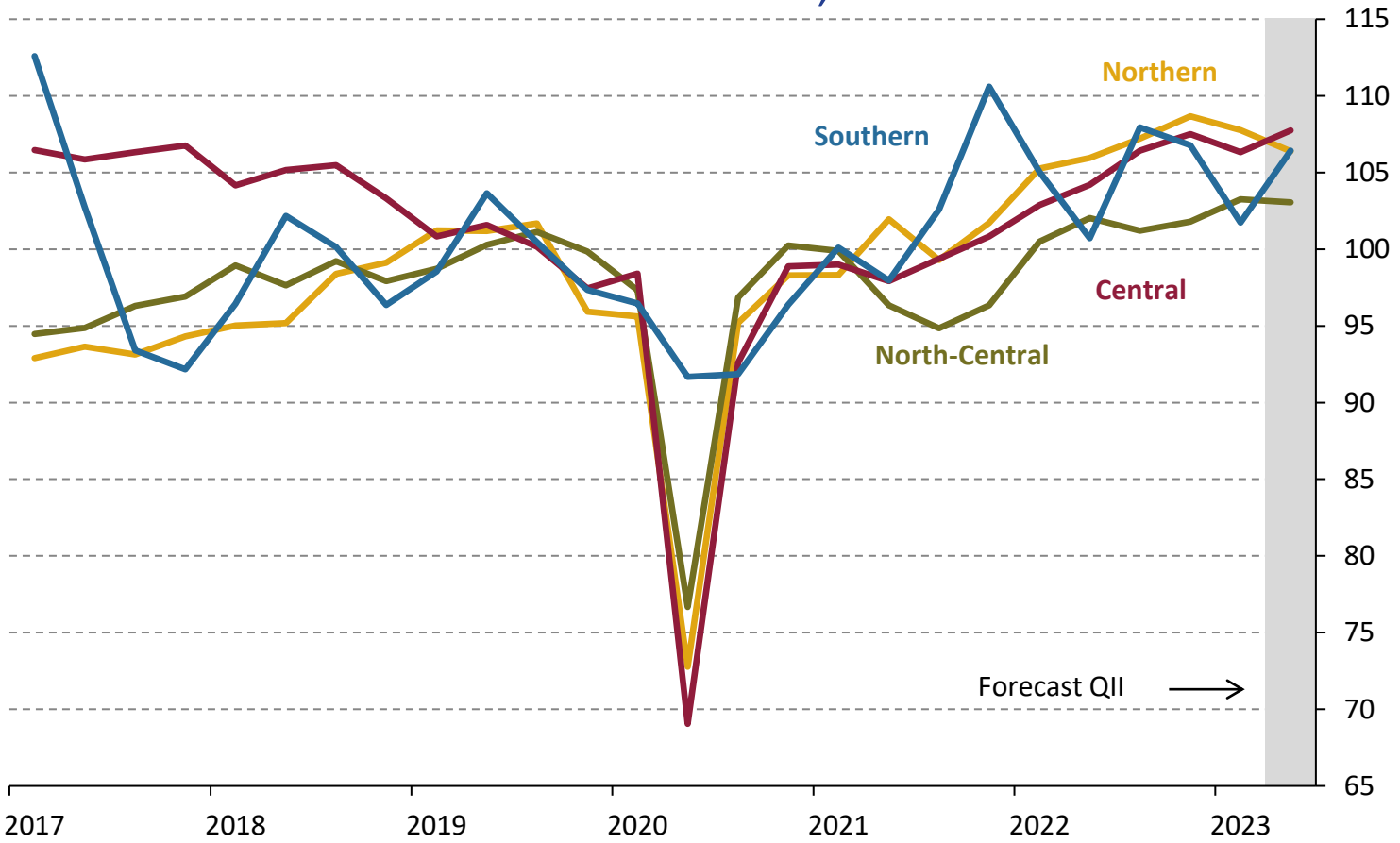
s. a. / Seasonally adjusted data.

Source: Estimated by Banco de México with seasonally adjusted series of the Quarterly Indicator of State Economic Activity from INEGI.

In Q2-2023, manufacturing activity is anticipated to have expanded in the Central and Southern regions, while it is estimated to have contracted in the Northern and North-Central regions.

Regional Manufacturing Indicator

Index 2019=100, s. a.



s. a. / Seasonally adjusted data.

Source: Estimated by Banco de México with seasonally adjusted series of the Monthly Indicator of Manufacturing Activity by State from INEGI.

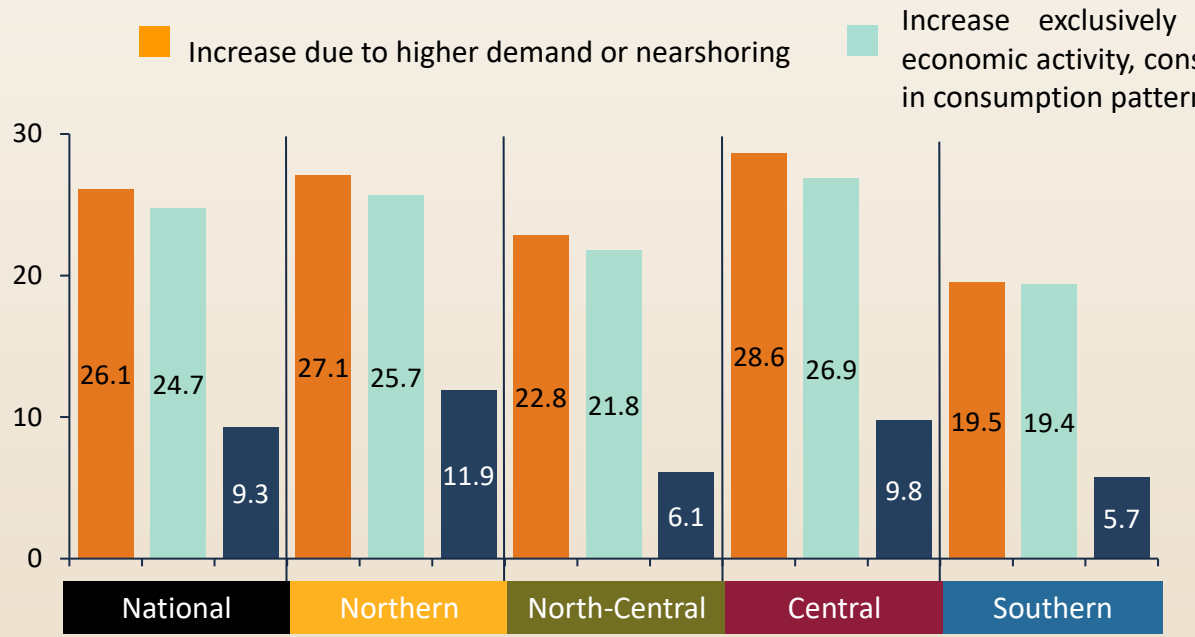
Business opinion on the impact of nearshoring between June 2022 and June 2023

- The process of nearshoring has continued benefitting businesses in Mexico heterogeneously across regions and sectors.

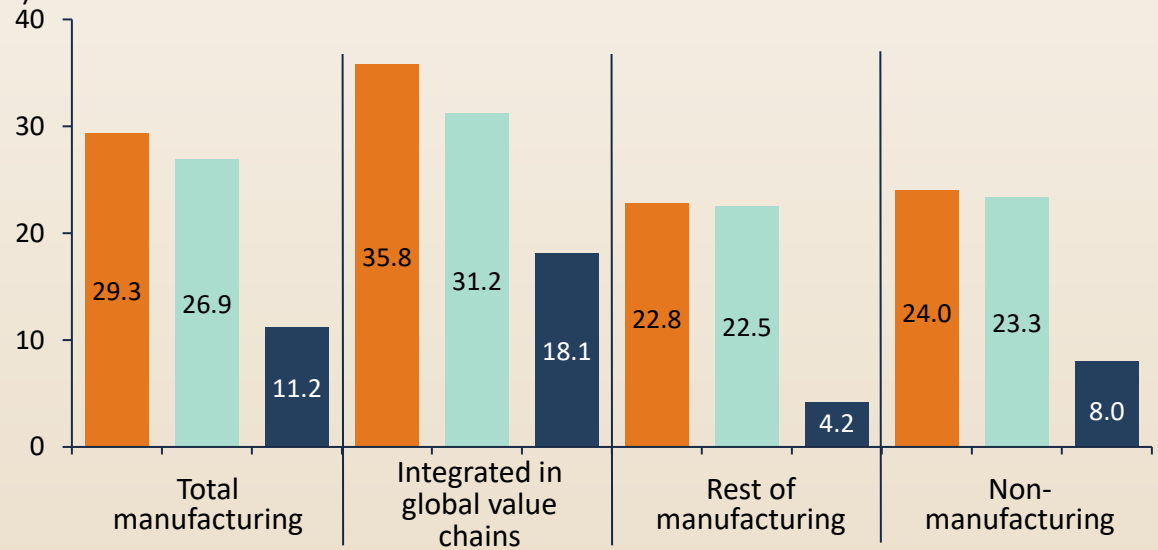
Increases in firms' production, sales or investment attributable to different factors

Percentage of firms that responded that their production, sales or investment increased due to each factor

By region



By sector



* The manufacturing sector integrated in global value chains (GVC) groups NAICS subsectors whose share of global manufacturing export value added in total production in 2019 was greater than 10% according to INEGI, and includes the following subsectors: 315, 326, 332, 331, 333, 334, 335, 336, and 339. The Monthly Survey of Regional Economic Activity (EMAER, for its acronym in Spanish) is representative of businesses with more than 100 workers in the manufacturing, and non-manufacturing sectors.

