

Regional Economic Report

January – March 2019

BANCO DE MÉXICO

June 13th, 2019

Outline

I. Regional Economic Report

II. Results January – March 2019

A. Economic activity

B. Inflation

C. Economic outlook

(based on data obtained between March 25th and April 25th, 2019)

III. Final Remarks

Regional Economic Report

- The Regional Economic Report is a quarterly publication on the recent trends in economic activity, inflation and business agents' expectations in Mexico's regions.[1]
- The information herein presented is taken into account by Banco de México's Governing Board when evaluating the economic situation and the forecast for the Mexican economy.
- The economic performance of the regions in Q1 2019 and the prospects for regional economic activity and inflation over the following 12 months are analyzed herein.

[1] For the purposes of this Report, the states of Mexico are grouped into the following four regions. Northern: Baja California, Chihuahua, Coahuila, Nuevo León, Sonora and Tamaulipas. North-Central: Aguascalientes, Baja California Sur, Colima, Durango, Jalisco, Michoacán, Nayarit, San Luis Potosí, Sinaloa and Zacatecas. Central: Ciudad de México, Estado de México, Guanajuato, Hidalgo, Morelos, Puebla, Querétaro and Tlaxcala. Southern: Campeche, Chiapas, Guerrero, Oaxaca, Quintana Roo, Tabasco, Veracruz and Yucatán.

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Economic activity

- During the first quarter of 2019, economic activity in Mexico contracted as compared to the previous quarter, deepening the weakness observed in late 2018.
  - ✓ This evolution can be attributed to both a moderation in global economic growth and a greater weakness of domestic demand, which was aggravated by some transitory factors.

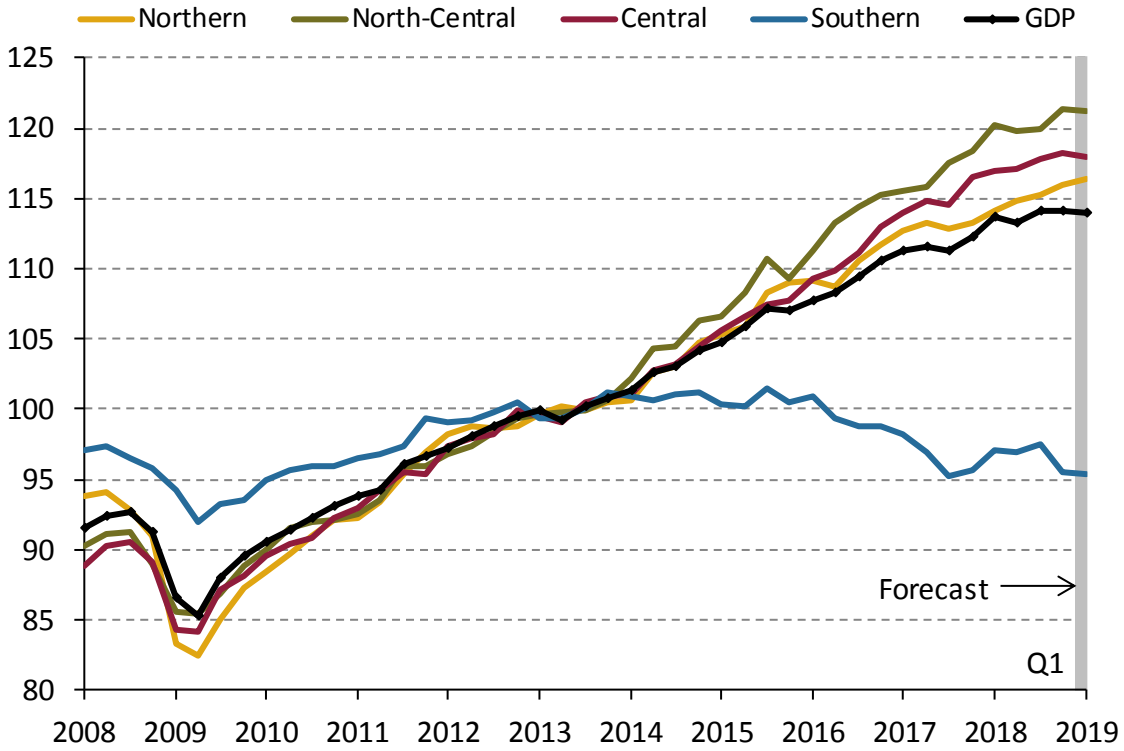
- The weakness of the Mexican economy was reflected in all regions.

Economic activity is estimated to have decelerated in Q1 2019 in the Northern region, while in the Central and Southern ones it contracted.

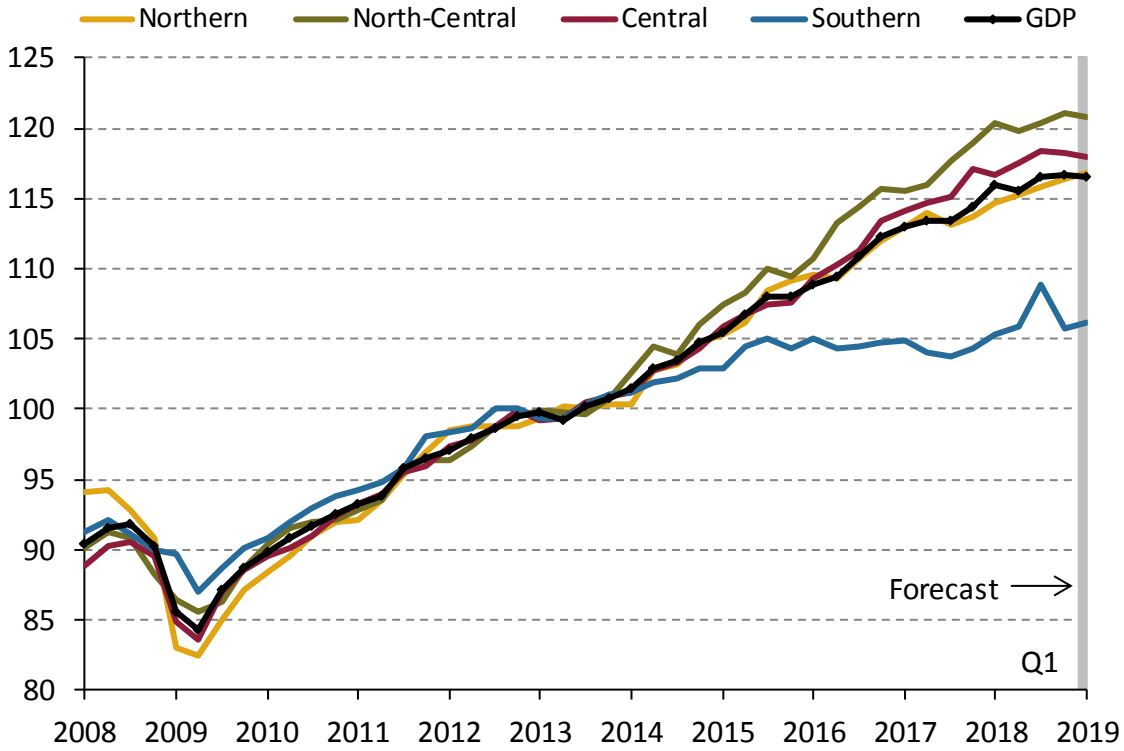
Quarterly Indicator of Regional Economic Activity 1/

Index 2013=100

Total



Non-oil



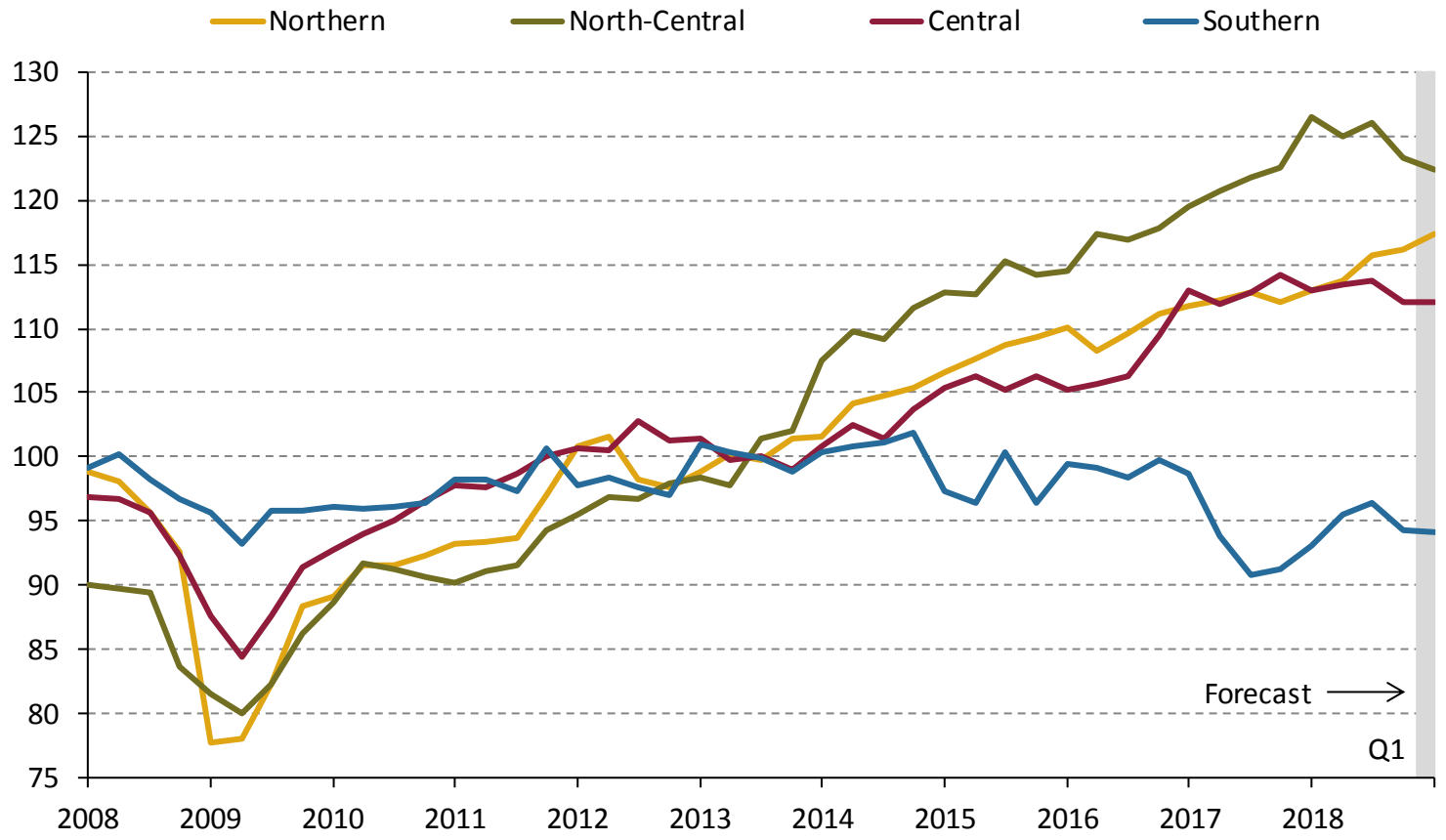
1/ The value of Gross Domestic Product (GDP) for Q1 2019 corresponds to the observed data.

Source: Estimated by Banco de México with seasonally adjusted series of domestic GDP and of the Quarterly Indicator of Economic Activity by State. Instituto Nacional de Estadística y Geografía (INEGI, for its acronym in Spanish). (Instituto INEGI).

During Q1 2019, manufacturing remained subdued. In the North-Central and Southern regions, manufacturing production is estimated to have continued contracting, while in the Central region it exhibited weakness and in the Northern one it is foreseen to have continued expanding.

Regional Manufacturing Indicator

Index 2013=100, quarterly average



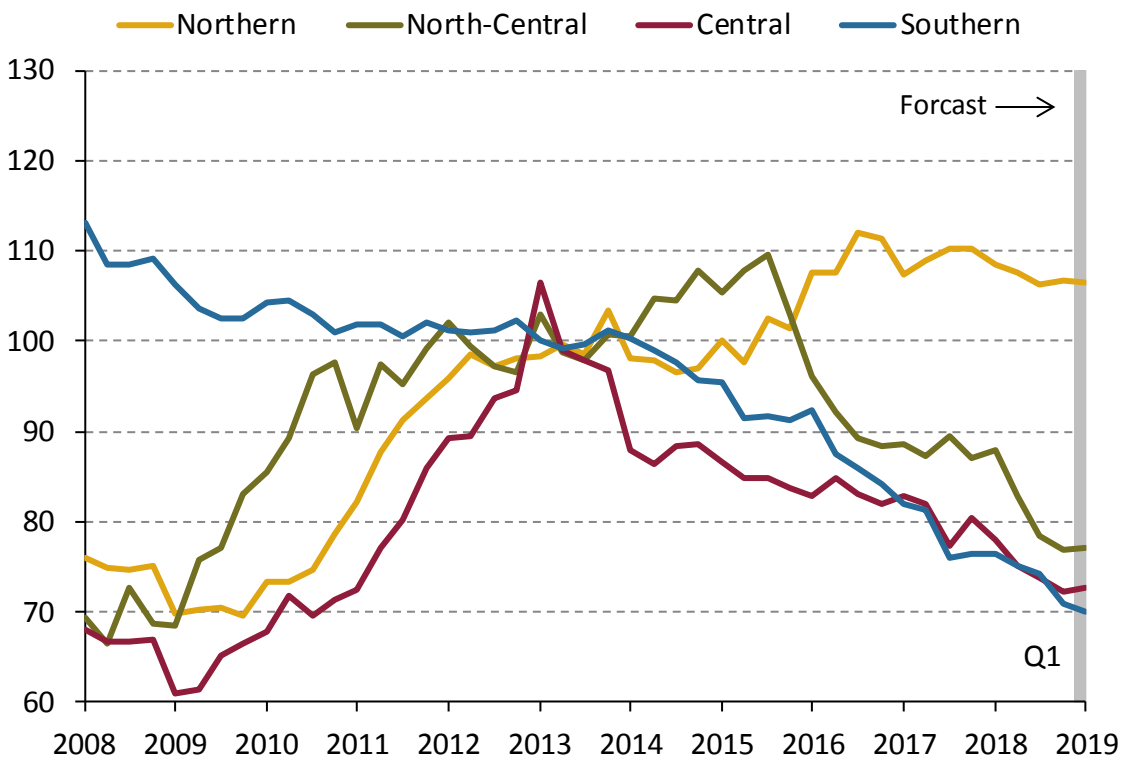
Source: Estimated by Banco de México with seasonally adjusted series of the Monthly Indicator of Manufacturing Activity by State. INEGI.

In the period January – March 2019, mining activity is estimated to have lost dynamism in the Northern region, while it maintained low levels in the rest of the regional economies.

