



Regional Economic Report

April – June 2017



BANCO DE MÉXICO

September 13, 2017

Outline

- I. Regional Economic Report**
- II. Results April - June 2017**
 - A. Economic Activity**
 - B. Inflation**
 - C. Economic Outlook**
- 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 the Mexican regions.¹
- This information is taken into account by Banco de México's Board of Governors when evaluating the economic situation and the forecast for the Mexican economy.
- The economic performance of the regions in Q2 2017 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.

Outline

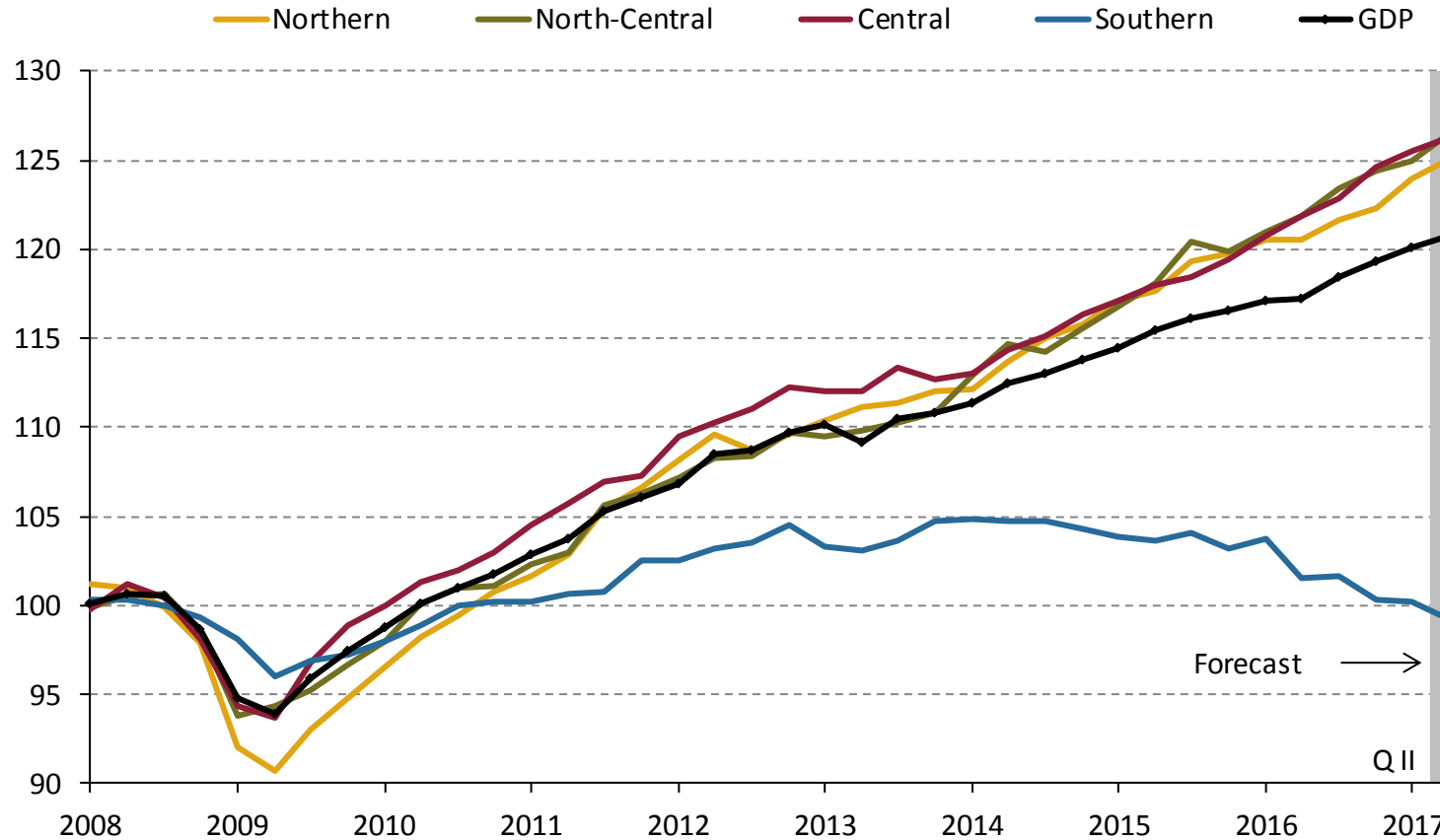
- I. Regional Economic Outlook
- II. Results April – June 2017**
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Economic Activity

- During Q2 2017, Mexican economy continued expanding, although at a slightly lower rate as compared to Q1 2017.
 - ✓ This growth kept reflecting the dynamism of the tertiary sector, while stagnation in the industrial activity, which had been observed since mid-2014, persisted. At the same time, the primary activities contracted.
 - Within the industrial activity, the manufacturing sector lost dynamism relative to the second half of 2016, while the performance of construction remained weak and mining maintained an unfavorable trajectory.
- The expansion of Mexico's productive activity in the reference quarter was perceived across most regions of the country. Indeed, in the Northern and Central regions the economic activity is estimated to have continued growing, albeit in the North it occurred at a more moderate rate. In contrast, in the South a contraction is estimated to have been recorded.