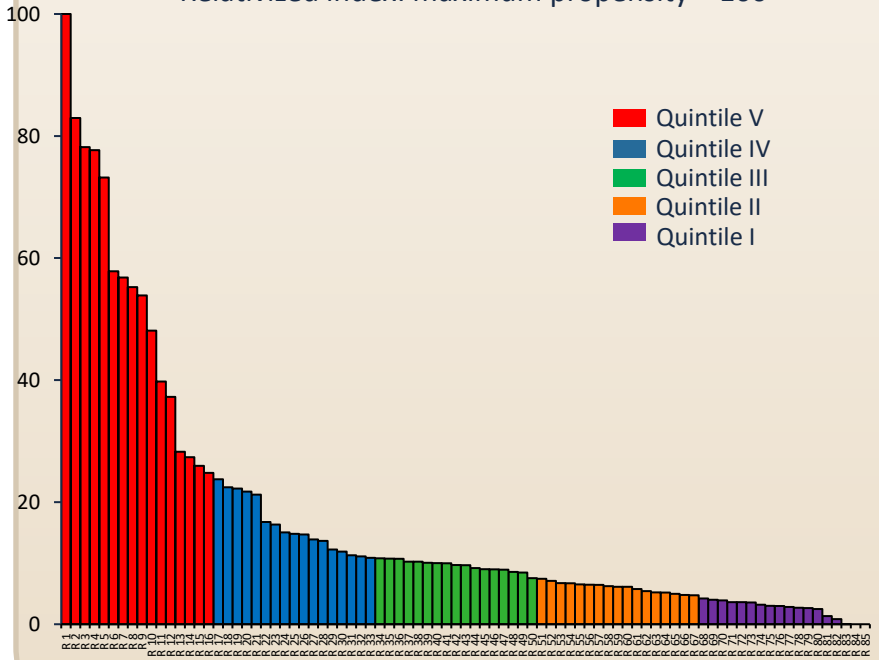
Source: Prepared by Banco de México with data drawn from responses to the following question asked in the July 2023 EMAER survey: "For the previous 12 months, please indicate how your company's production, sales or investment have changed as a result of the following phenomena."

Initial effects of nearshoring on manufacturing activity in Mexico

- The synthetic control method was used to compare the behavior of industry groups, which could be assumed to have a higher probability of benefiting from the nearshoring process, with respect to a counterfactual scenario constructed based on the behavior of other industry groups that are identified as showing lesser propensity to nearshoring.

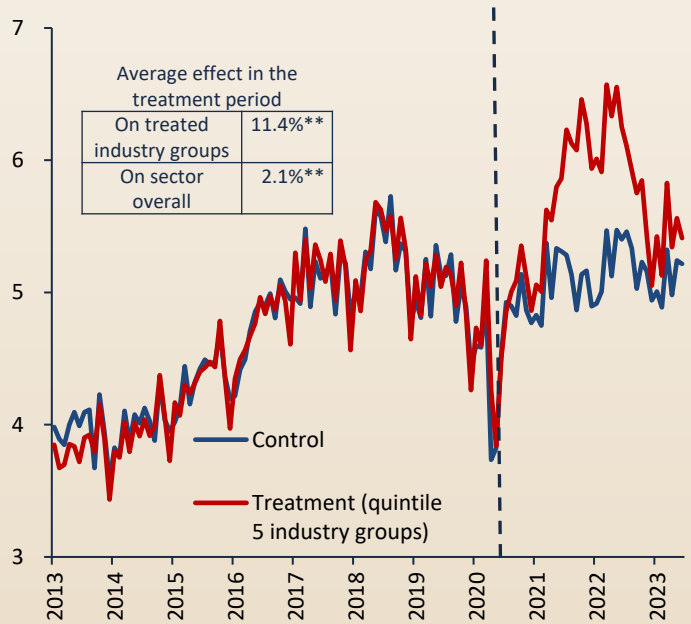
Index of potential propensity to nearshoring by manufacturing industry group

Relativized index: maximum propensity = 100



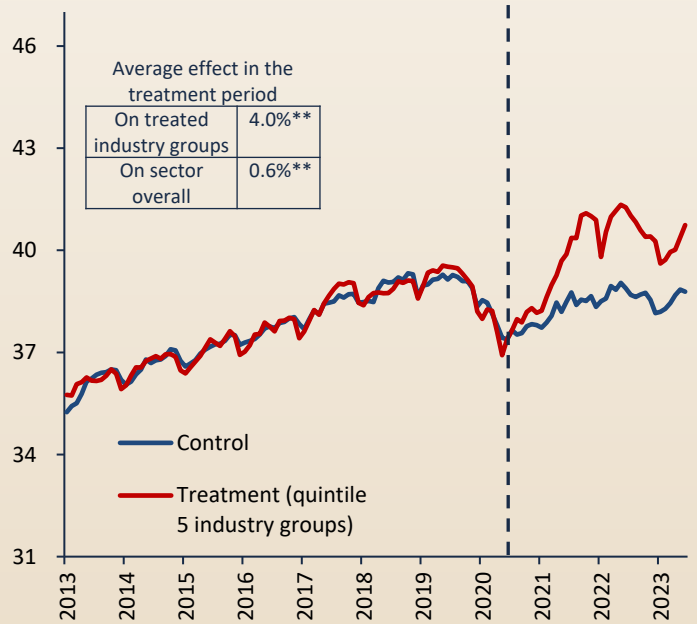
Monthly production value by manufacturing company

Million MXN, 2019



Average monthly jobs by manufacturing industry group

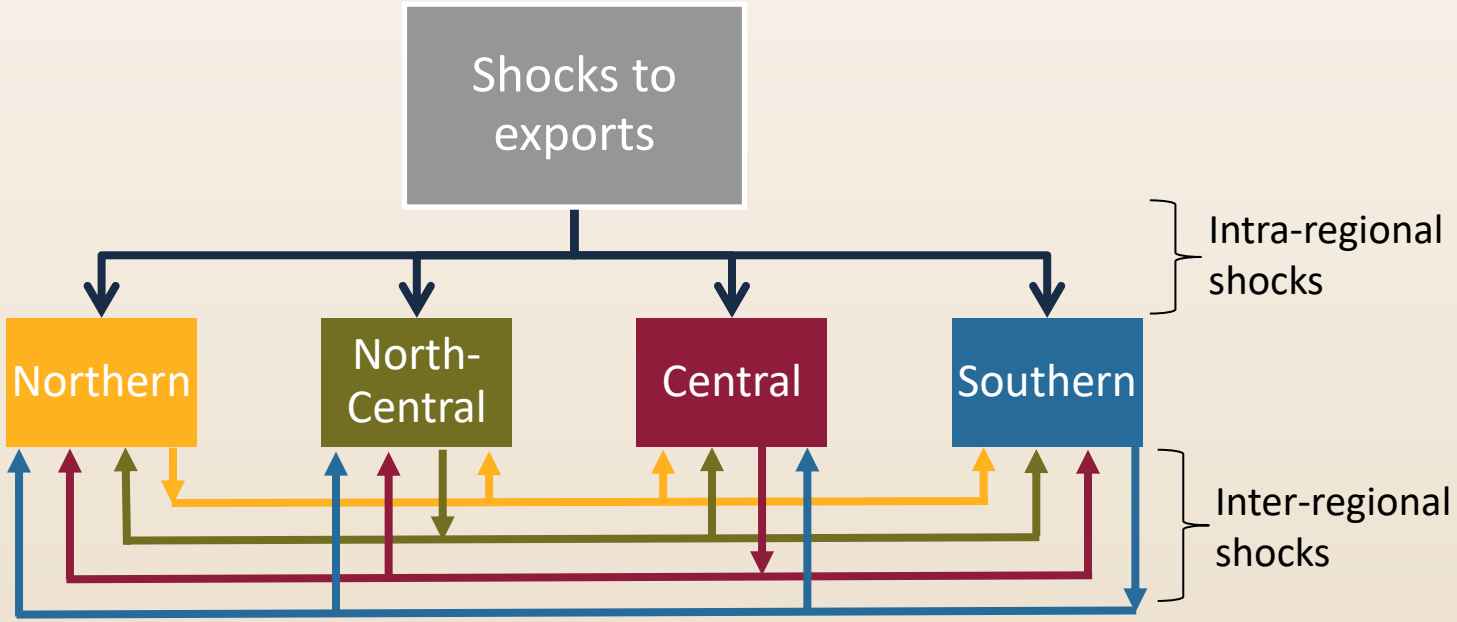
Thousand jobs



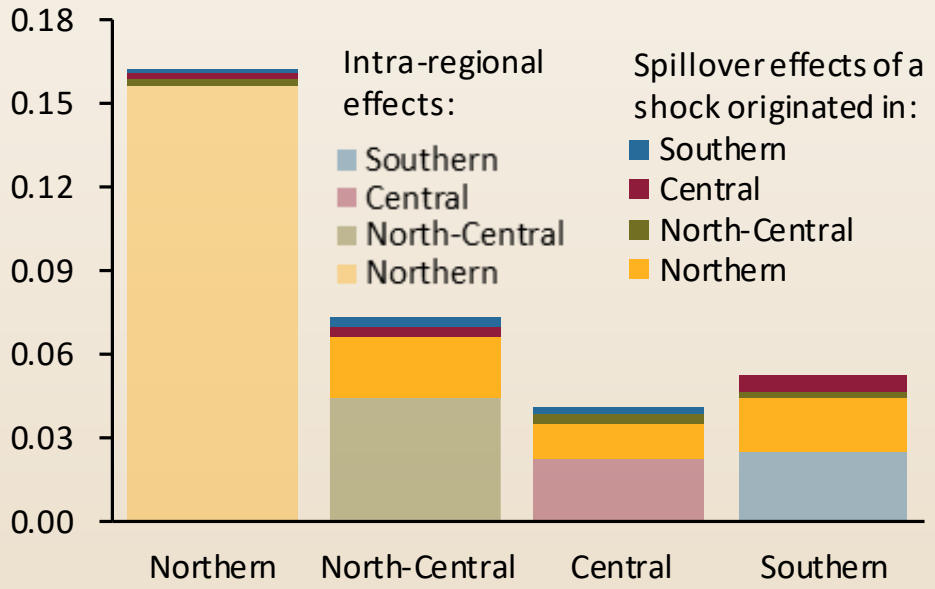
Note: The dotted line indicates the end of the pretreatment period. Statistical significance level: 0.01 (***); 0.05 (**); 0.1 (*).
Source: Prepared by Banco de México with data from Google and the Monthly Manufacturing Industry Survey, INEGI.

Intra- and inter-regional effects of a shock on manufacturing exports

- The box shows that aggregate activity in the Northern region, given its greater export orientation, is the most responsive to external shocks. However, this also implies significant inter-regional effects on the other regions, mainly the North-Central and Southern regions.