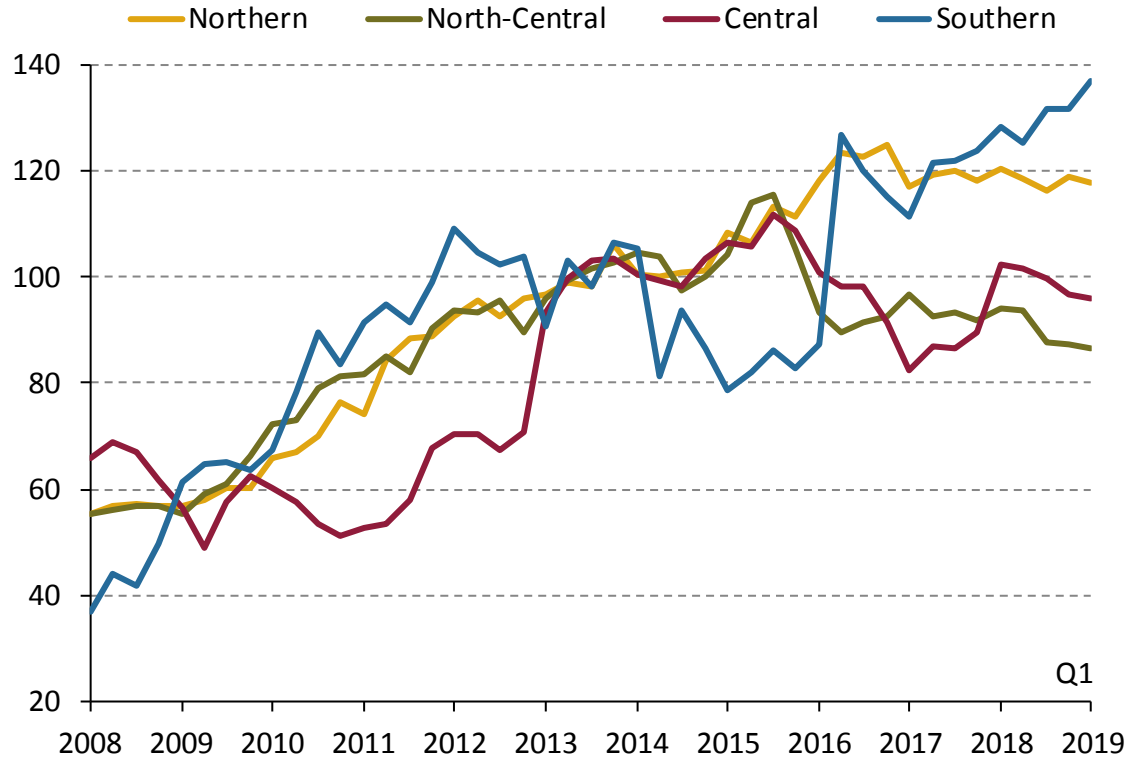
Regional Indicator of Mining, Quarrying, and Oil and Gas Extraction

Index 2013=100, quarterly average

Total



Metal and Non-metal Minerals



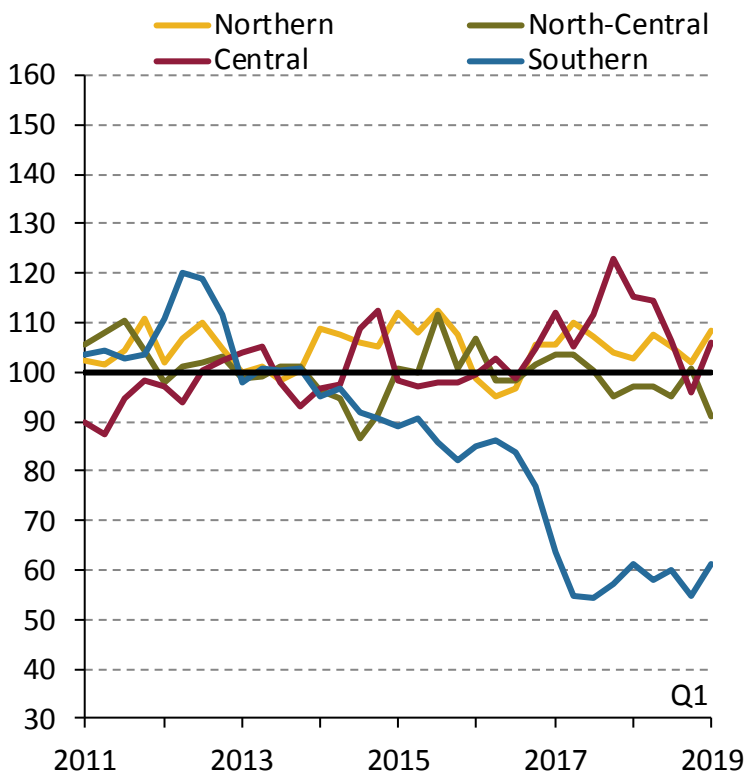
Source: Estimated and seasonally adjusted by Banco de México with the series of the Monthly Indicator of Mining Activity by State. INEGI.

Although in Q1 the real value of production expanded, on average, in all regions, except for the North-Central one, the real value of construction firms keeps exhibiting a weak performance in the four regions.

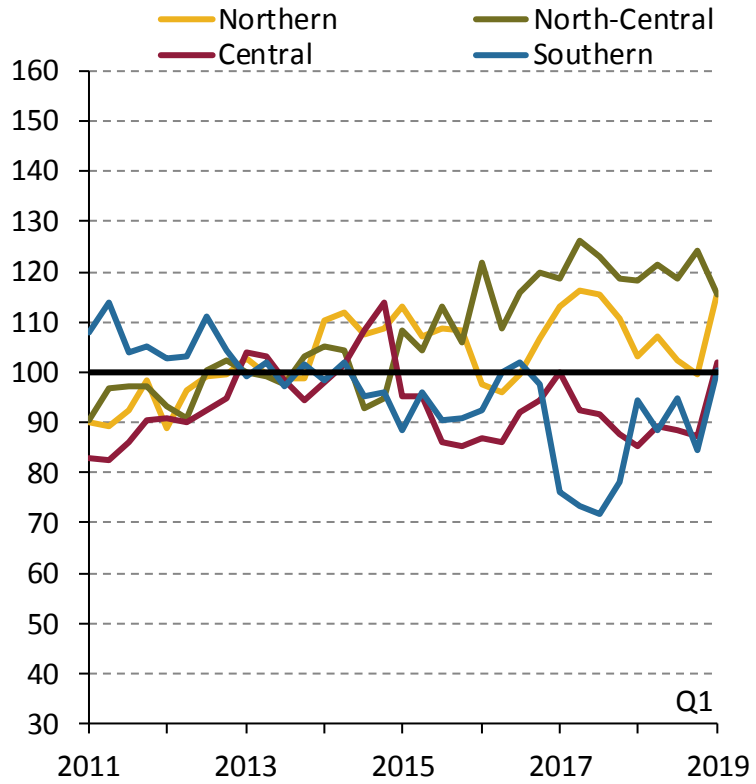
Real Value of Production in the Construction Industry by Region

Index 2013=100, quarterly average

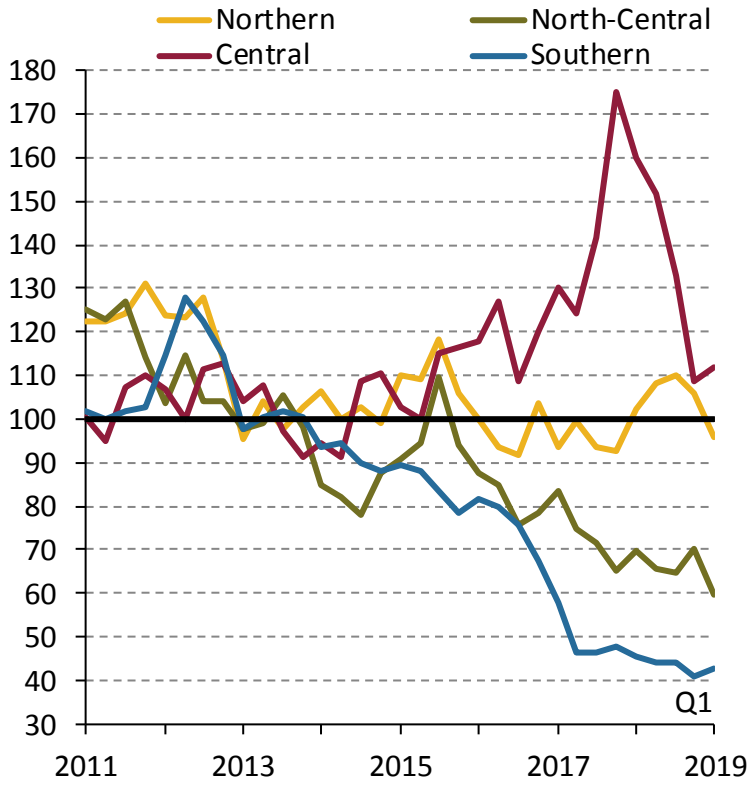
Total



Private



Public

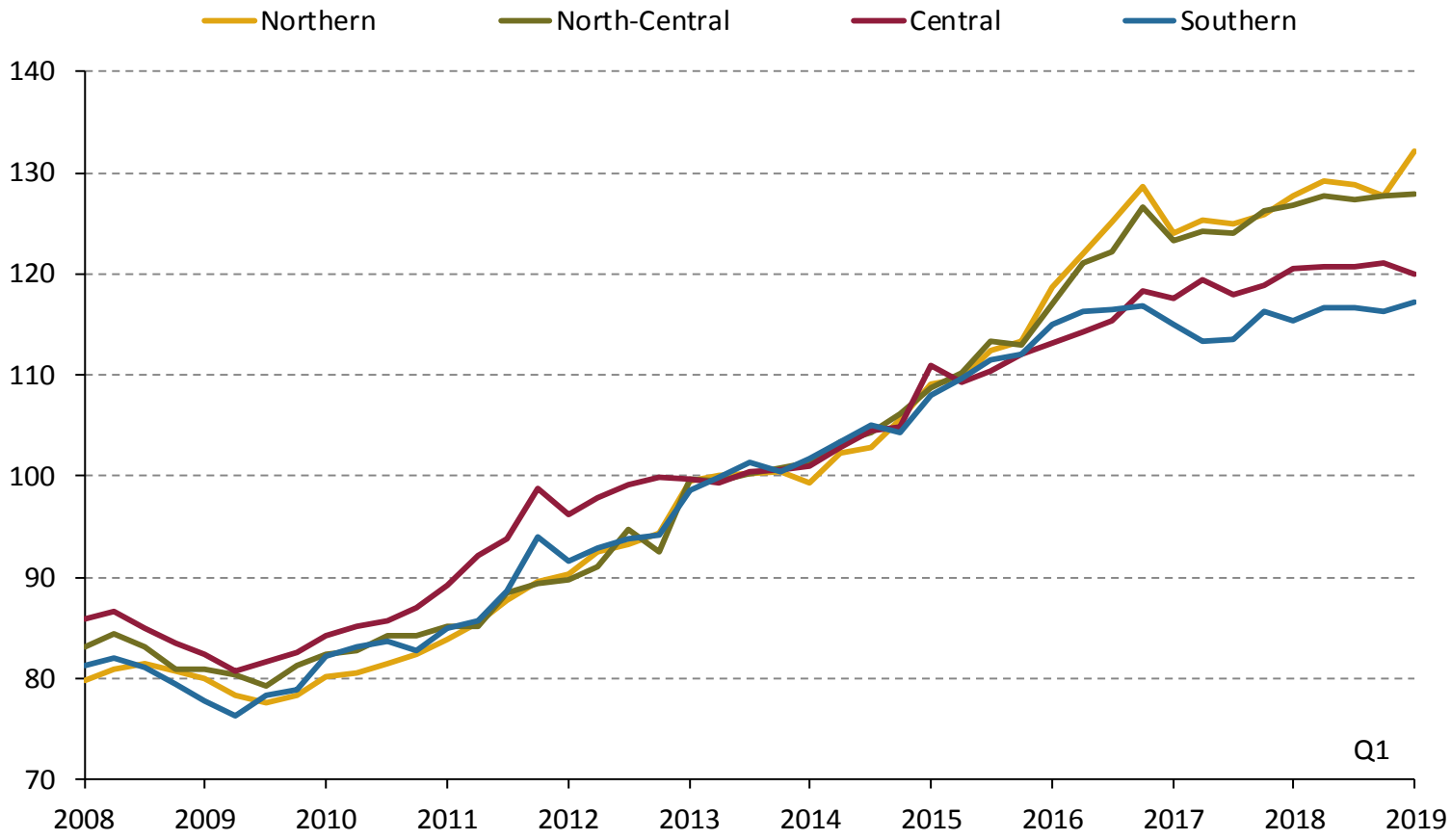


Source: Prepared and Seasonally adjusted by Banco de México with data from the National Survey of Construction Companies. INEGI.

Retail trade expanded in the Northern and Southern regions, and continued on an increasing trajectory in the North-Central one. In contrast, in the Central region, it contracted.

Regional Indicator of Trade

Index 2013=100, quarterly average



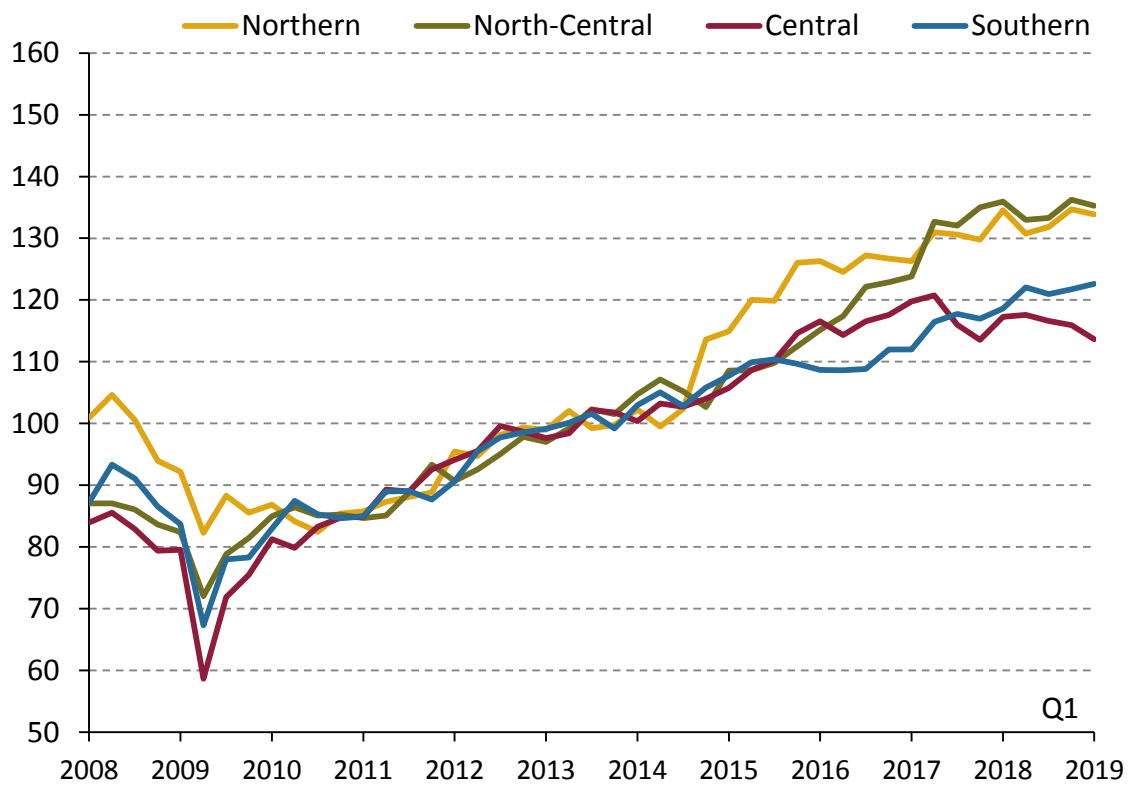
Source: Prepared and seasonally adjusted by Banco de México with the series of Revenues from the Supply of Goods and Services by Retail Business, by State. INEGI.

Activity in the tourism sector exhibited a weak performance. Hotel occupancy contracted in all regions, except for the Southern one. With respect to the inflow of passengers, it declined in the North-Central and Southern regions, while it maintained a positive trend in the Northern and the Central ones.

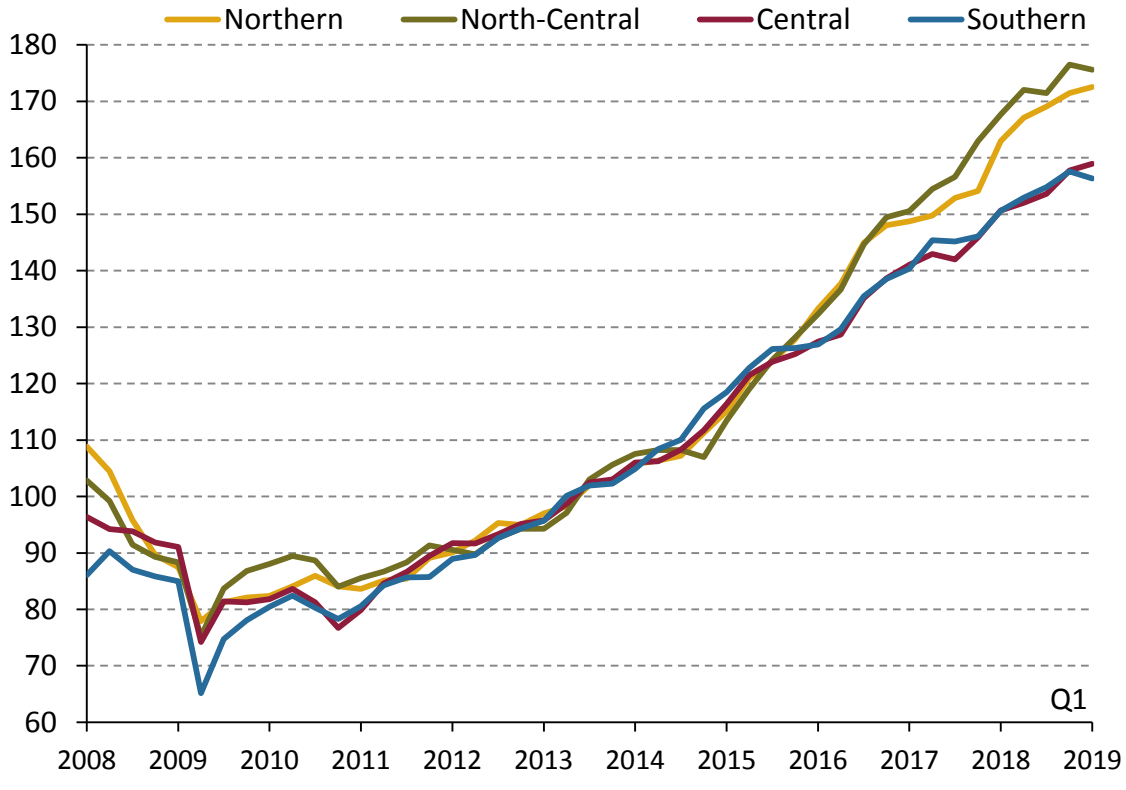
Regional Indicators of Tourism (Air Transportation and Traveler Accommodation)

Index 2013=100, quarterly average

Hotel Occupancy



Inflow of Passengers to Airports

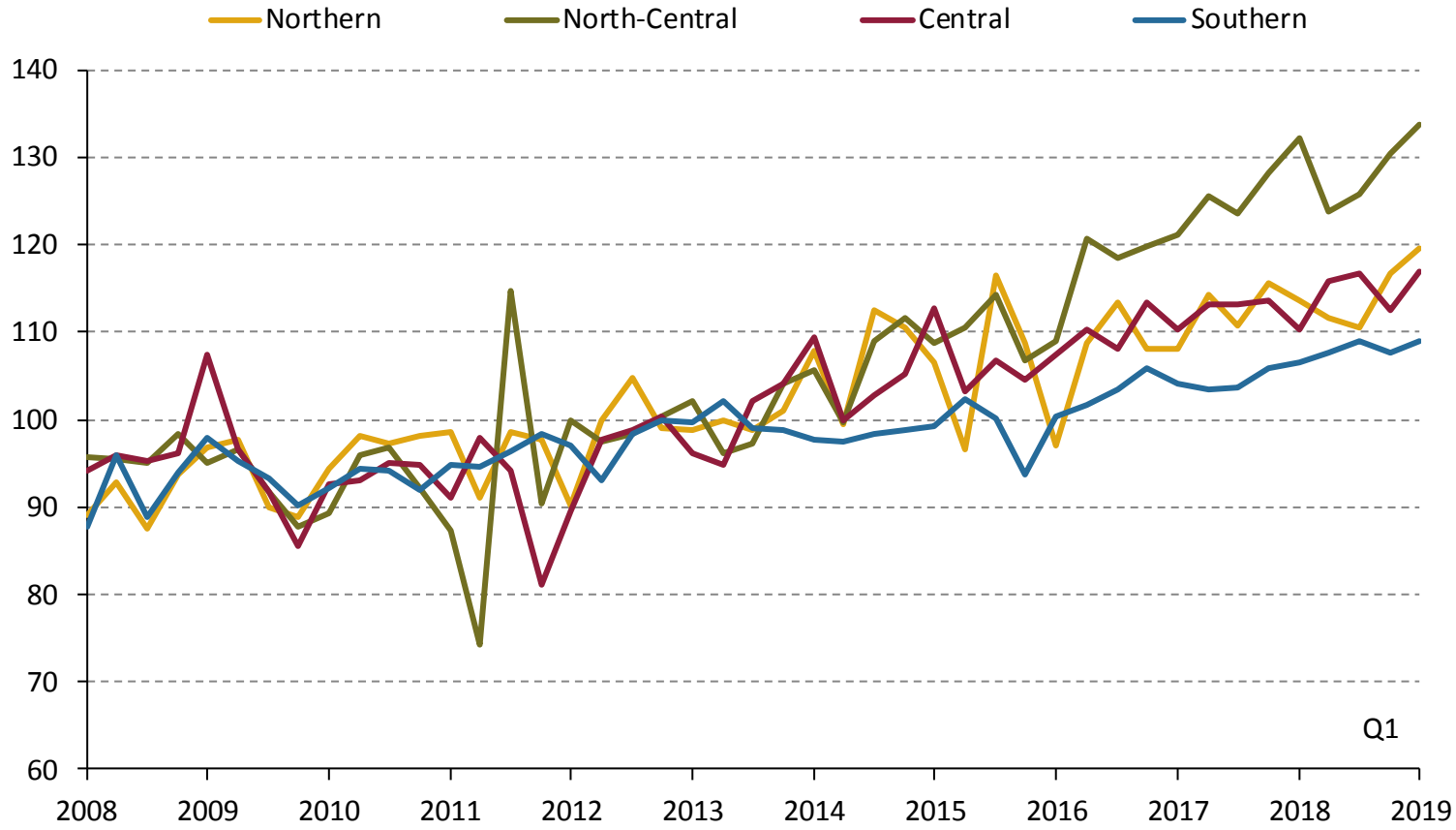


Source: Prepared and seasonally adjusted by Banco de México based on data from the Mexican Secretariat of Tourism and the state-owned company Airport and Auxiliary Services (ASA, for its acronym in Spanish).

The agricultural industry expanded in all regional economies. Indeed, in the Northern and North-Central regions, agricultural production continued to grow, while in the Central and the Southern regions it recovered slightly, after having contracted in Q4 2018.

Index of Regional Agricultural and Livestock Product Production

Index 2013=100, quarterly average



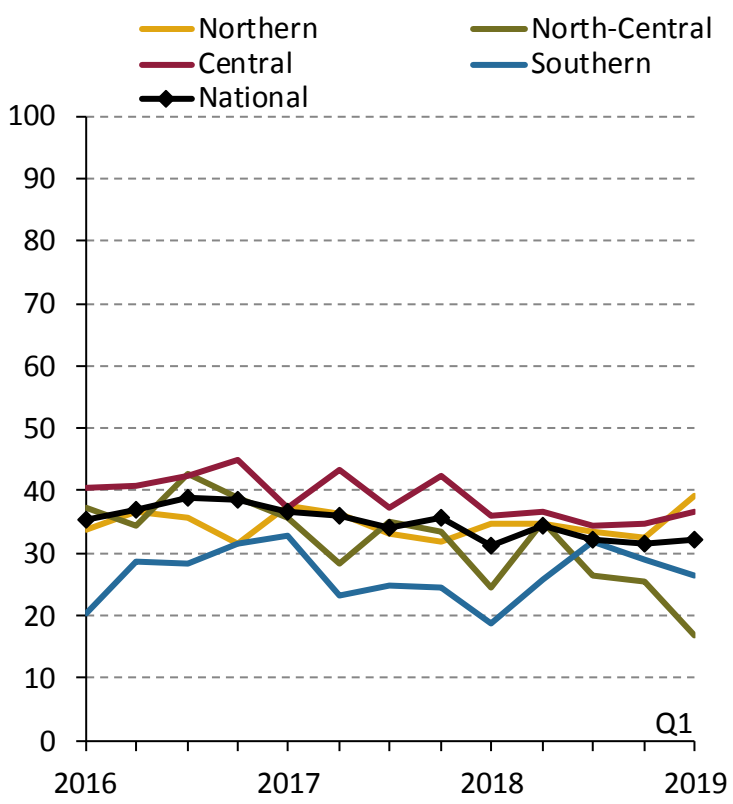
Source: Estimated and seasonally adjusted by Banco de México based on data from the Agricultural and Fisheries Information Service (SIAP, for its acronym in Spanish). It should be noted that, unlike GDP estimates, this indicator excludes information on the value generated by land cultivation and approximates a measurement of the gross production value, rather than that of added value generated in the sector.

The share of firms that resorted to financing their activities through commercial banks increased in the Northern and Central regions, while in the North-Central and Southern ones it declined. The share of firms that used financing by suppliers contracted across the four regional economies. Regarding financing with own resources, the share of firms grew in all regions, except for the Southern one.

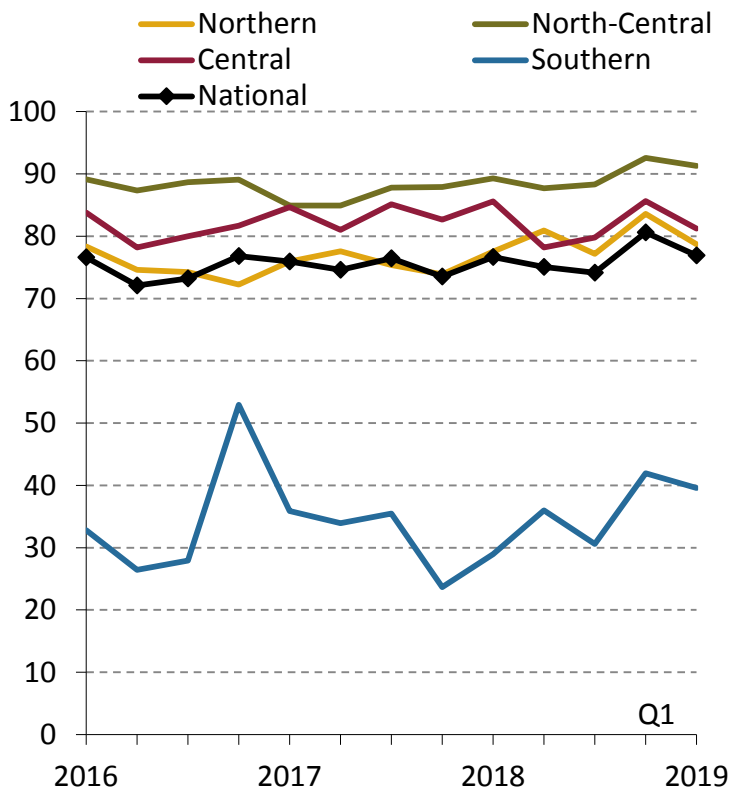
Main Sources of Financing by Firms in Q1

Percent of businesses that used each source of financing

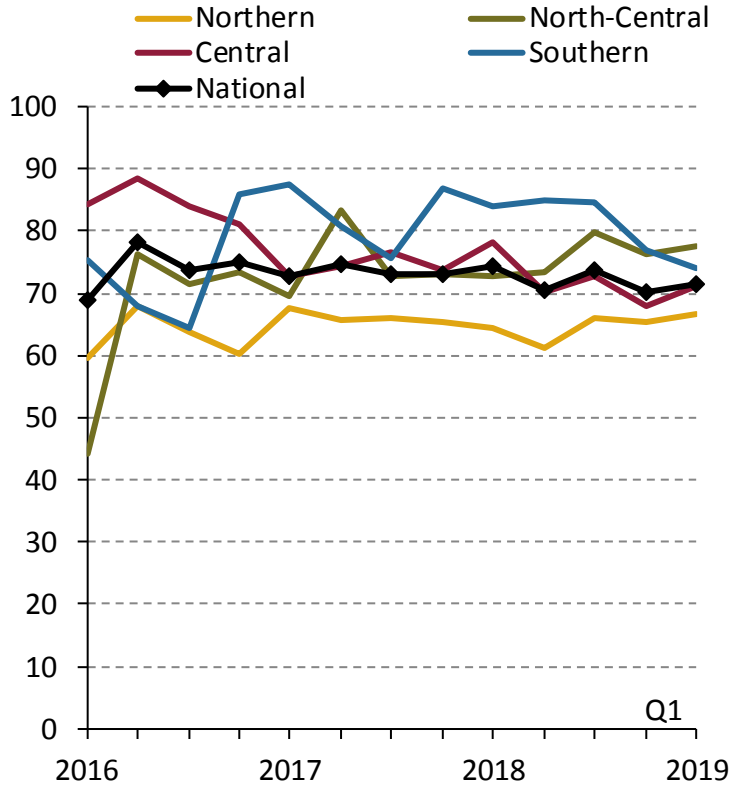
Commercial banks



Suppliers



Own resources



Source: Banco de México.

Box:
Regional Financial Development and Economic Growth

- International evidence indicates that deeper financial systems:
  - ✓ Provide tools to facilitate savings mobilization to productive uses more efficiently (by reducing transaction costs).
  - ✓ Allow business agents to smooth their consumption in an intertemporal manner.
  - ✓ Contribute to a greater accumulation of physical and human capital, which, in turn, leads to greater economic growth.
- This Box estimates the impact of commercial banks' credit to non-financial private firms on per capita GDP growth rate in Mexico.
  - ✓ The results suggest a positive impact of bank credit to firms, which is congruent with the emphasis that has been given to public policies seeking to stimulate the sound evolution of the financial system at the domestic and international level.