Effects on each region's gross value added in the event of a 1% positive shock on non-automotive manufacturing exports
Percent

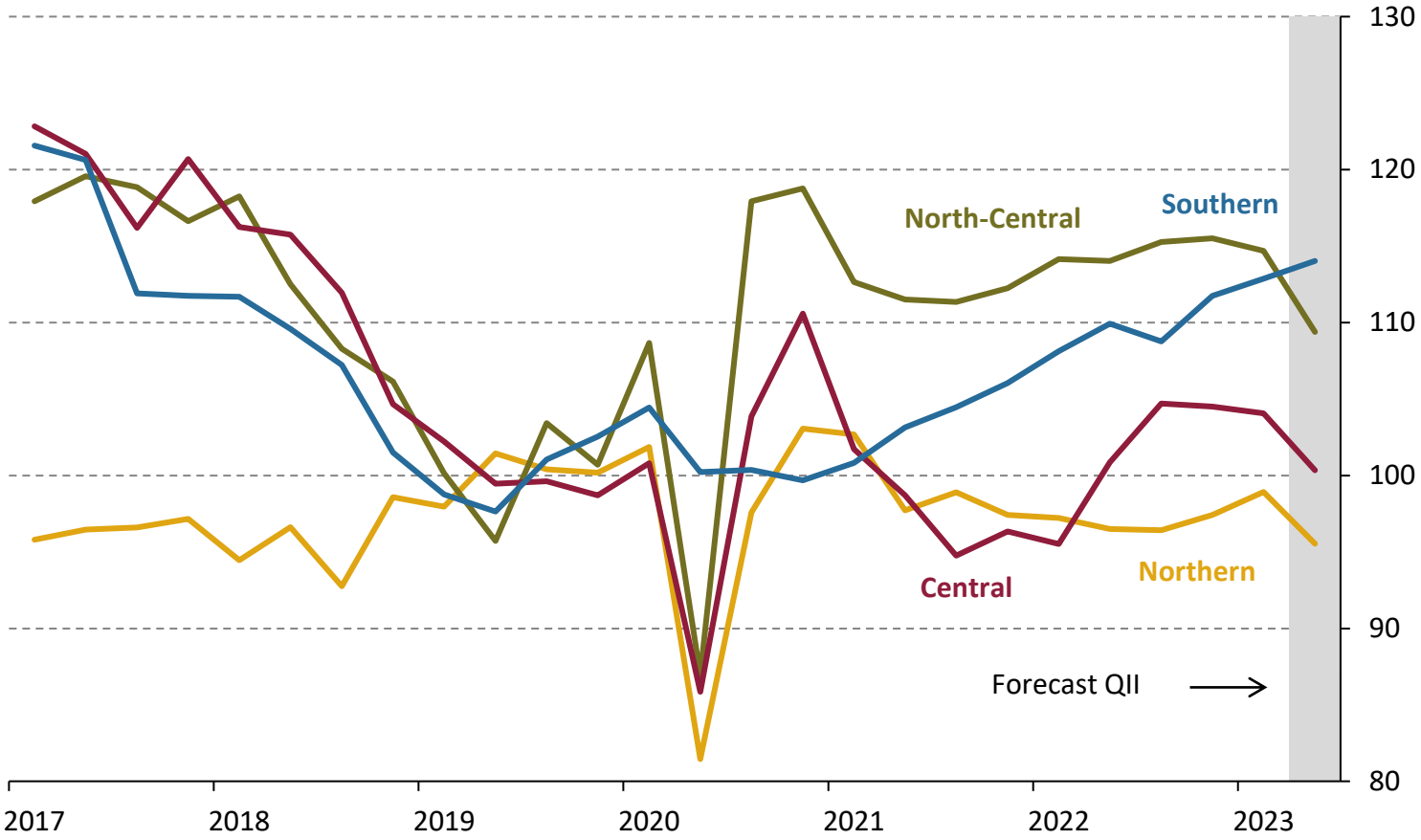


Note: Intra-regional effects consider the shock to the sector receiving it (direct), as well as the spillover effects on the rest of the sectors within the region (indirect).
Source: Prepared by Banco de México based on information from INEGI's Multi-State Input-Output Matrix.

Mining activity is estimated to have declined in the Northern and Central regions in Q2-2023, while in the Southern one it is anticipated to have continued expanding.

Regional Indicator of Mining, Quarrying, and Oil and Gas Extraction

Index 2019=100, s. a.

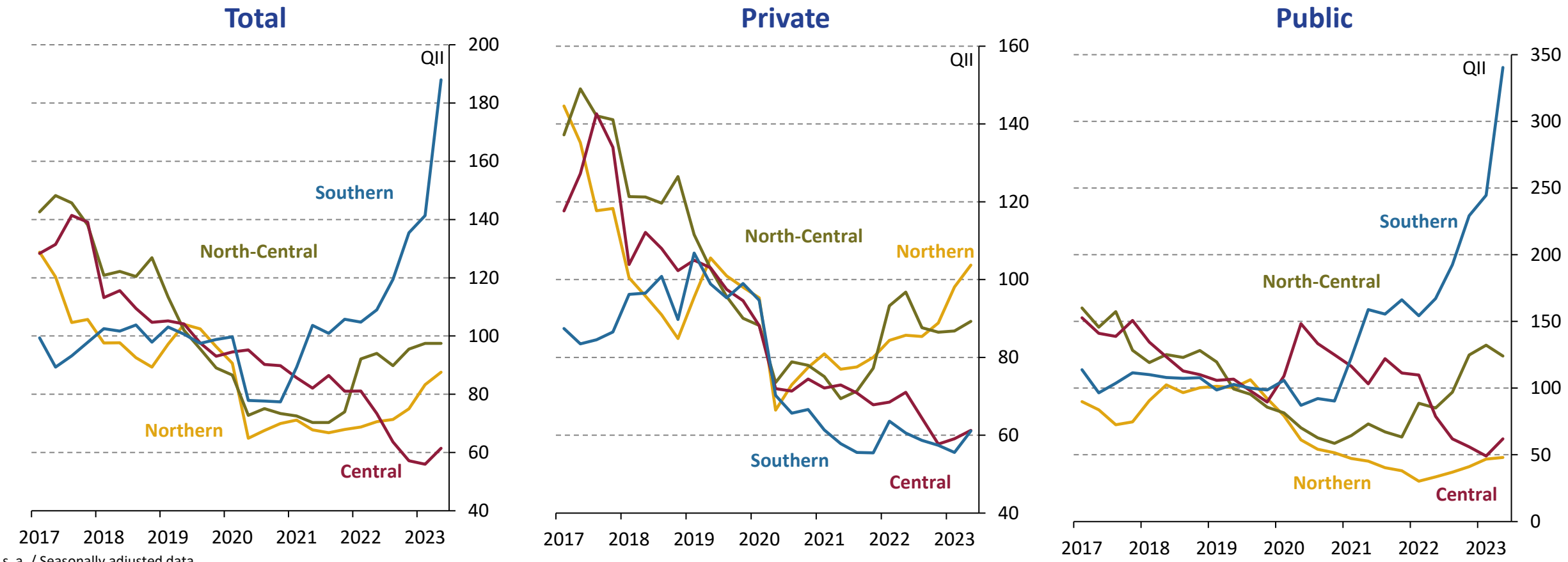


s. a. / Seasonally adjusted data.

Source: Prepared and seasonally adjusted by Banco de México based on series of the Monthly Mining Activity Indicator by State from INEGI.

Spending on construction expanded in the Northern, Central and, notably, in the Southern regions during Q2-2023. The latter region continued to show particularly high levels of activity, while construction in the North-Central region remained practically unchanged.

Real value of production in the construction industry by region
Index 2019=100, s. a.

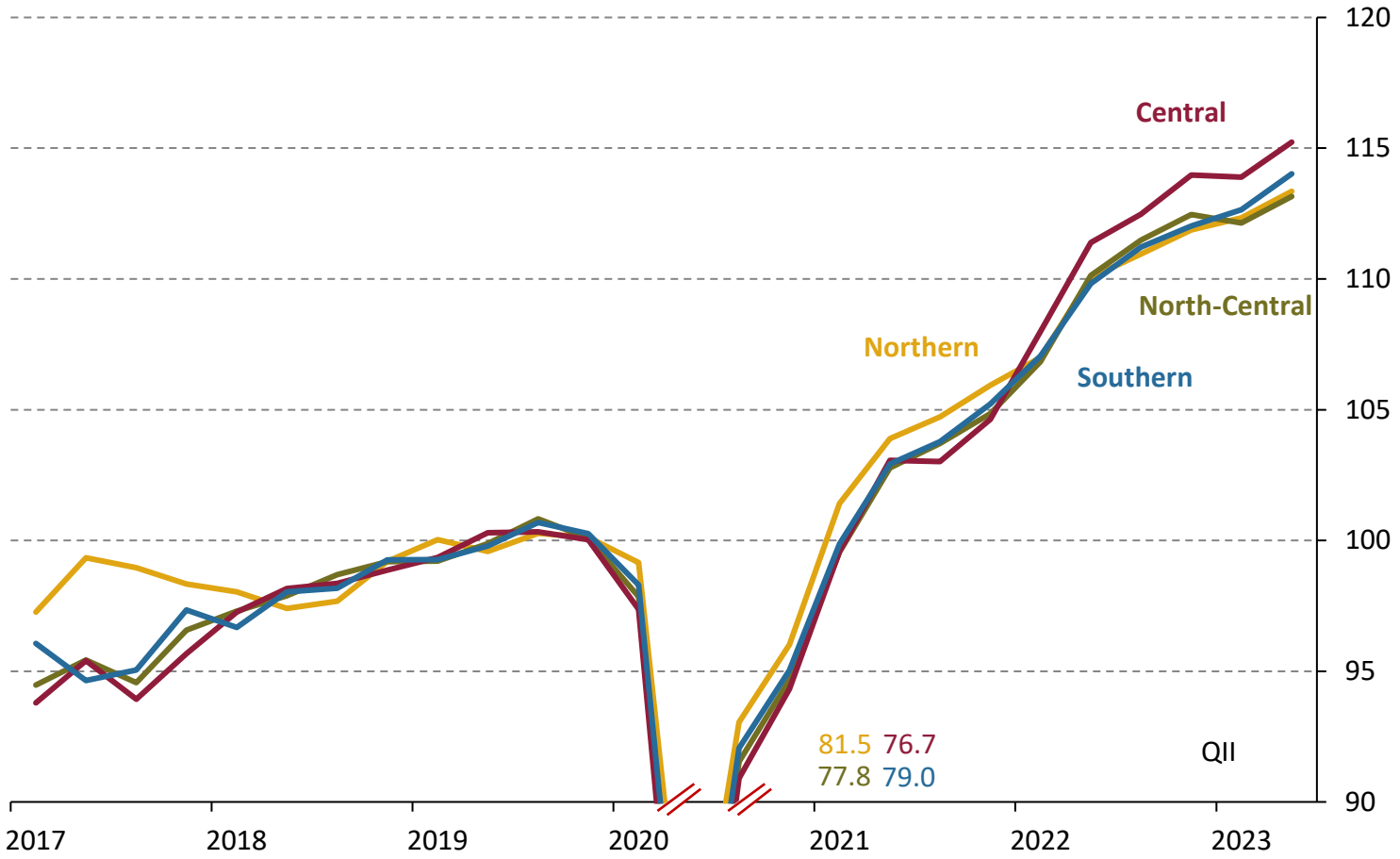


s. a. / Seasonally adjusted data.
Source: Prepared and seasonally adjusted by Banco de México with data from the National Survey of Construction Companies by INEGI.