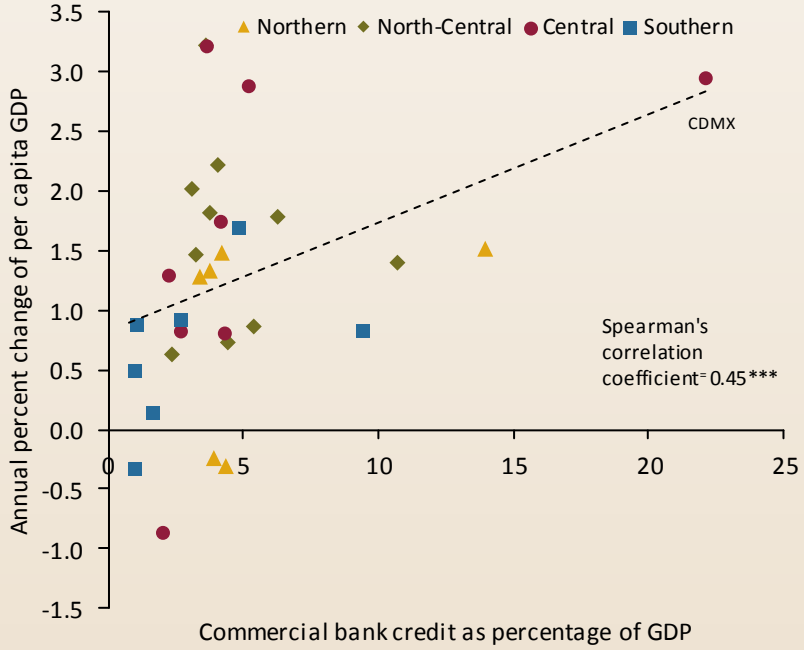
Box:
Regional Financial Development and Economic Growth

Evolution of Commercial Banks' Credit to Non-financial Private Firms, 2005-2017
Share of GDP



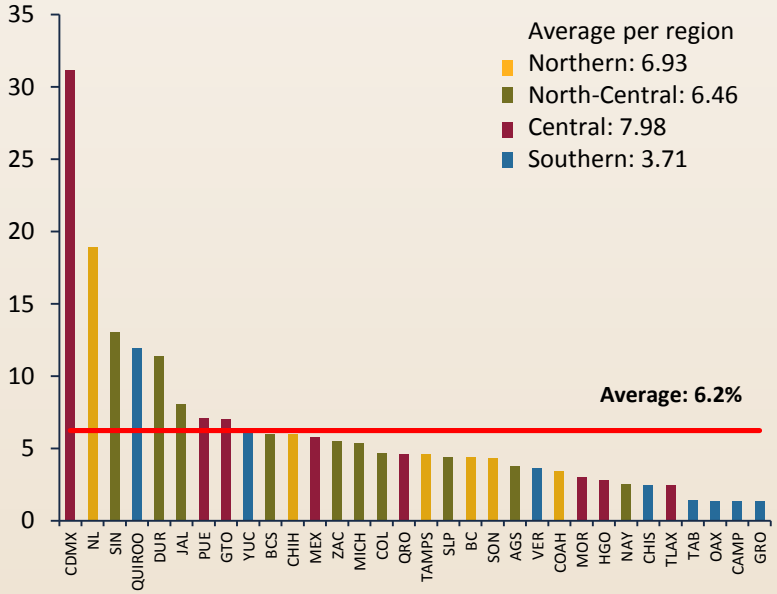
Source: Estimated by Banco de México with data from INEGI and own data.

Economic Growth and Commercial Banks' Credit to Non-Financial Private Firms, by State [1/]
Average 2005 – 2017



1/ ***. denotes statistical significance at 1%. Spearman's correlation coefficient is 0.41, and it is statistically significant at 5%, excluding Mexico city
Source: Estimated by Banco de México with data from INEGI and own data.

Commercial Banks' Credit to Firms, by State, 2017
Share of GDP



Source: Estimated by Banco de México with own data.

Box:
Regional Financial Development and Economic Growth

Dynamic Panel Estimations

Dependent variable: per capita GDP growth

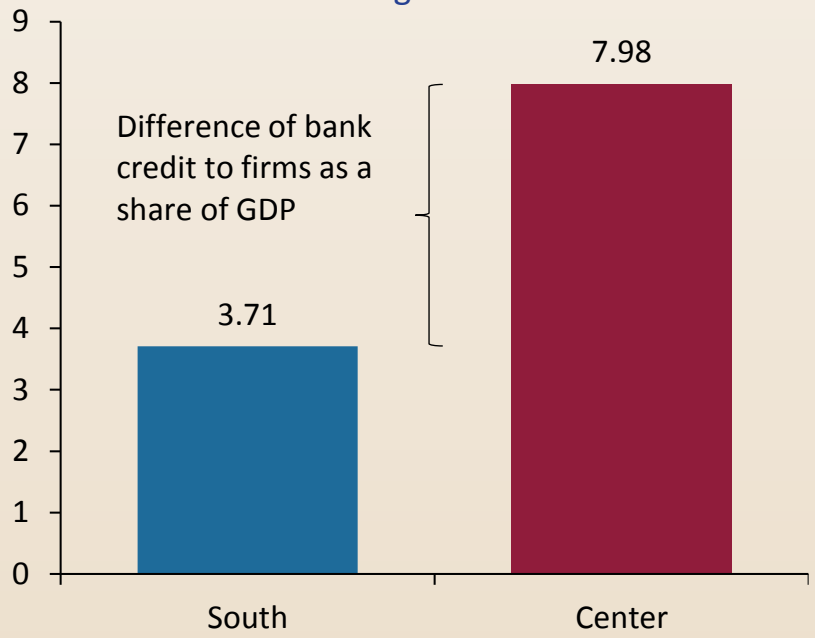
Variables	
Per capita GDP growth (t-1)	-0.179 ***
CREDIT	0.022 ***
Infrastructure	0.055 *
Public spending	-0.069 ***
Foreign Direct Investment (FDI)	0.006 *
Inflation	-0.086 ***
Human capital	0.104 ***
Crisis	-0.017 ***
Constant	-0.580 *

Note: ***, ** and * denote significance at 1, 5 and 10 percent, respectively.
Source: Estimated by Banco de México with own data and INEGI data.

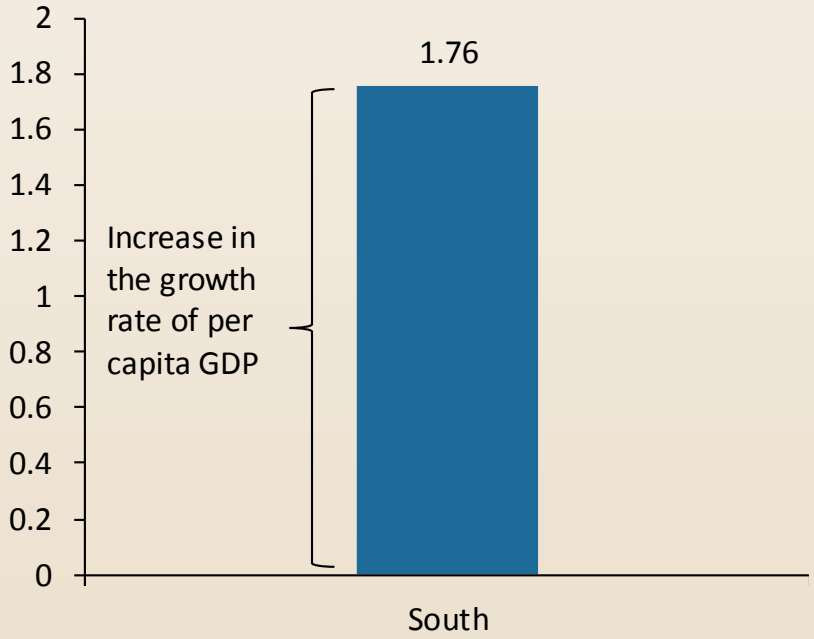
Box:
Regional Financial Development and Economic Growth

- If bank credit to firms as a share of GDP in the Southern region were to increase to the level of the Central region, the annual growth rate of real per capita GDP of the South would increase by 1.76 p.p.

Commercial Banks' Credit to Non-financial Private Firms
Percentage of GDP



Counterfactual Increase in Per Capita GDP Growth
Percentage points



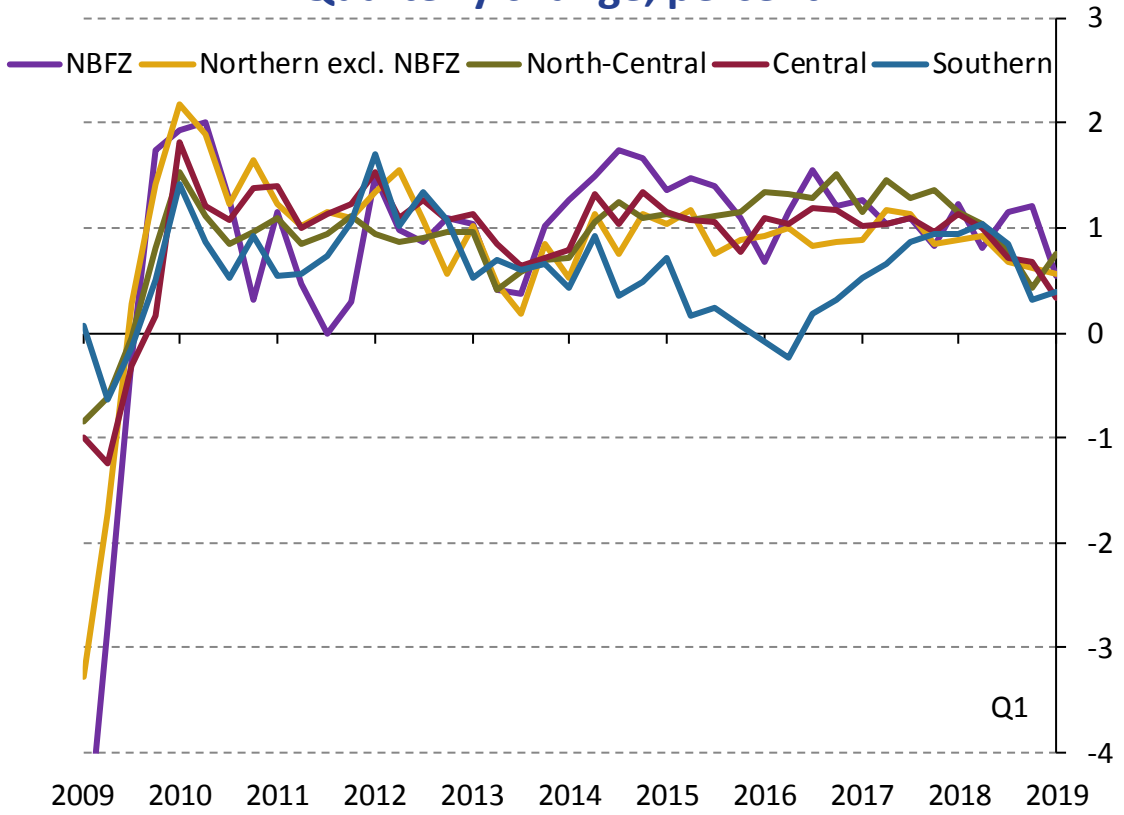
Box:
Regional Financial Development and Economic Growth

- This Box shows that financial development, measured with bank credit to firms, has contributed to raise economic growth across Mexico's regional economies.
- However, the fact that the degree of financial development is far from homogenous across the regional economies opens new opportunities for strategies, such as those recently announced by the financial authorities, to be translated into a greater economic growth in the states, particularly those lagging behind.
- Nevertheless, it should be kept in mind that the development of the financial system should be sound and sustainable, in addition to the fact that this evolution is merely one of the many factors necessary to propitiate higher rates of economic growth at both regional and national levels.
  - ✓ Factors such as the quality of public infrastructure, human capital, an efficient regulatory framework and strengthening of the rule of law, among others, are also crucial to reach higher levels of economic growth and population welfare.

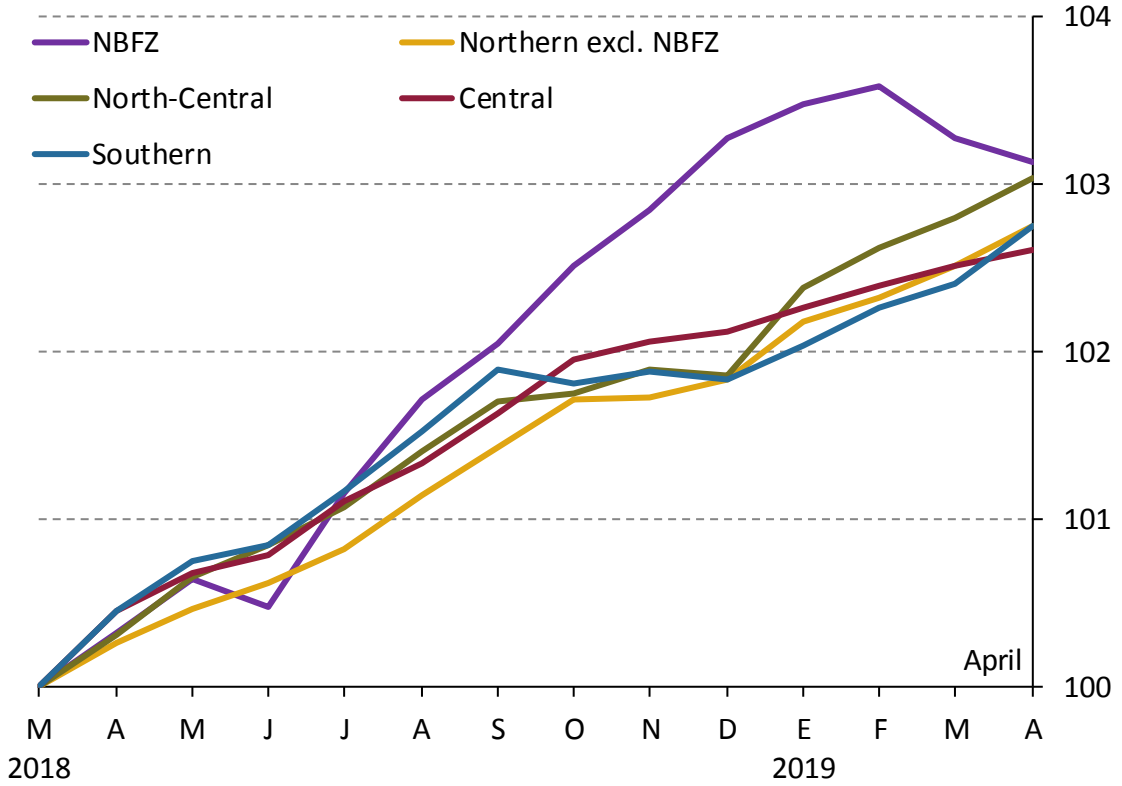
Regarding the evolution of formal employment during the analyzed period, measured by the number of IMSS-insured workers, it is worth noting the decrease in the number of workers in the Northern Border Free Zone (NBFZ) since February 2019.

Number of IMSS-insured Workers [1/]

Quarterly change, percent



Index 2013=100

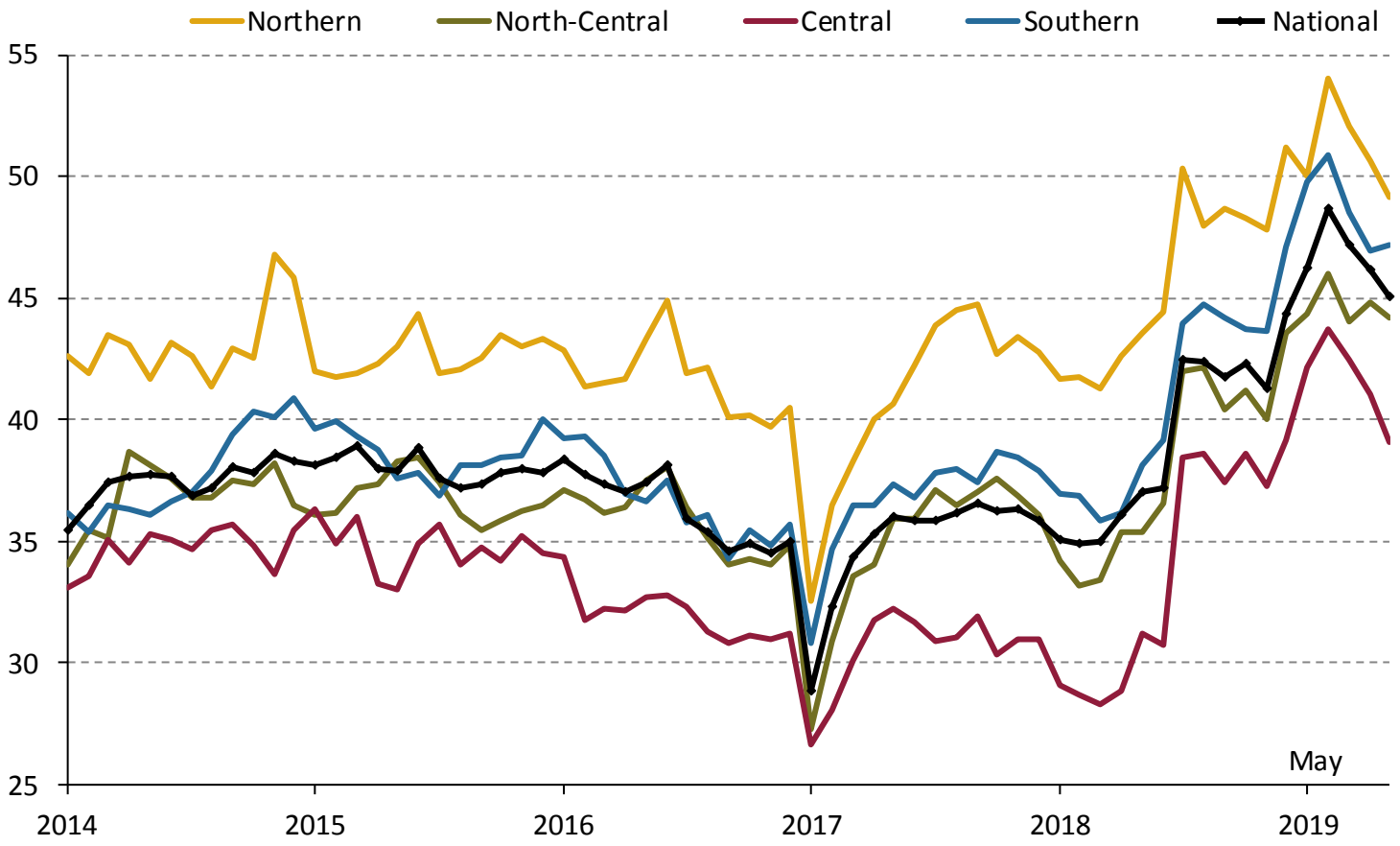


1/ Permanent and temporary jobs in urban areas.
Source: Estimated and seasonally adjusted by Banco de México with IMSS data.

The Consumer Confidence Index remained at particularly high levels during the period January – May 2019 in the four regional economies, despite the reductions that were usually registered between March and May.

Consumer Confidence

Balance of responses



Source: Prepared and seasonally adjusted by Banco de México with data from the series of the Consumer Confidence Index (INEGI) and Banco de México.

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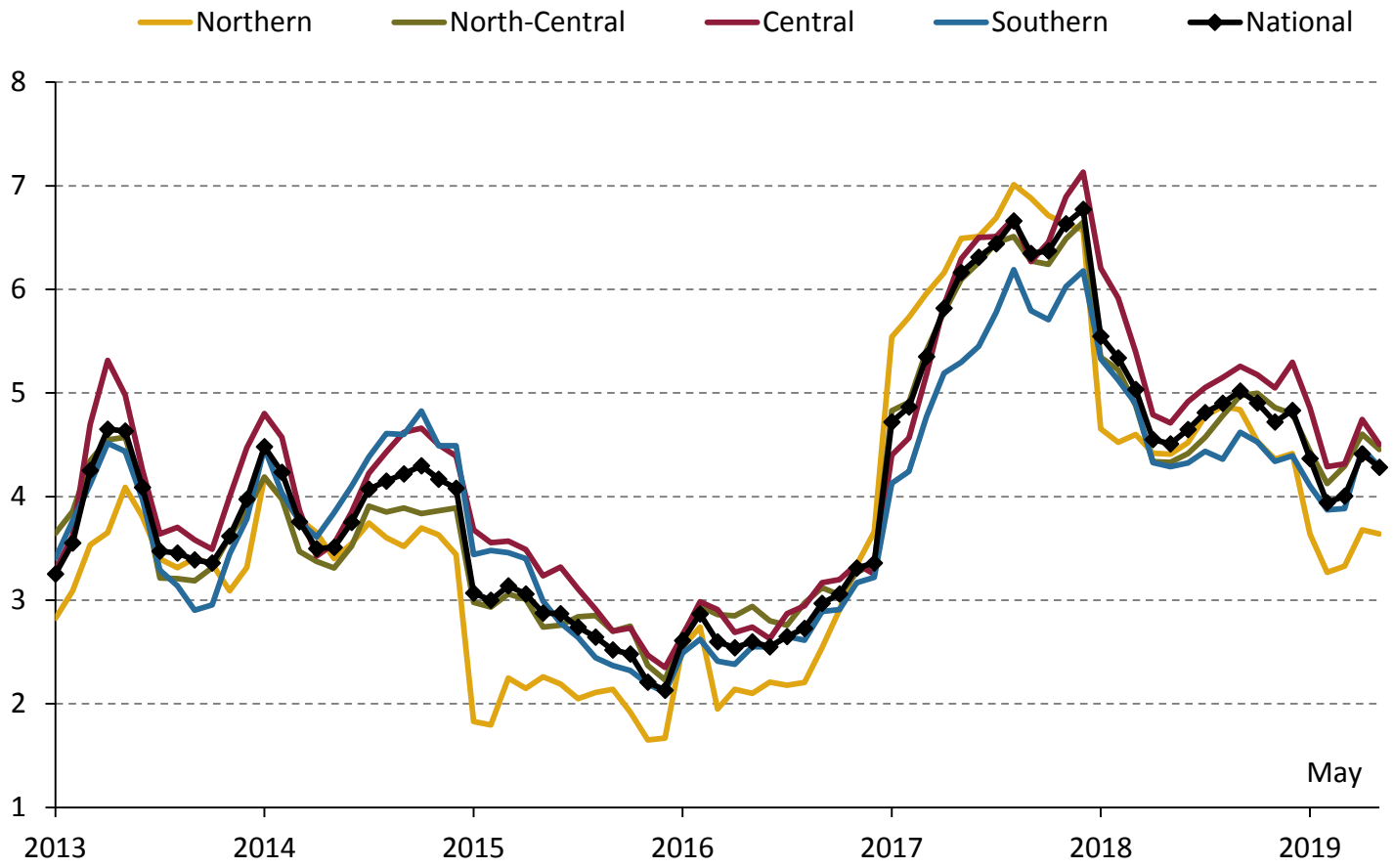
(based on data obtained between March 25th and April 25th, 2019)

III. Final Remarks

Between Q4 2018 and Q1 2019, all regions considered in this report observed declines in their levels of average annual inflation. The reductions in regional inflations at the beginning of 2019 were largely due to the lower levels of non-core inflation.

Annual Headline Inflation, by Region

Data in percent

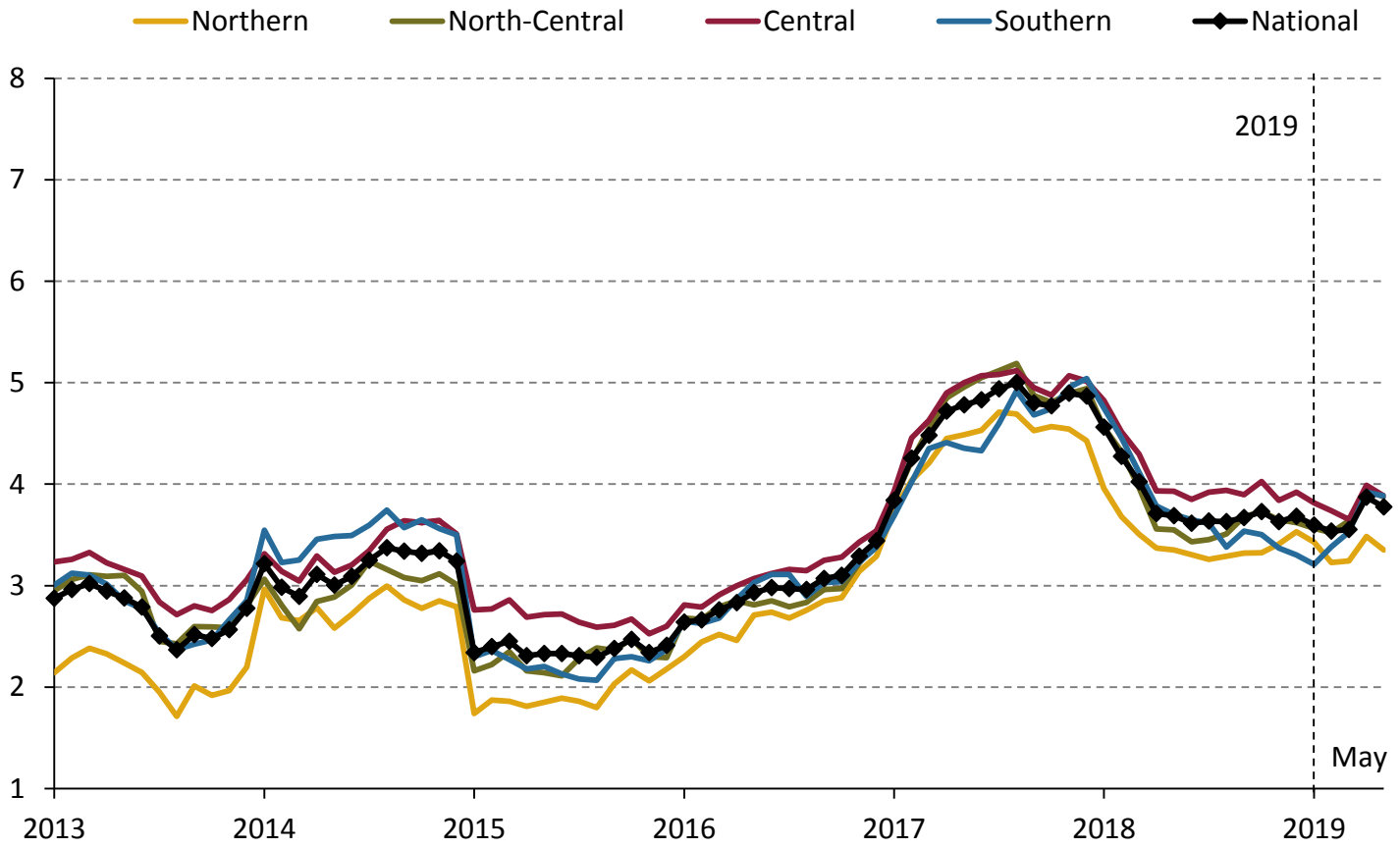


Source: Prepared by Banco de México with data from INEGI and Banco de México.

Although in January and February core inflation decreased moderately in all regions, in March this indicator started to show a change of trend, in April it rebounded in all regions, and slightly declined in May.

Annual Core Inflation, by Region

Data in percent

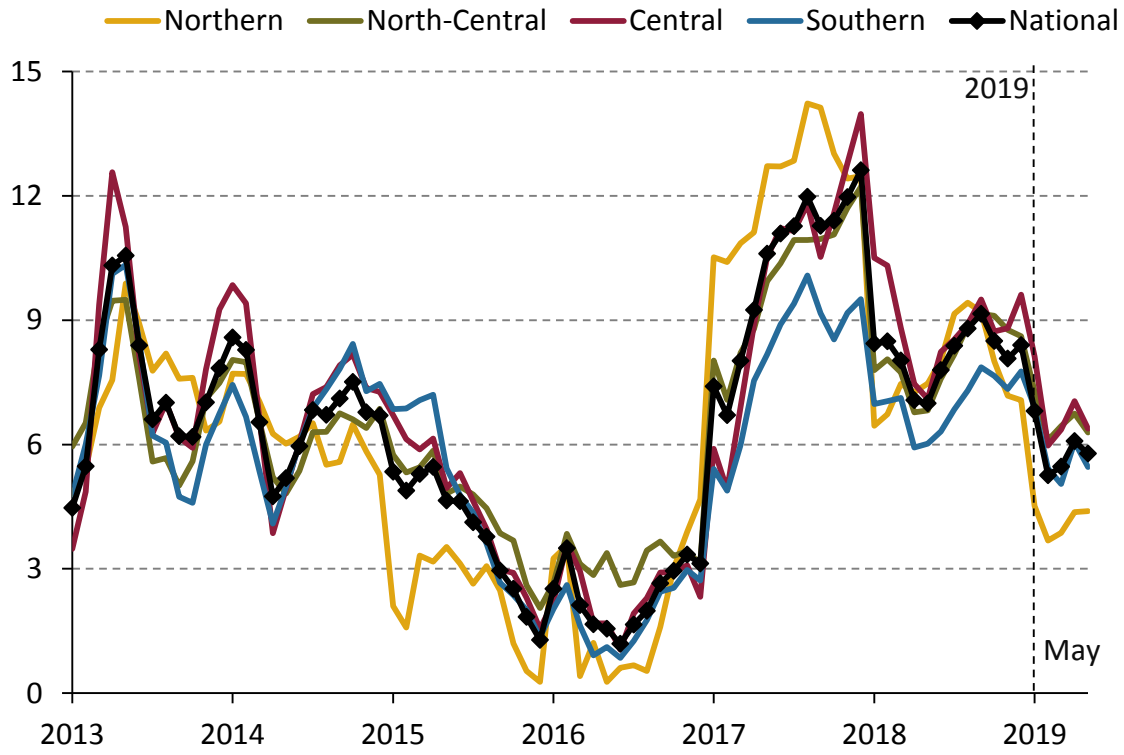


Source: Prepared by Banco de México with data from INEGI and own data.

In the first two months of 2019, annual non-core inflation continued the decline, which, in general terms, had been observed in all regions since the beginning of Q4 2018. However, such trend began to reverse in March.