In Q2-2023, commercial activity expanded in all regions, with slightly higher growth in the Central and Southern regions.

Regional Commercial Activity Indicator

Index 2019=100, s. a.



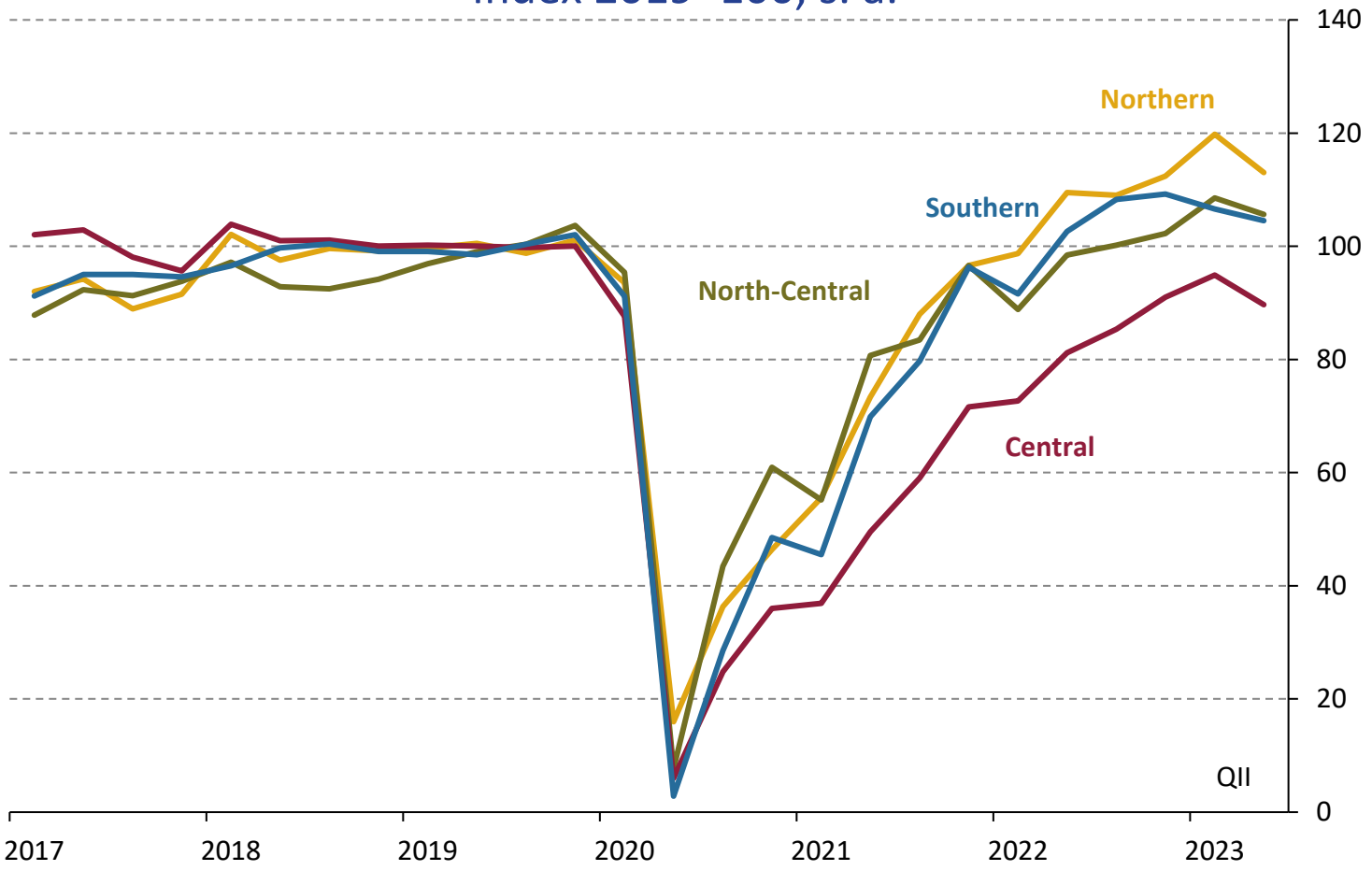
s. a. / Seasonally adjusted data.

Source: Prepared and seasonally adjusted by Banco de México with the series of Revenues of Retailers' Supply of Goods and Services by State from INEGI.

Tourism activity, measured by indicators of hotel occupancy, contracted in all regions in Q2-2023, in contrast to the upward trend it had been following in the Northern and Central regions.

Regional Indicator of Hotel Occupancy

Index 2019=100, s. a.

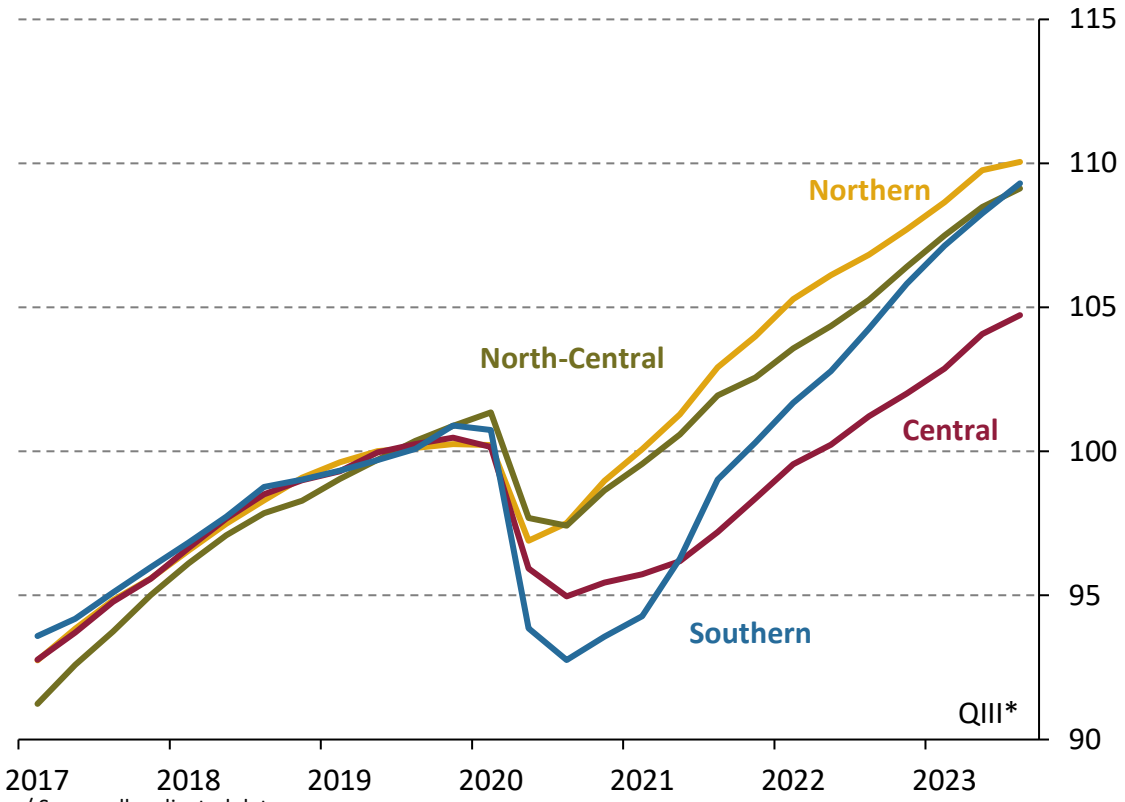


s. a. / Seasonally adjusted data.
Source: Prepared and seasonally adjusted by Banco de México with data from the Mexican Ministry of Tourism.

The labor market remained strong during Q2-2023.

Number of IMSS-insured workers

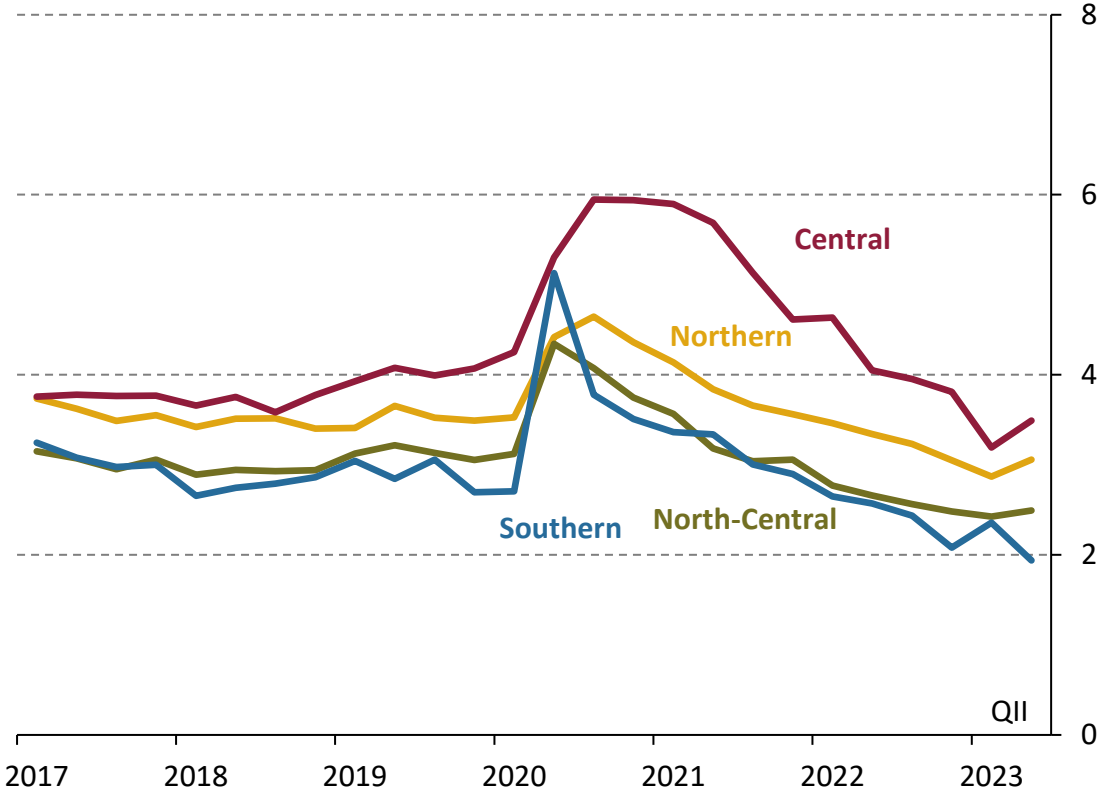
Index 2019=100, s. a. 1/



s. a./ Seasonally adjusted data.
*/ Figures as of August 2023.
1/ Permanent and temporary jobs in urban areas.
Source: Prepared and seasonally adjusted by Banco de México with data from IMSS.