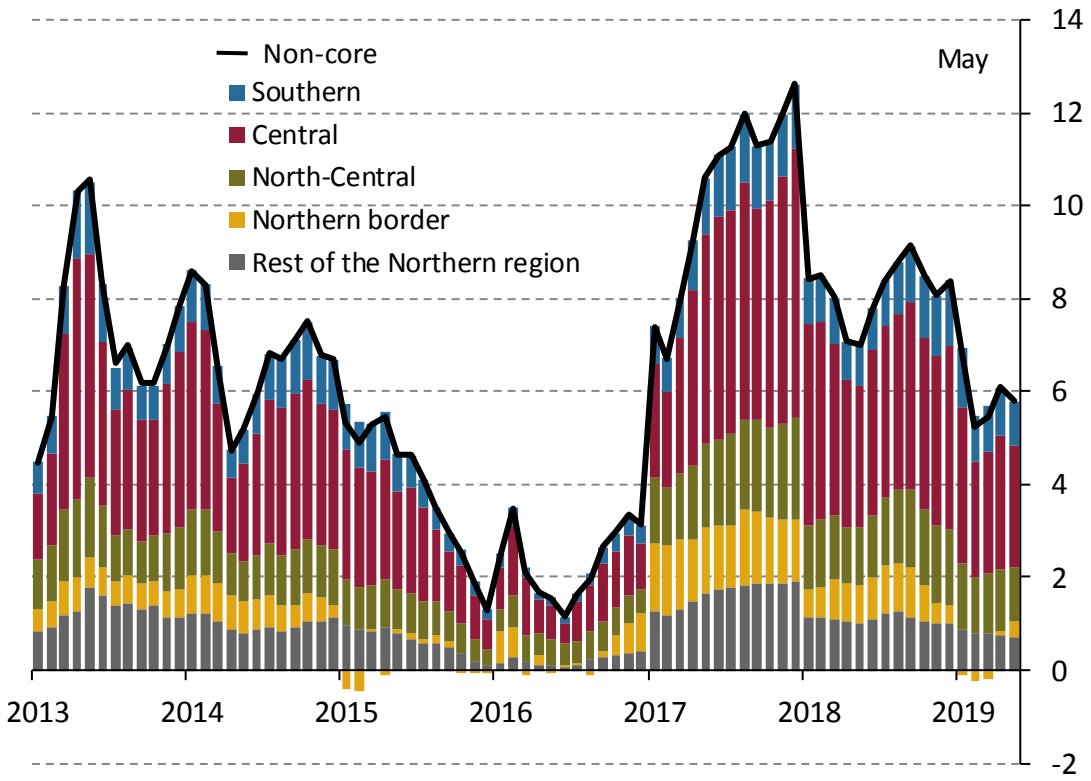
Annual Non-core Inflation, by Region

Data in percent



Impacts on Mexico's Annual Non-core Inflation

In percentage points



Source: Prepared by Banco de México with data from INEGI and Banco de México.

Box:
Impact of Competition on Gasoline Prices and Markups at the Regional Level

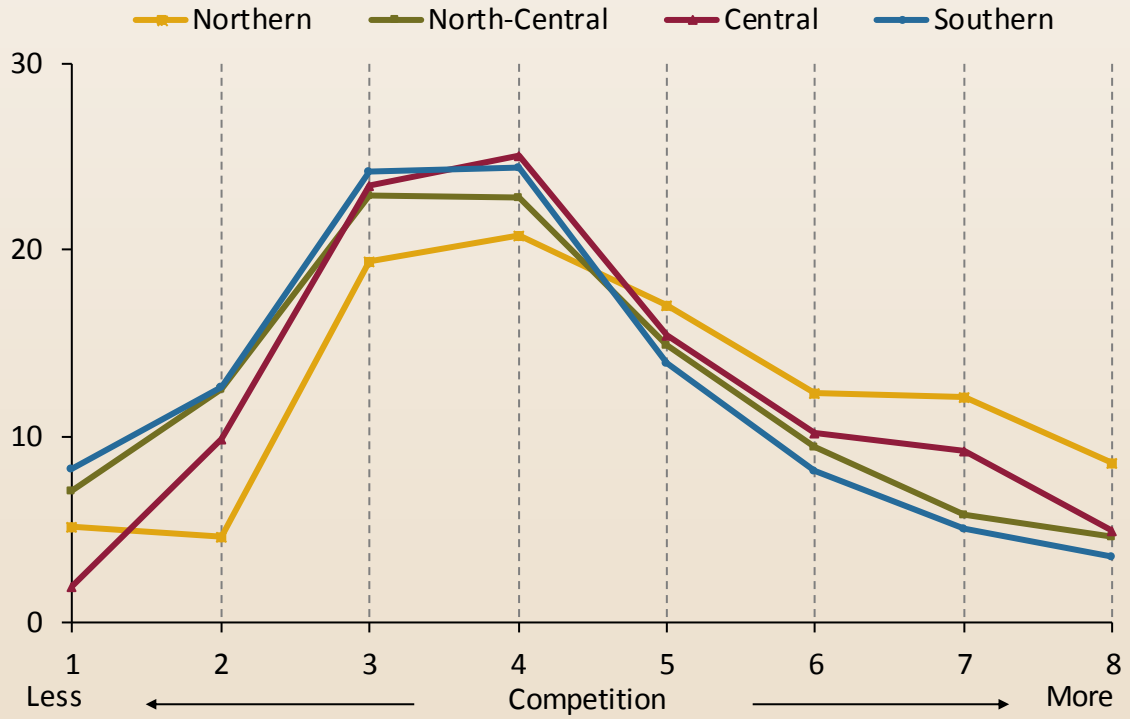
- This Box analyzes the behavior of regular gasoline consumer prices at the regional level during a period characterized by diminishing wholesale prices (at distribution terminals, TAR), and the relation of this behavior to competition among stations.
- It is found that in all regional economies the consumer price decreased to a lesser degree as compared to the average wholesale price corresponding to each region. Therefore, markups increased.
    - In addition, markups increased to a greater degree in the Central and North-Central regions, followed by the Southern one, and, to a lower degree, the Northern region.
- Two effects can be identified in these differentiated results:
    1. Composition effect: the more gas stations face higher competition in the region, the less the markups increase.
    2. Performance effect: within each group of competition (defined according to the number of "neighbors" that a given gas station has), markups increase at a different magnitude in each region.

Box:
Impact of Competition on Gasoline Prices and Markups at the Regional Level

- The Northern region has a higher concentration of high competition gas stations, and also the largest proportion of high competition gas stations, in contrast to the Southern one.

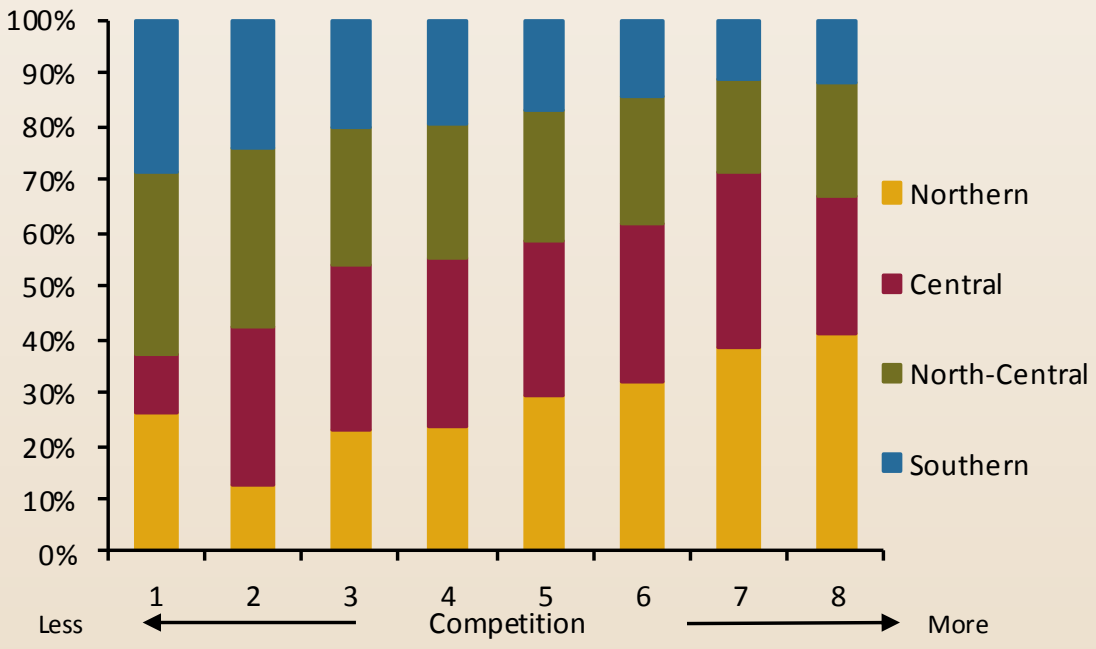
Distribution of Gas Stations by Competition in each Region*

Share in percent (%)



Share of Gas Stations by Region for each Group of Competition

Share in percent (%)



*For each region, the total share of gas stations in each group of competition is 100%.

Source: Estimated by Banco de México with data from the Energy Regulatory Commission (Comisión Reguladora de Energía, CRE).

Box:
Impact of Competition on Gasoline Prices and Markups at the Regional Level

- Given the defined competition groups, the increase in the markup is estimated during the period in which TAR prices declined.

Increase in Markups by Region and Competition Group under a 1-peso Reduction in TAR Prices

Greater competition →

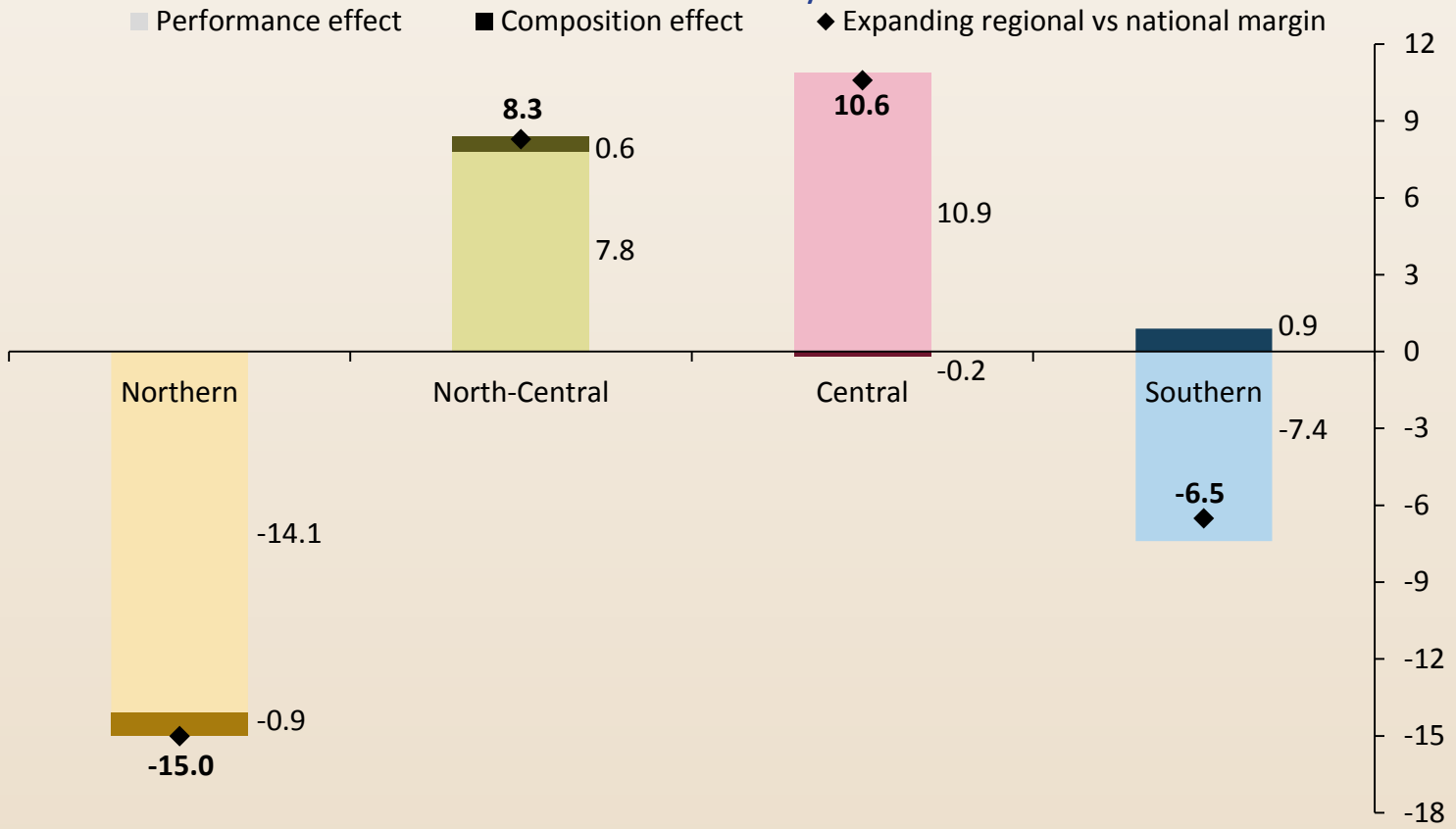
	G1	G2	G3	G4	G5	G6	G7	G8	Average increase
National	$ 0.73	$ 0.70	$ 0.66	$ 0.65	$ 0.63	$ 0.62	$ 0.59	$ 0.55	$ 0.65
Northern	$ 0.67	$ 0.63	$ 0.53	$ 0.51	$ 0.48	$ 0.43	$ 0.45	$ 0.40	$ 0.50
Southern	$ 0.72	$ 0.60	$ 0.60	$ 0.59	$ 0.56	$ 0.53	$ 0.45	$ 0.35	$ 0.58
Central	$ 0.73	$ 0.75	$ 0.73	$ 0.75	$ 0.77	$ 0.79	$ 0.75	$ 0.78	$ 0.75
North-Central	$ 0.78	$ 0.76	$ 0.74	$ 0.72	$ 0.70	$ 0.72	$ 0.70	$ 0.69	$ 0.73

Note: The indicated change is between October 11, 2018 and January 10, 2019. This period is characterized by a decrease in all TAR prices, from a local maximum to local minimum. The indicated changes are normalized and therefore each one is interpreted as the change in the sales price under a 1-peso reduction in the average TAR price in the corresponding region. Weighted measures are estimated using the number of gas station in each competition group by region.
Source: Prepared by Banco de México with CRE data.

Box:
Impact of Competition on Gasoline Prices and Markups at the Regional Level

Contribution of Composition/Performance Effects to the Regional Differences in the Increase of Markups, with respect to the National Level

Cents by liter



Source: Prepared by Banco de México with CRE data.

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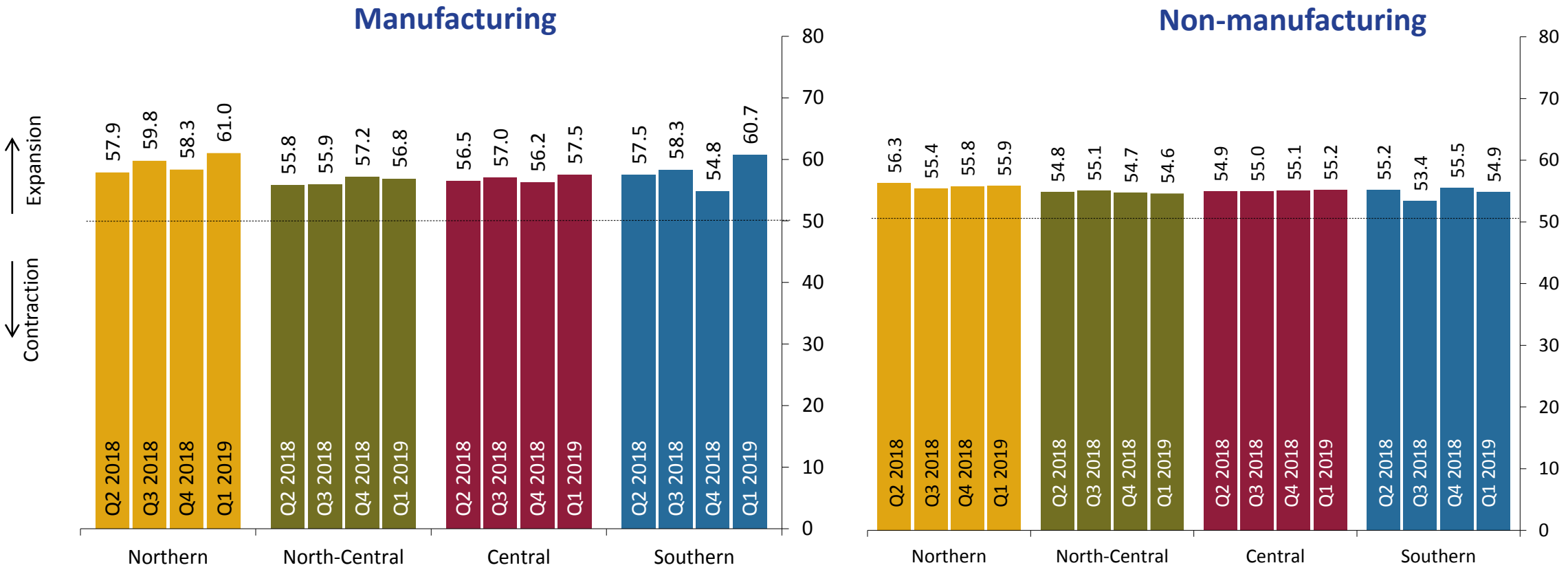
(based on data obtained between March 25th and April 25th, 2019)

III. Final Remarks

Regional indices signal that both manufacturing and non-manufacturing activity will continue to expand in the next 3 months in all regional economies. In the manufacturing sector, the signal of expansion strengthened in all regions, except for the North-Central one. In the non-manufacturing sector, the signal of expansion remained practically unchanged.

Regional Index of Manufacturing and Non-manufacturing Orders: Activity Outlook, Next 3 Months 1/

Diffusion indices

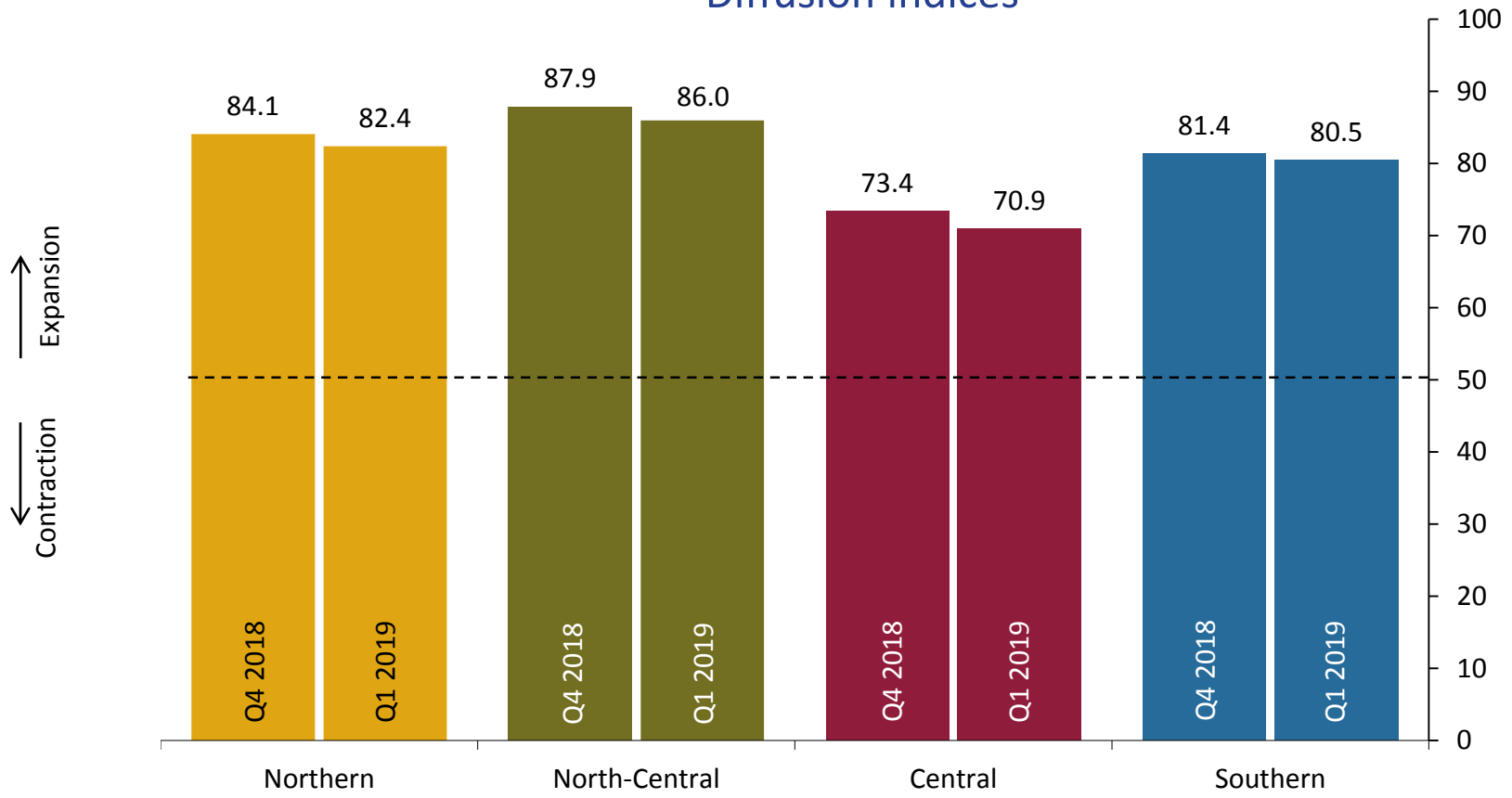


1/ Seasonally adjusted data.
Source: Banco de México.

For the next 12 months, business agents consulted in different regions anticipate a higher demand for their goods and services. However, the signal was weaker than in Q4 in all regions.

Business Agents' Expectations: Demand over Next 12 Months 1/

Diffusion indices

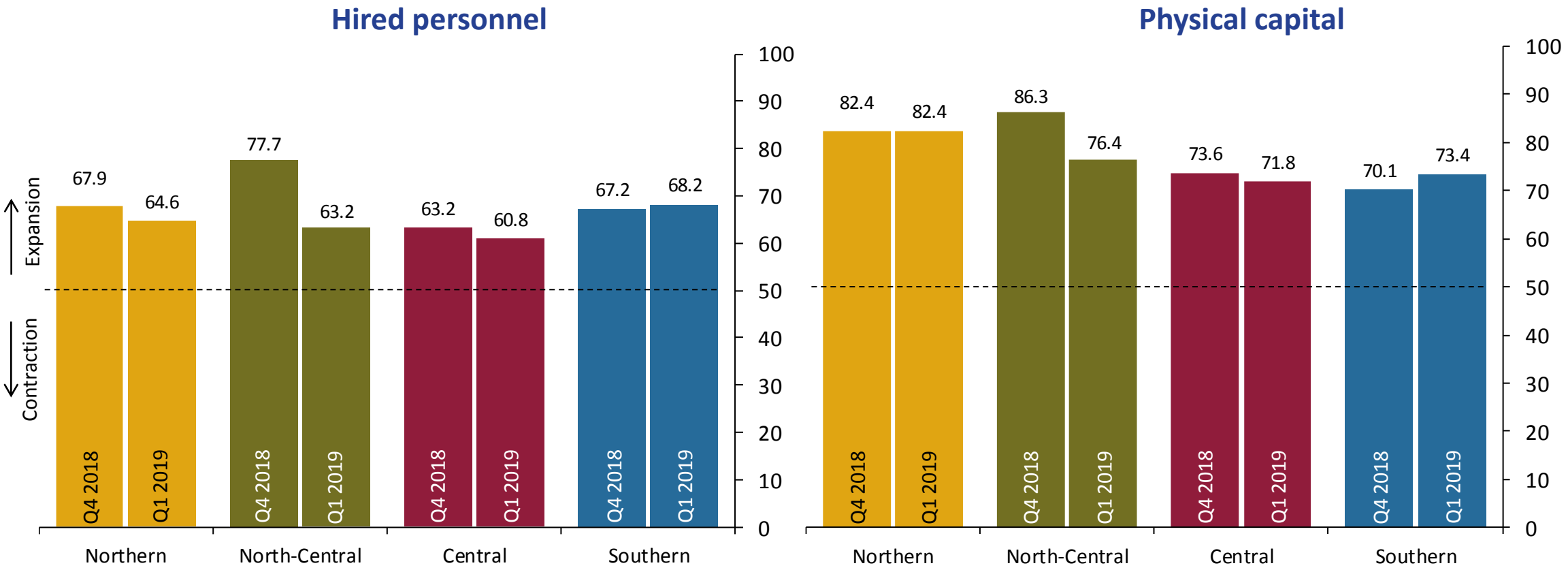


1/ Results obtained from responses to the question: "With respect to the volume of sales of your goods and services in the previous 12 months, how do you expect your sales volume to change in the next 12 months?", from interviews conducted by Banco de México.

Consistent with the expected growth in demand for their own goods and services, business agents anticipate an increase of hired personnel and physical capital in all regional economies, although the signal for these two indicators weakened as compared to Q4 in all regions of Mexico, except for the Southern region.

Business Agents' Expectations: Hired Personnel and Physical Capital, Next 12 Months [1/]

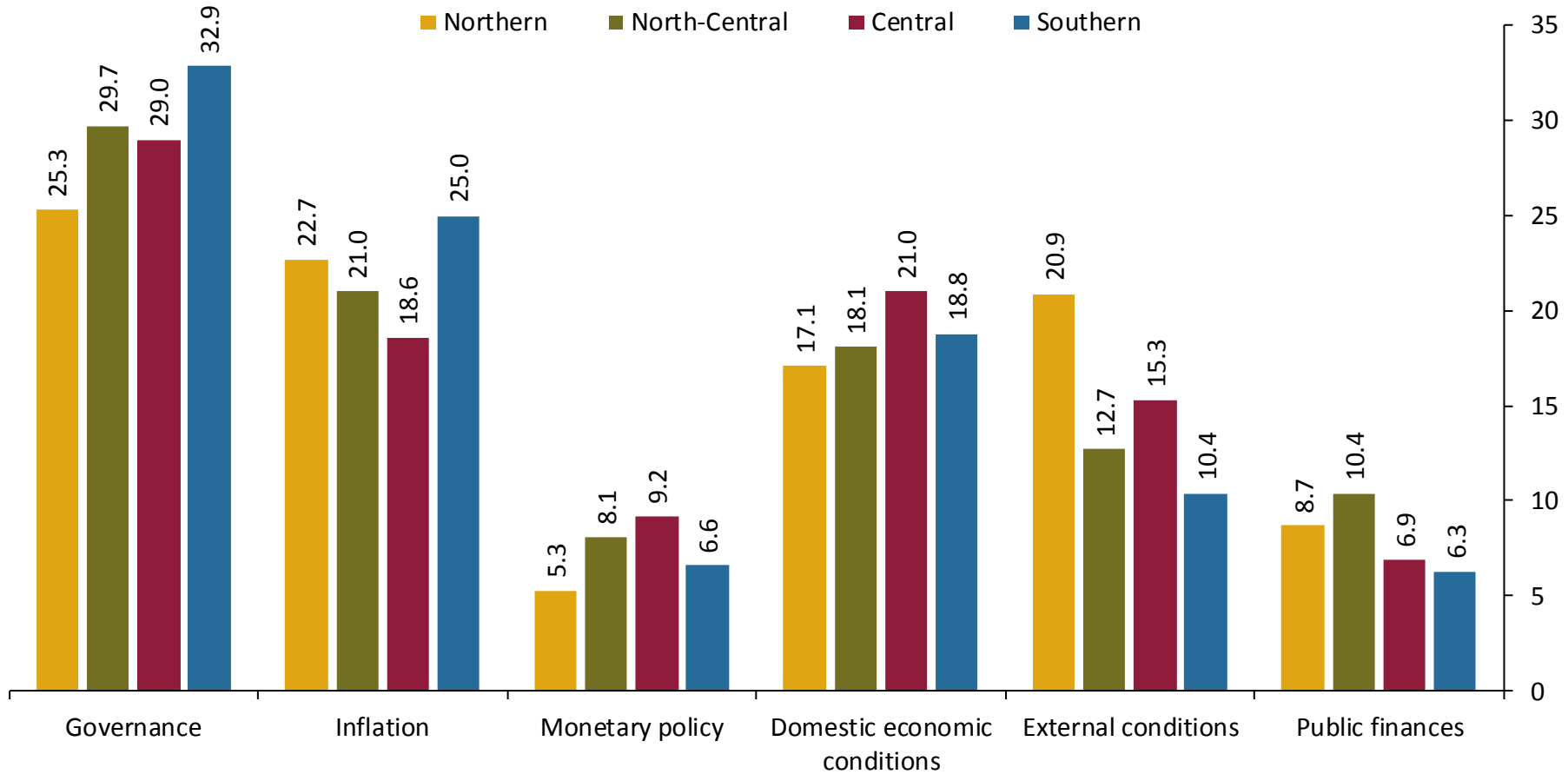
Diffusion indices



1/ Results obtained from responses to questions: "With respect to the previous 12 months, how do you expect the total number of workers in your firm to change in the next 12 months?", and "With respect to your firm's investment in fixed assets during the previous 12 months, how do you expect investment levels to change in the following 12 months?", from interviews conducted by Banco de México.

Percentage Distribution of Business Agents' Responses when Interviewed about the Three Main Factors that Could Hinder Growth of Economic Activity in their Federal Entities in the Next Six Months [1/]

Data in percent: March 2019

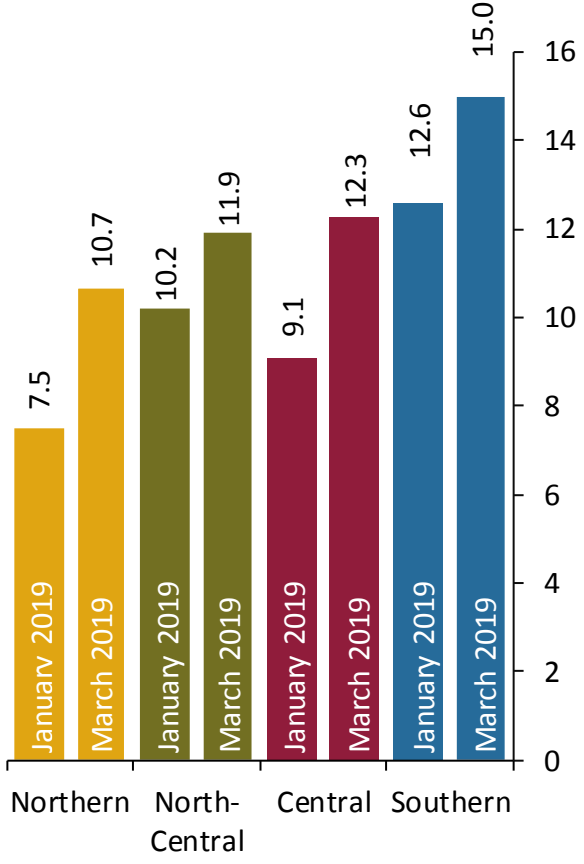


1/ Question: "Which do you consider to be the main three limiting factors for growth of economic activity in your state during the next six months?" This question is similar to that included in the questionnaire of the Survey among Private Sector Specialists.