Unemployment rate

Percent, s. a.



s. a./ Seasonally adjusted data.
Source: Prepared and seasonally adjusted by Banco de México with data from INEGI.

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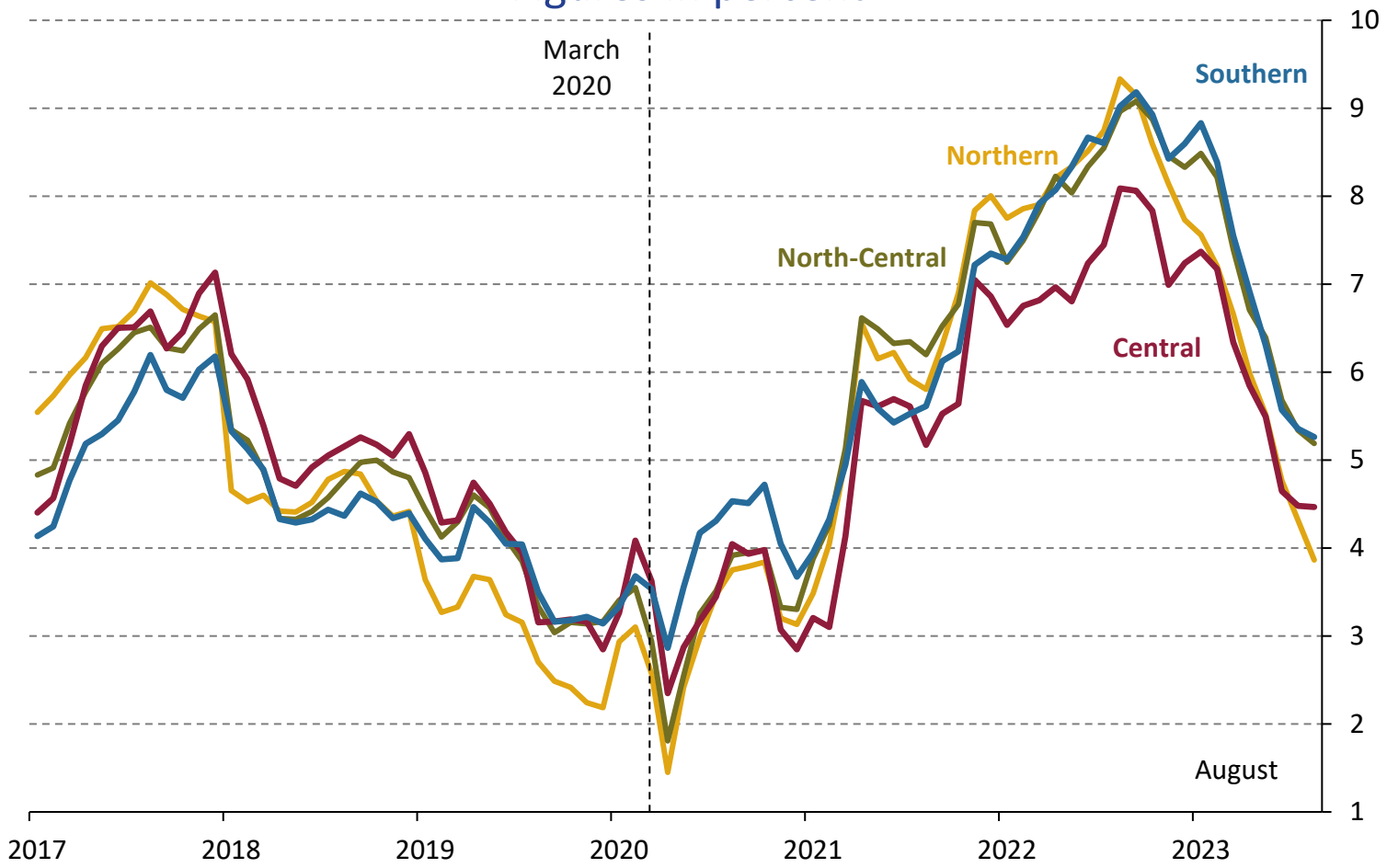
(based on data collected between June 26 and July 20, 2023)

III. Final remarks

In all regions, annual headline inflation declined between Q1-2023 and Q2-2023. This was the result of the decrease in both core and non-core inflation in all regional economies.

Annual headline inflation by region

Figures in percent

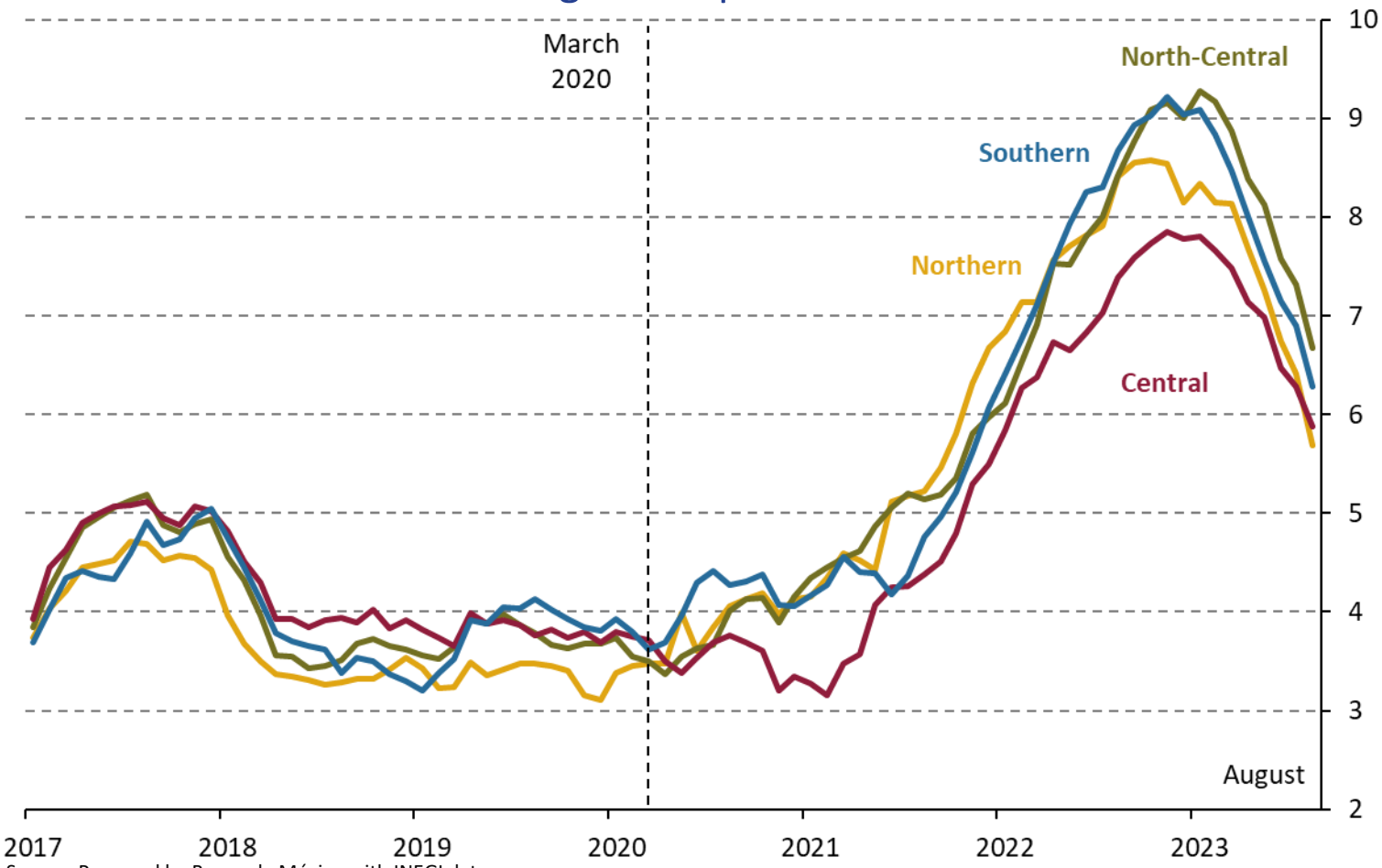


Source: Prepared by Banco de México with INEGI data.

In all regions, core inflation decreased gradually between Q1-2022 and Q2-2023 and continued trending downwards in Q3-2023. Nevertheless, it remains at high levels as a result of persistent pressures from the pandemic-related shocks and the military conflict in Ukraine.