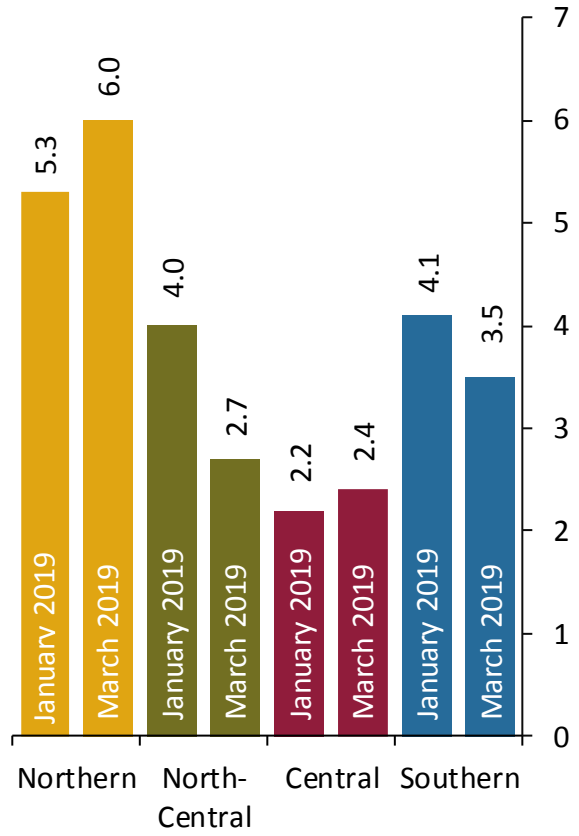
Percentage Distribution of Business Agents' Responses when Interviewed about the Three Main Factors that Could Hinder Growth of Economic Activity in their Federal Entities in the Next Six Months [1/]

Data in percent: January and March 2019

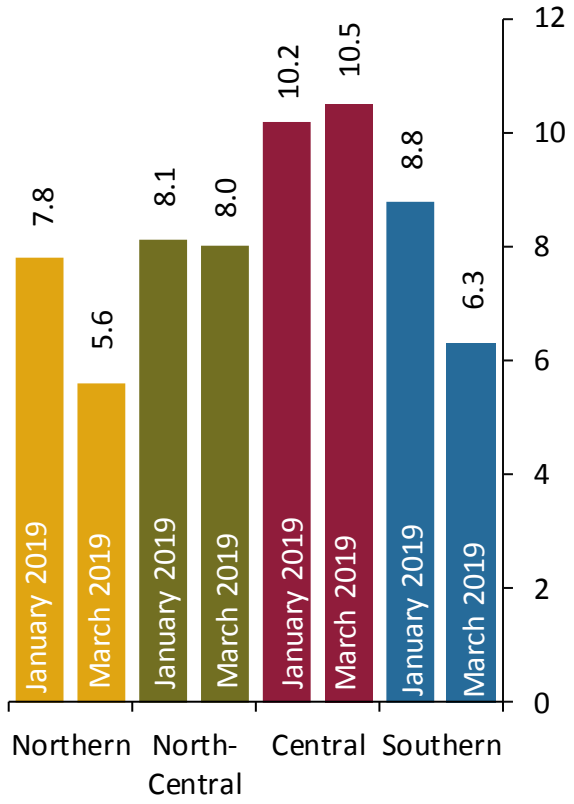
Public Safety Problems



Increase in Wage Costs

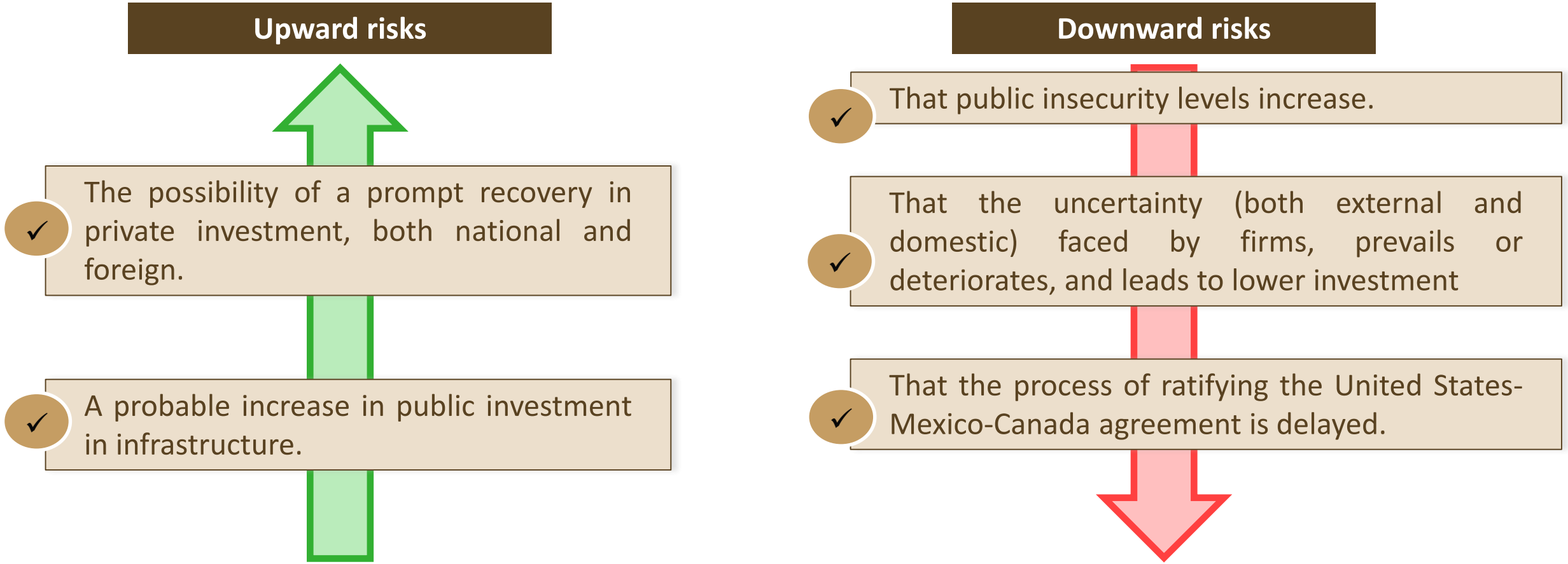


Uncertainty over Domestic Economic Situation



1/ Question: "Which do you consider to be the main three limiting factors for growth of economic activity in your state during the next six months?" This question is similar to that included in the questionnaire of the Survey among Private Sector Specialists.

Business Agents' Opinion on Risks to Regional Economic Activity (based on data collected between March 25 and April 25, 2019) 1/



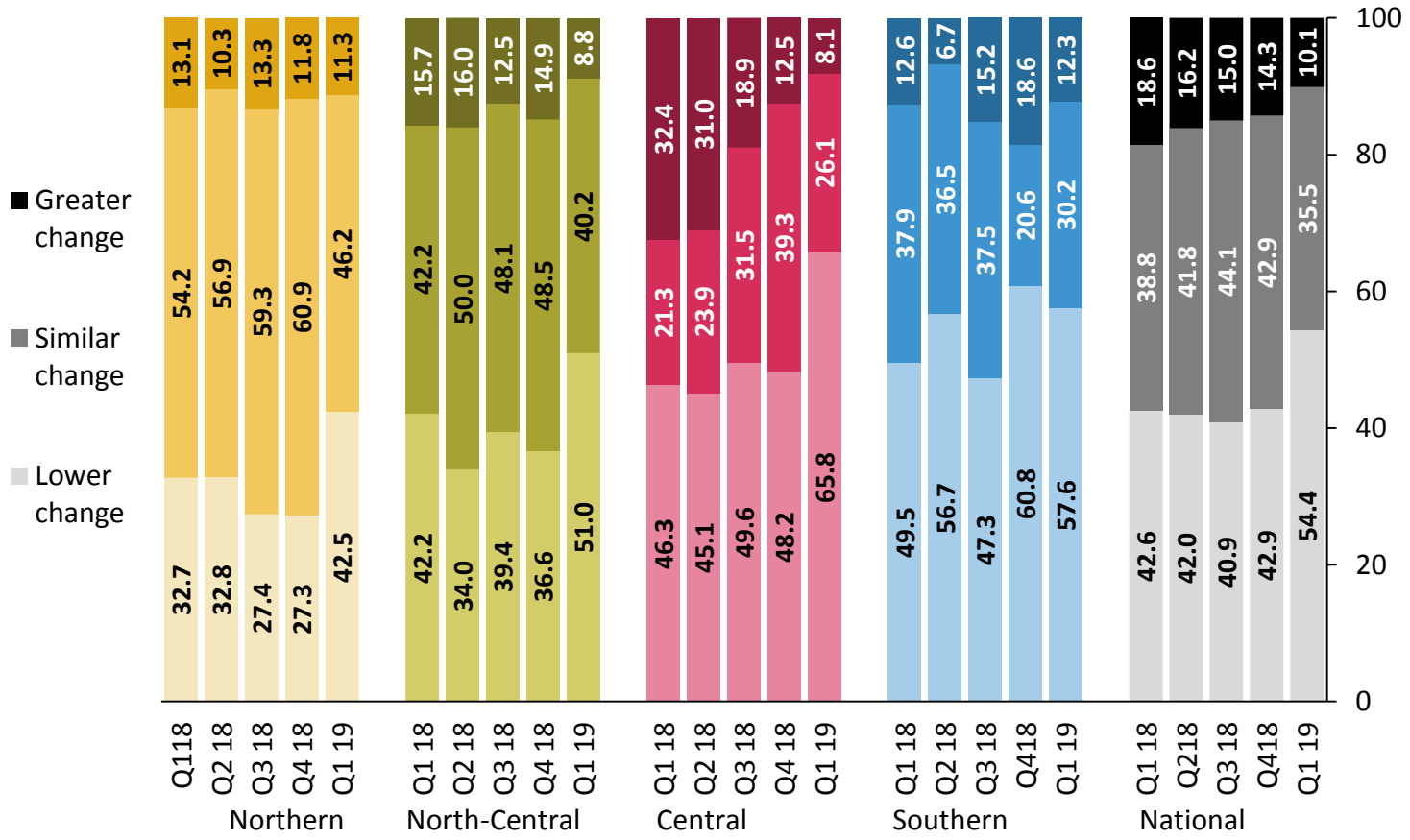
It should be specified that business contacts' interviews were conducted prior to the US government announcement of its intention to impose higher tariffs to Mexican imports and the deal that has been reached to suspend such tariffs as well as prior to Fitch and Moody's downgrading Mexico's sovereign credit rating and lowering the sovereign debt outlook to negative, respectively.

1/ Results obtained from responses to the questions: "Which are the main two events/situations/facts that, if they occur, would boost economic performance in your state in the next 12 months?", and "Which are the main two events/situations/facts that, if they occur, would hinder economic growth in your state in the next 12 months?", from interviews conducted by Banco de México between March 25 and April 25, 2019.

Regarding sales prices of their own goods and services, most business contacts interviewed in different regions anticipate similar or lower growth rates, as compared to those observed in the previous 12 months.

Business Agents' Expectations: Annual Change of Sales Prices, Next 12 Months 1/

Percentage of responses

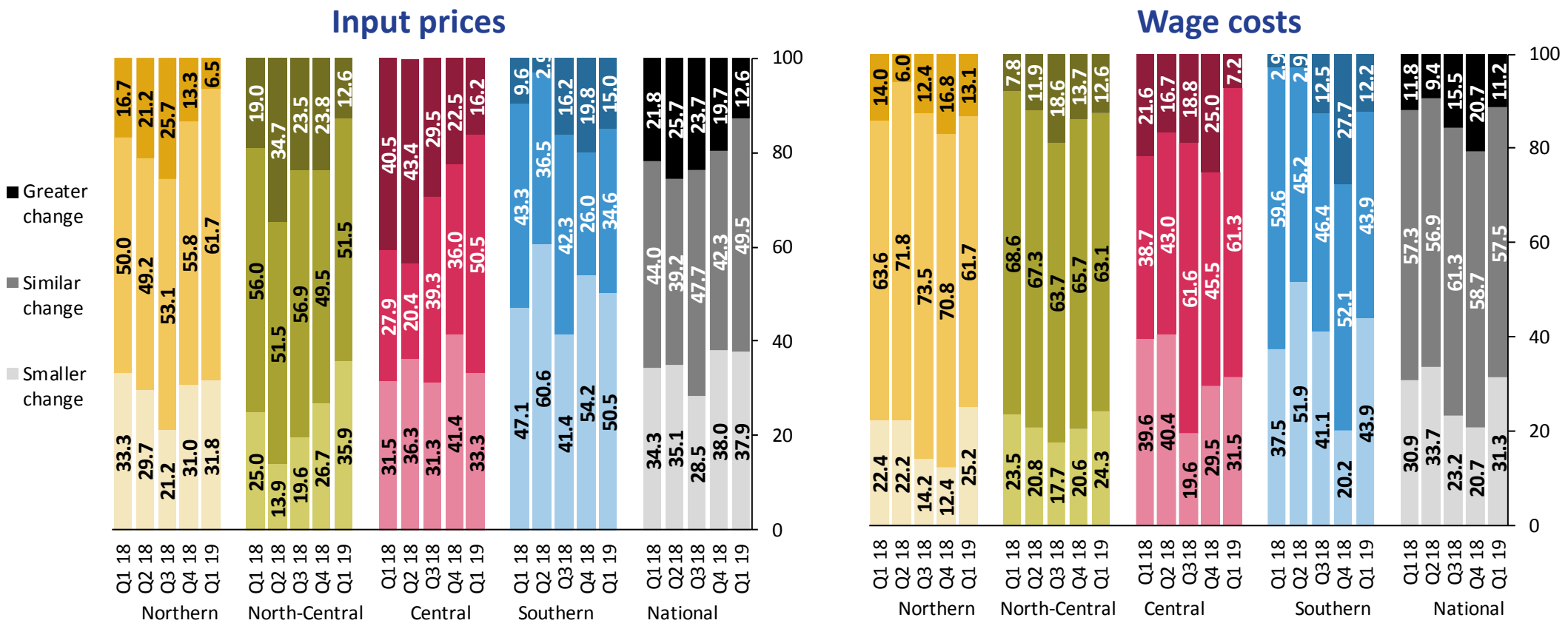


1/ Results obtained from responses to the question: "With respect to the previous 12 months, how do you expect sales prices in your sector to change over the next 12 months?", from interviews conducted by Banco de México.

Likewise, most business contacts interviewed in all regions expect input prices and wage costs to grow at a similar or lower annual growth rate as compared to those observed in the previous 12 months.

Business Agents' Expectations: Annual Change of Input Prices and Wage Costs, Next 12 Months [1/]

Share of responses



1/ Results obtained from responses to the question: "With respect to the previous 12 months, how do you anticipate the change in input prices (goods and services) used in your sector to be for the next 12 months?", and "With respect to the previous 12 months, how do you anticipate the change in wages of workers in your sector to be in the next 12 months?", in interviews conducted by Banco de México.

Outline

I. Regional Economic Report

II. Results January – March 2019

A. Economic activity

B. Inflation

C. Economic outlook

(based on data collected between March 25th and April 25th, 2019)

III. Final Remarks

Final Remarks

- To face the challenges and lags the different Mexican regions face, it is key to implement and maintain policies that support regional growth, and that structural and institutional problems, which have prevented the regions from reaching greater productivity and attracting higher investment flows, are corrected.

- As stated in the previous Reports, it is fundamental to strengthen the rule of law, and thus guarantee legal certainty, compliance with the regulatory framework and respect for private property.

- In the same vein, it is necessary to encourage a public policy agenda that fosters the proper microeconomic functioning of markets, contributes to a better infrastructure provision, especially in the Southern region, and to raising both the level and quality of capital. All of the latter, together with a sound macroeconomic framework, would contribute to increase the growth potential of all regions in Mexico.



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