Annual core inflation by region

Figures in percent

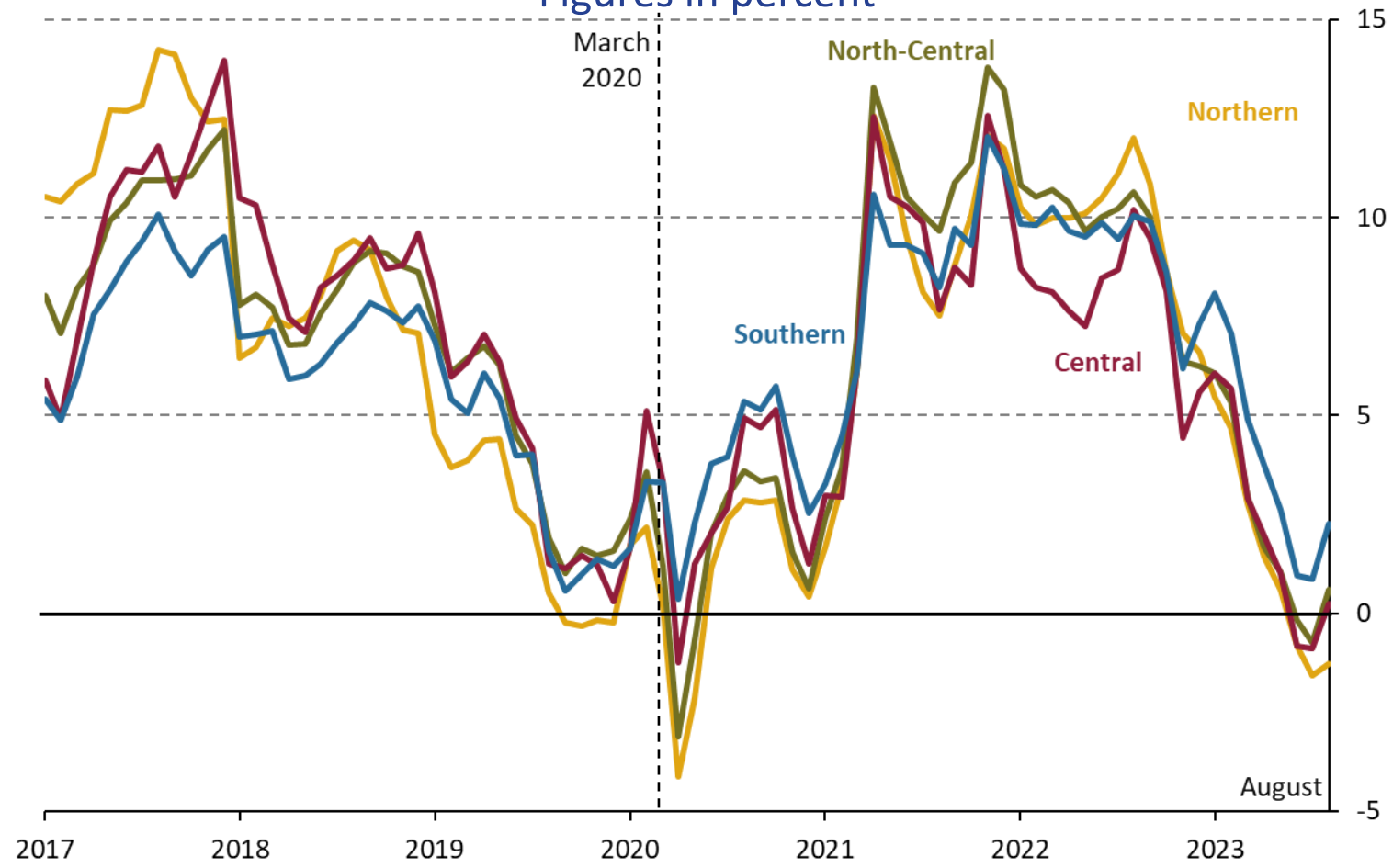


Source: Prepared by Banco de México with INEGI data.

In all regions, annual non-core inflation decreased significantly between Q1-2022 and Q2-2023, reaching atypically low levels.

Annual non-core inflation by region

Figures in percent



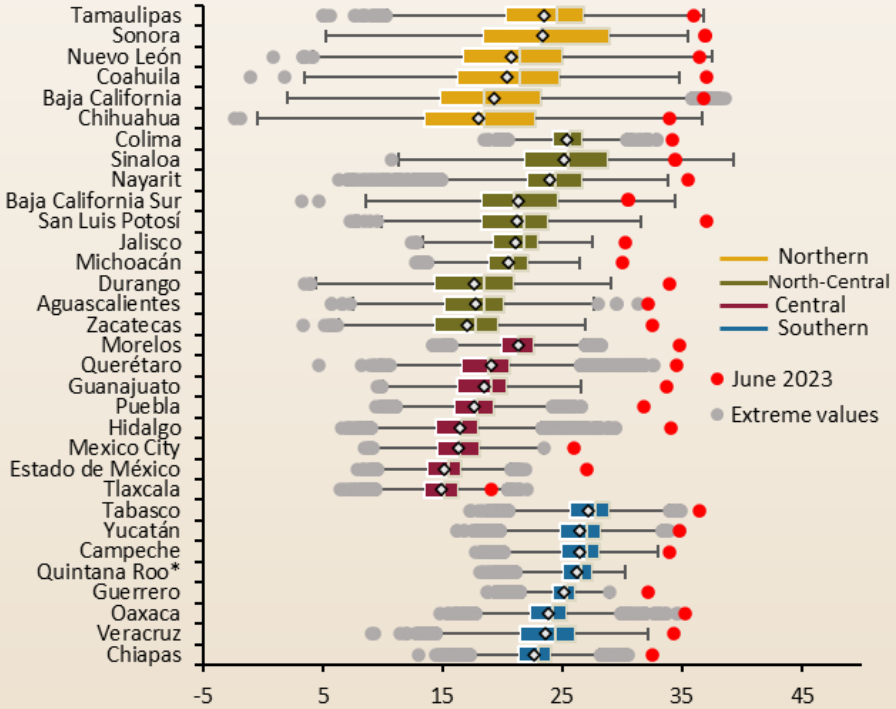
Source: Prepared by Banco de México with INEGI data.

Heat waves and the effect of higher temperatures on fruit and vegetable prices

- Heat waves are extreme temperature events which have been increasingly occurring throughout the country.
- An econometric model relating temperature with the fruit and vegetable price index suggests that heat waves have generated short-term upward pressures on fruit and vegetable prices.

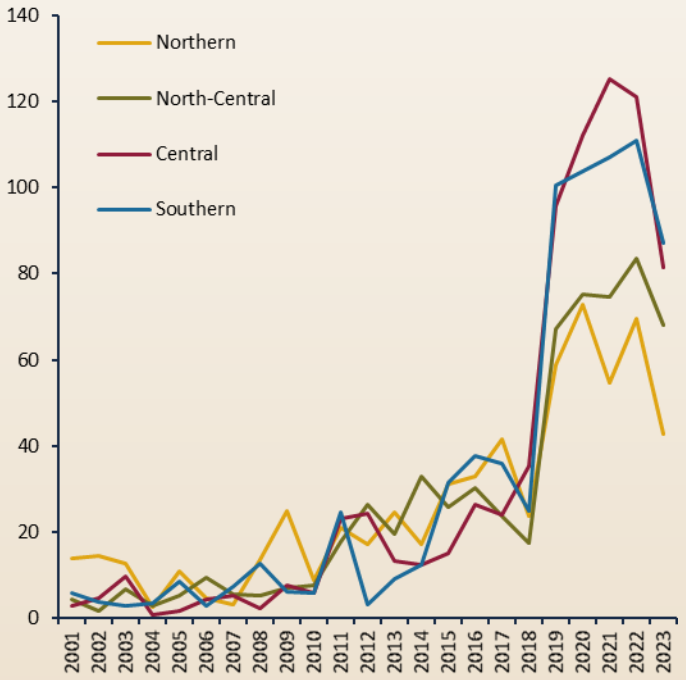
Box-and-whisker plot of the average daily temperature by state from January 2001 to June 2023

Degrees Celsius



Note: /* Quintana Roo has no data for June 2023. The boxes for each row represent the interquartile range of the distribution, the line at the center of the box corresponds to the median, the white diamond at the center is the mean, and the arms symbolize the width of the distribution without outliers.
Source: Prepared by Banco de México with daily information from weather stations of the National Meteorological Service.

Number of cumulative days per year by region classified as heat waves from January 2001 to June 2023



Source: Prepared by Banco de México with daily information from weather stations of the National Meteorological Service.

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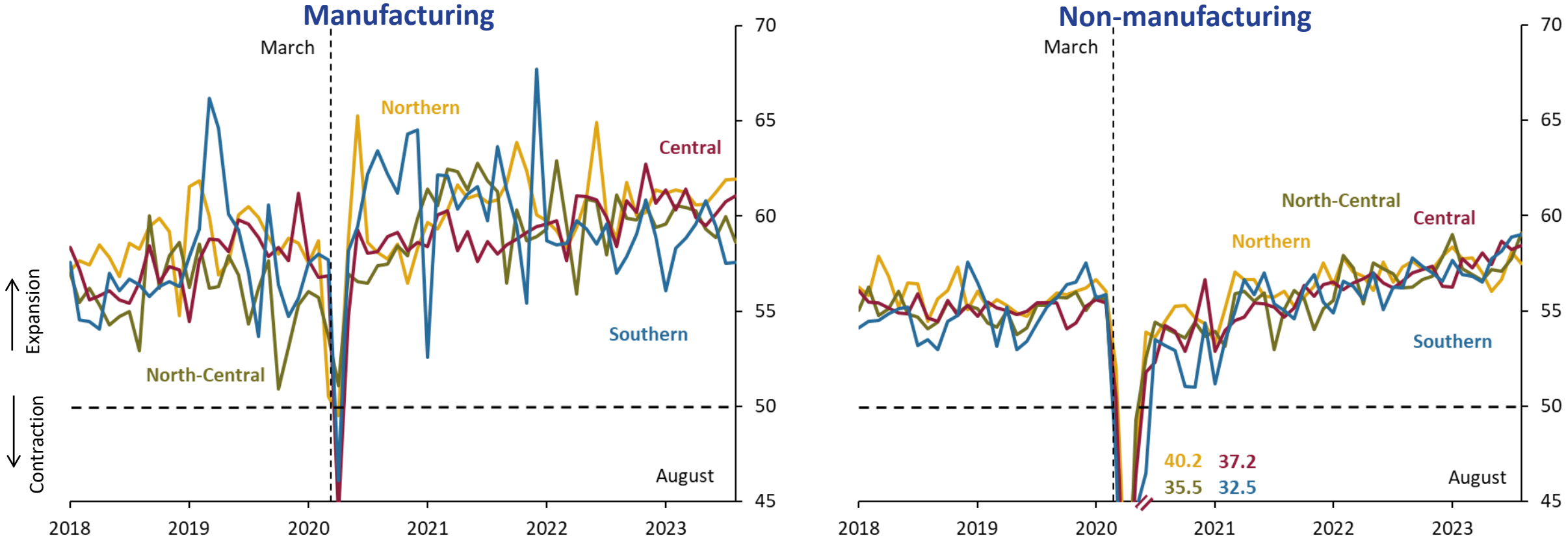
(based on data collected between June 26 and July 20, 2023)

III. Final remarks

Regional manufacturing and non-manufacturing orders' indexes remain in the expansion zone.

Regional Manufacturing and Non-manufacturing Orders' Index: activity outlook for the next 3 months

Diffusion indexes, s. a.

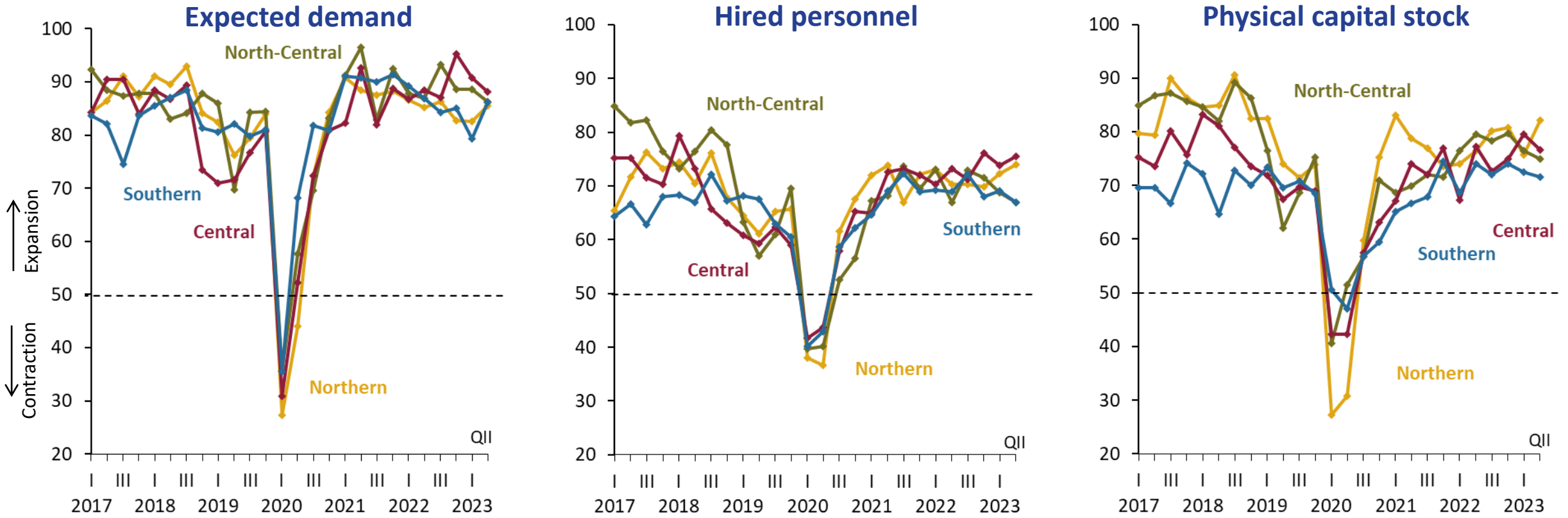


s. a./ Seasonally adjusted figures.
Source: Banco de México

The diffusion indices of expectations on demand, number of workers hired, and firms' fixed-asset investment for the next 12 months remained in the expansion zone in all regions during Q2-2023.

Business agents' expectations: demand, hired personnel and physical capital stock, next 12 months[1/]

Diffusion indices

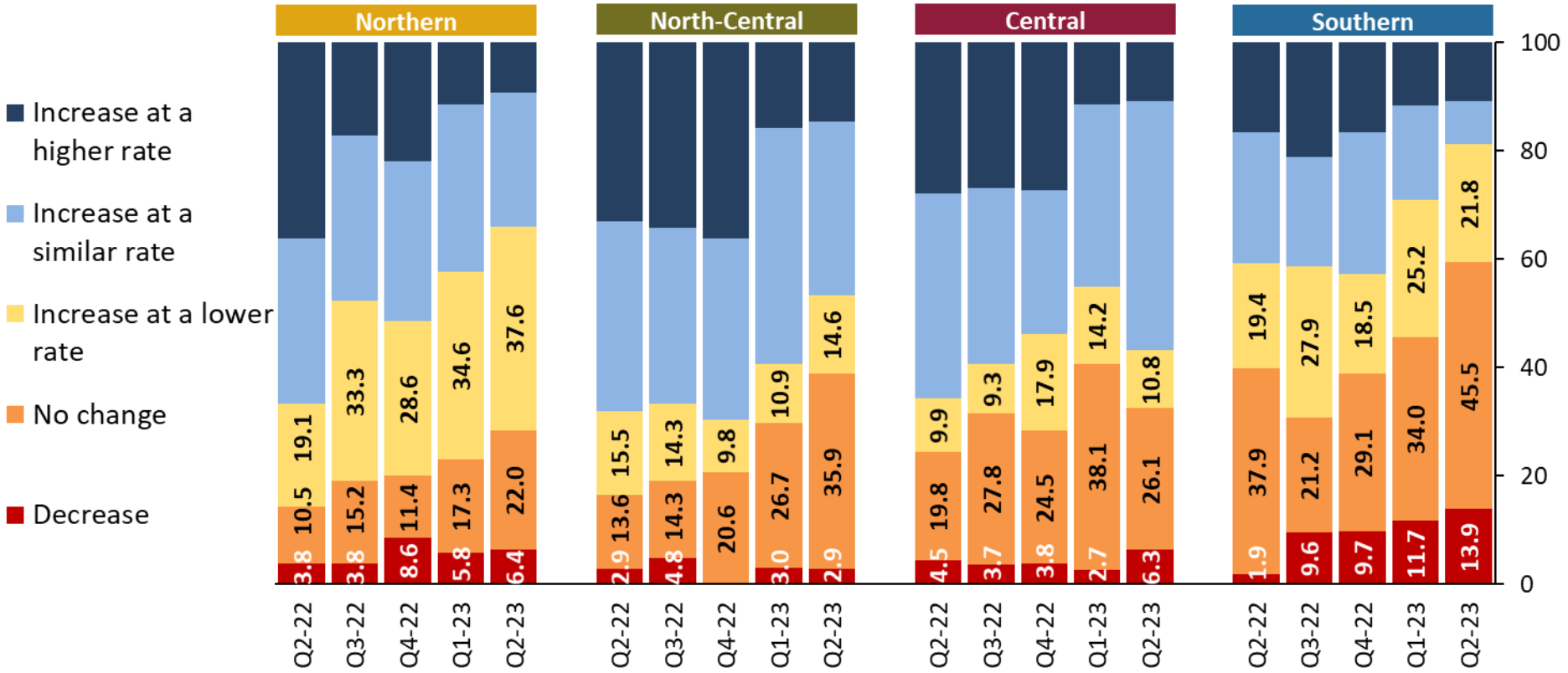


1/ Results obtained from the questions: "With respect to the previous 12 months, how do you expect your sales volume to change over the next 12 months, how do you expect the total number of workers in your company to change over the next 12 months?" and "With respect to the investment in fixed assets made by your company during the previous 12 months, how do you expect the level of investment to change over the next 12 months?", included in the interviews conducted by Banco de México. Expectations corresponding to each Report were generally collected during the four weeks following the end of the reported quarter. In the case of the second quarter of 2023, they were obtained between June 26 and July 20, 2023.

In all regions, except for the Central one, a higher percentage of business agents anticipate their goods and services' sales prices to increase at a slower rate, remain unchanged or decrease in the next twelve months compared to the previous twelve months.

Business agents' expectations: annual variation of sales prices; next 12 months with respect to last 12 months [1/]

Percentage of responses

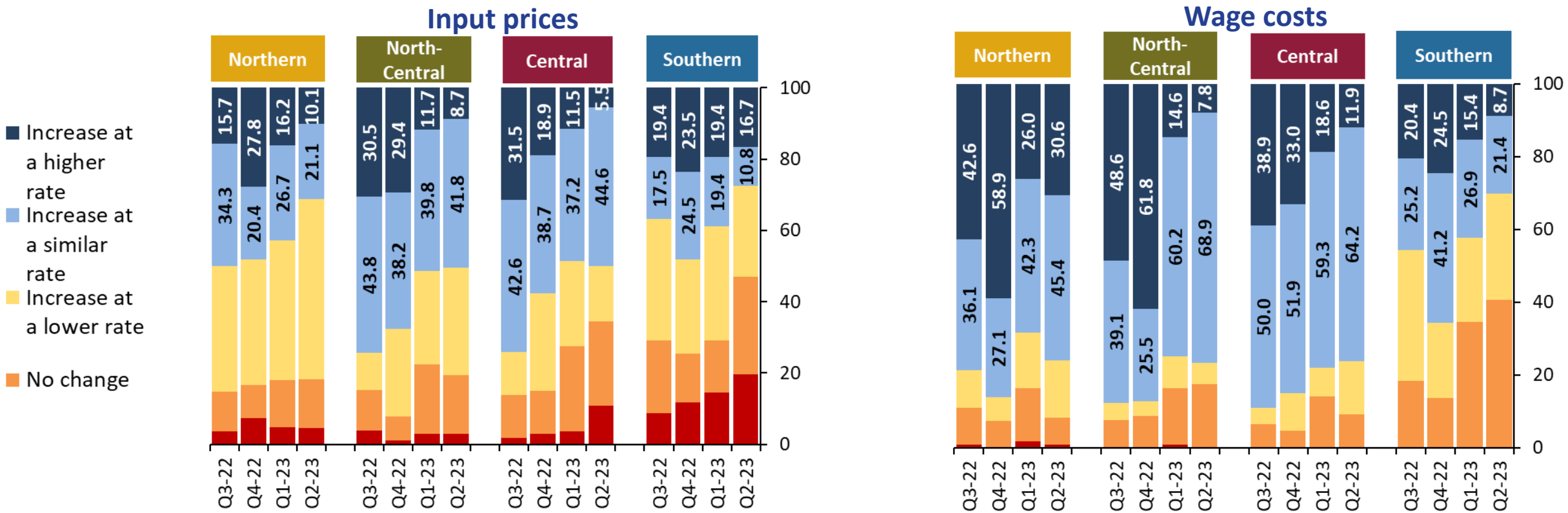


1/ Results obtained from the questions: "With respect to the previous 12 months, how do you anticipate sales prices in your sector to change over the next 12 months?", included in the interviews conducted by Banco de México. Expectations corresponding to each Report were generally collected during the four weeks following the end of the reported quarter. In the case of the second quarter of 2023, they were obtained between June 26 and July 20, 2023.

In most regions, business agents anticipate lower upward pressures on their input prices over the next twelve months. For wage costs, most business contacts, except in the Southern region, continue anticipating increases at a similar or higher rate over the next twelve months.

Business agents' expectations: annual variation of input prices and wage costs; next 12 months with respect to last 12 months[1/]

Percentage of responses



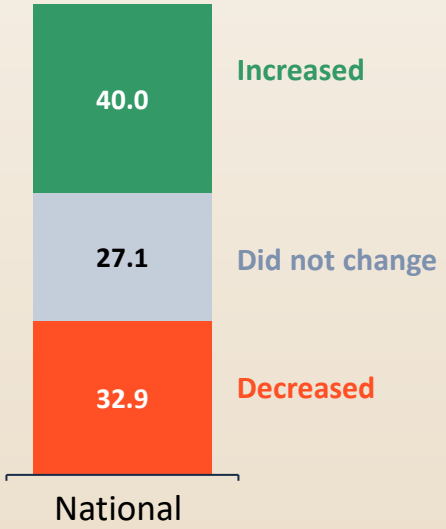
1/ Results obtained from the questions: "With respect to the previous 12 months, how do you anticipate the prices of inputs (goods and services) used in your sector to change over the next 12 months? and How do you anticipate wages and salaries of workers in your sector to change over the next 12 months?, included in the interviews conducted by Banco de México. Expectations corresponding to each Report were generally collected during the four weeks following the end of the reported quarter. In the case of the second quarter of 2023, they were obtained between June 26 and July 20, 2023.

Business perception on the evolution of profit margins following the pandemic

- Firms' profit margins have changed heterogeneously, possibly reflecting differentiated changes in the demand they have faced, since input price increases have been generalized.

Reported changes in profit margins during the first bimester of 2023 relative to the pre-pandemic period

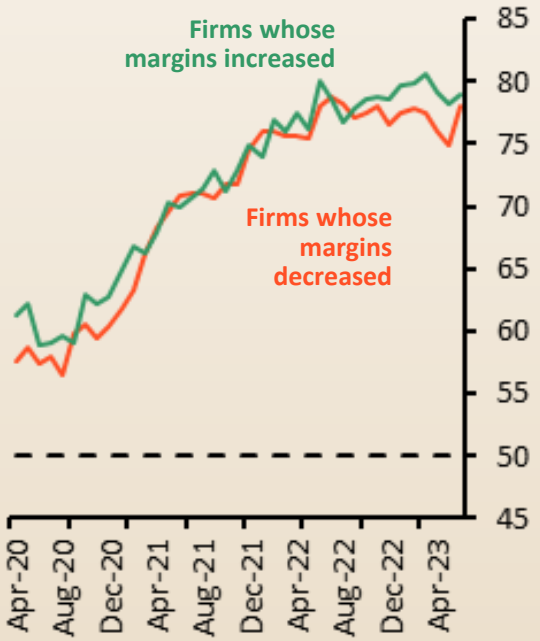
Percentage of firms



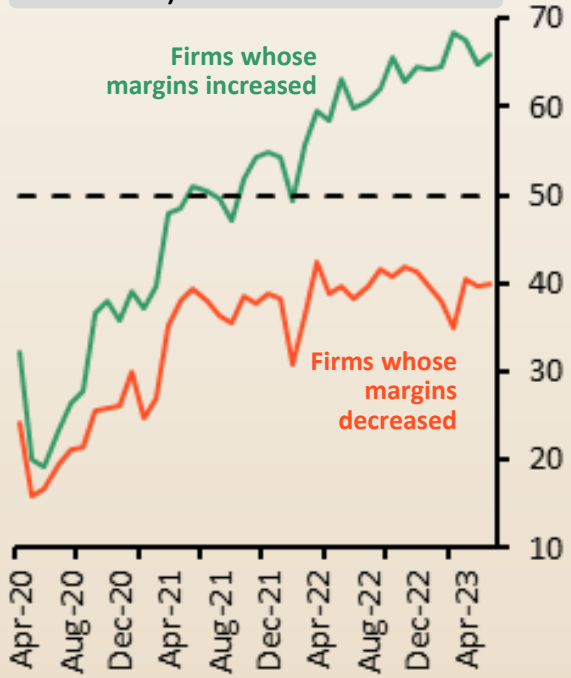
Evolution of different indicators as compared to the pre-pandemic period

Diffusion indices of the change in each month relative to the same month of 2019

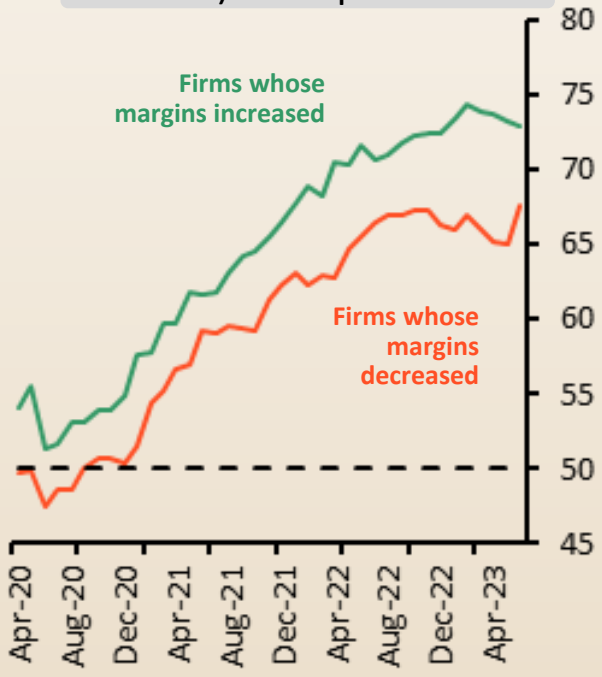
a) Input prices



b) Production



c) Sales prices

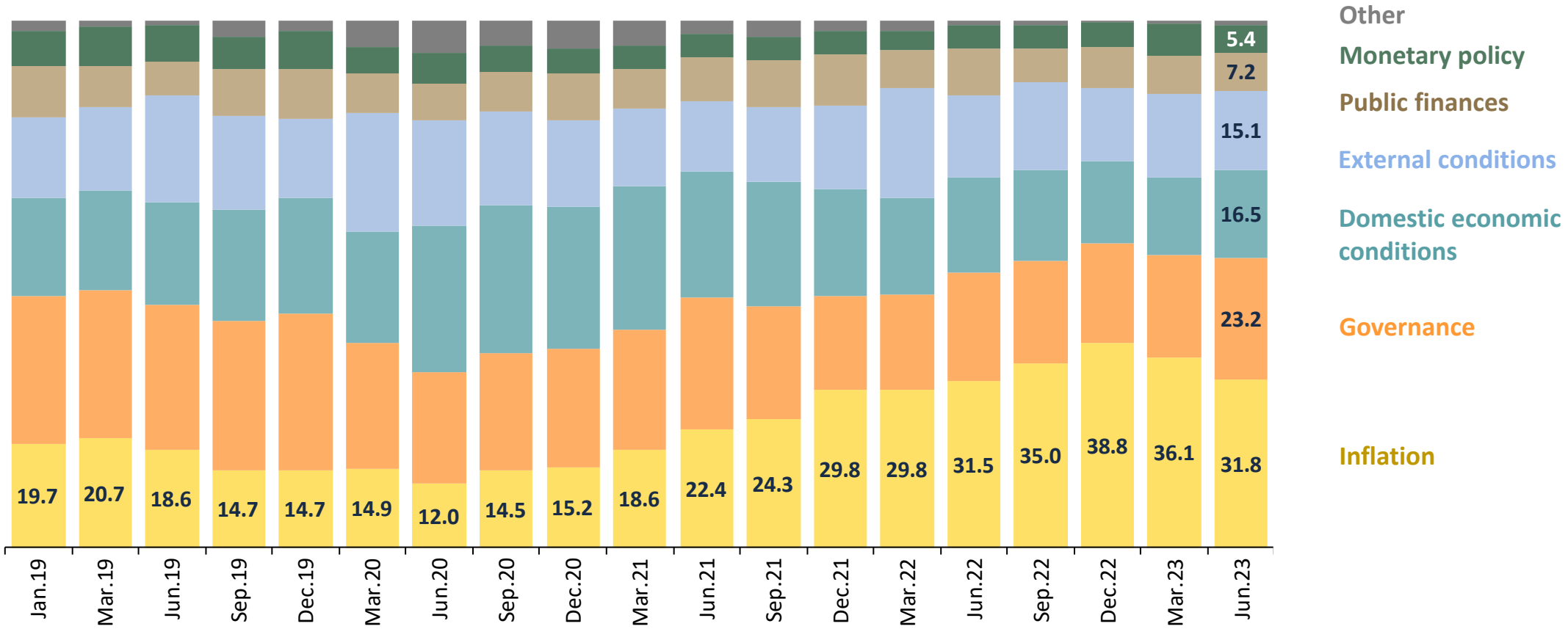


Source: Prepared by Banco de México with information from the EMAER surveys carried out between March 2020 and March 2023. Results obtained from the questions: "For the period Jan.-Feb. 2023 vs. Jan.-Feb. 2019, indicate how the average profit margin of your company behaved" and "Indicate the behavior of the following variables of your company in the previous month compared to the same month of 2019, before the implementation of contingency measures due to the spread of COVID-19." The EMAER is representative of businesses with more than 100 workers in the manufacturing and non-manufacturing sectors.

Business agents' response distribution when asked about the top three factors that could hinder growth of economic activity in their entities over the next six months

Percentage of responses

Based on data collected between June 1 and 30, 2023[1/]



1/ Question: What do you consider to be the three main factors limiting the growth of economic activity in your state over the next six months? This question is similar to the one included in the questionnaire of the Survey on Expectations of Private Sector Economic Specialists. Figures for June 2023 were obtained based on information collected between June 1 and 30, 2023.

Source: Banco de México.

Business agents' opinion on risks to regional economic activity (based on data collected between June 26 and July 20, 2023) 1/

Downward risks

- That public safety indicators deteriorate.
- That public spending is lower than expected.
- That inflation persists at high levels.

Upward risks

- That public spending, particularly investment in infrastructure projects, is higher than expected.
- That the reduction in inflation is consolidated.
- That more favorable conditions are observed, both domestically and internationally, thus promoting higher levels of private investment.

1/ Results obtained from the questions: "What are the 2 main events/situations/facts that if they were to occur would boost economic development in your state over the next 12 months?" and "What are the 2 main events/situations/facts that if they were to occur would limit economic development in your state over the next 12 months?", included in the interviews conducted by Banco de México between June 26 and July 20, 2023.

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Final remarks

- **Looking ahead, a complex and uncertain environment is anticipated, which poses significant challenges for regional growth.** Particularly**:**
  - That a possible weakening of the US economy affects exporting states in the Northern and Central regions or those receiving a significant inflow of remittances or international tourists.
  - That public safety conditions are not sufficiently favorable for economic activity in certain areas of the country.
  - That adverse weather events occur, affecting the economic performance of those states most exposed to such phenomena.
- **In order to address the challenges to achieve greater growth and take advantage of the opportunities posed by the global reconfiguration of production processes**, it is necessary to foster adequate conditions to encourage investment to flow not only to regions traditionally receiving its largest share, but also to the Southern one. To achieve this, it is necessary to:
  - **Continue strengthening the rule of law** in order to provide greater certainty to firms, facilitate their operations and reduce their costs.
  - **Continue developing infrastructure projects** that improve regional interconnectivity and facilitate access to energy sources in an efficient and sustainable manner.
  - **Continue encouraging human capital formation** to create a labor supply that satisfies the hiring needs of firms and increases workers' income.

Regional Economic Report

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September 2023

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Published-General Purpose

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