Based on the timely available data, the expansion of Mexico's productive activity in the reference quarter is estimated to have been perceived in most regions of the country. Indeed, in the Northern and Central regions economic activity kept expanding, although in the North at a more moderate rate with respect to Q1 2017. Meanwhile, in the South levels of economic activity remained contracted.

Quarterly Indicator of Regional Economic Activity ^{1/} Index 2008=100

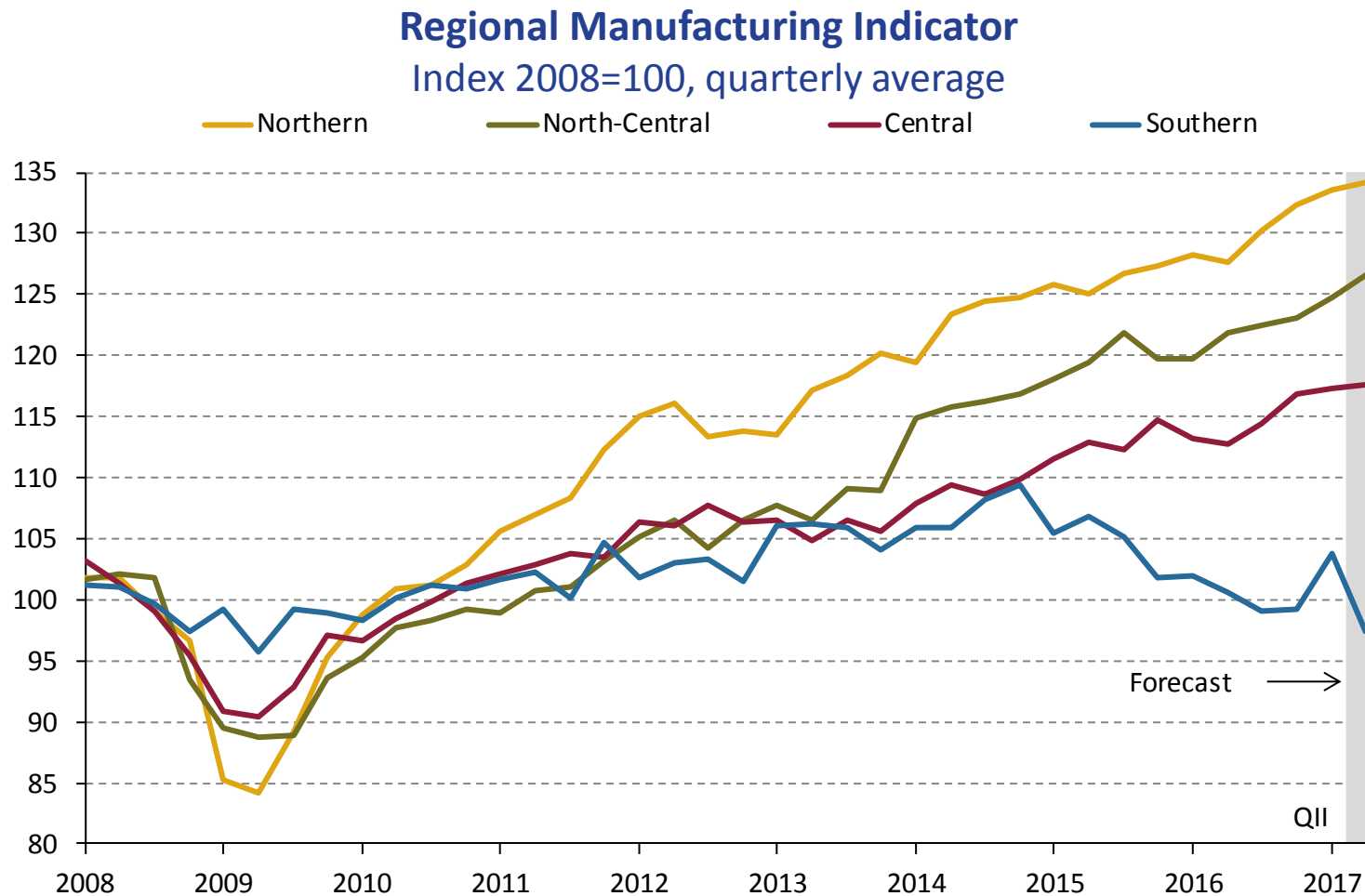


^{1/} The value of the Gross Domestic Product (GDP) for Q2 2017 corresponds to the observed data.
Source: Estimated by Banco de México with seasonally adjusted data from INEGI.

Economic Activity

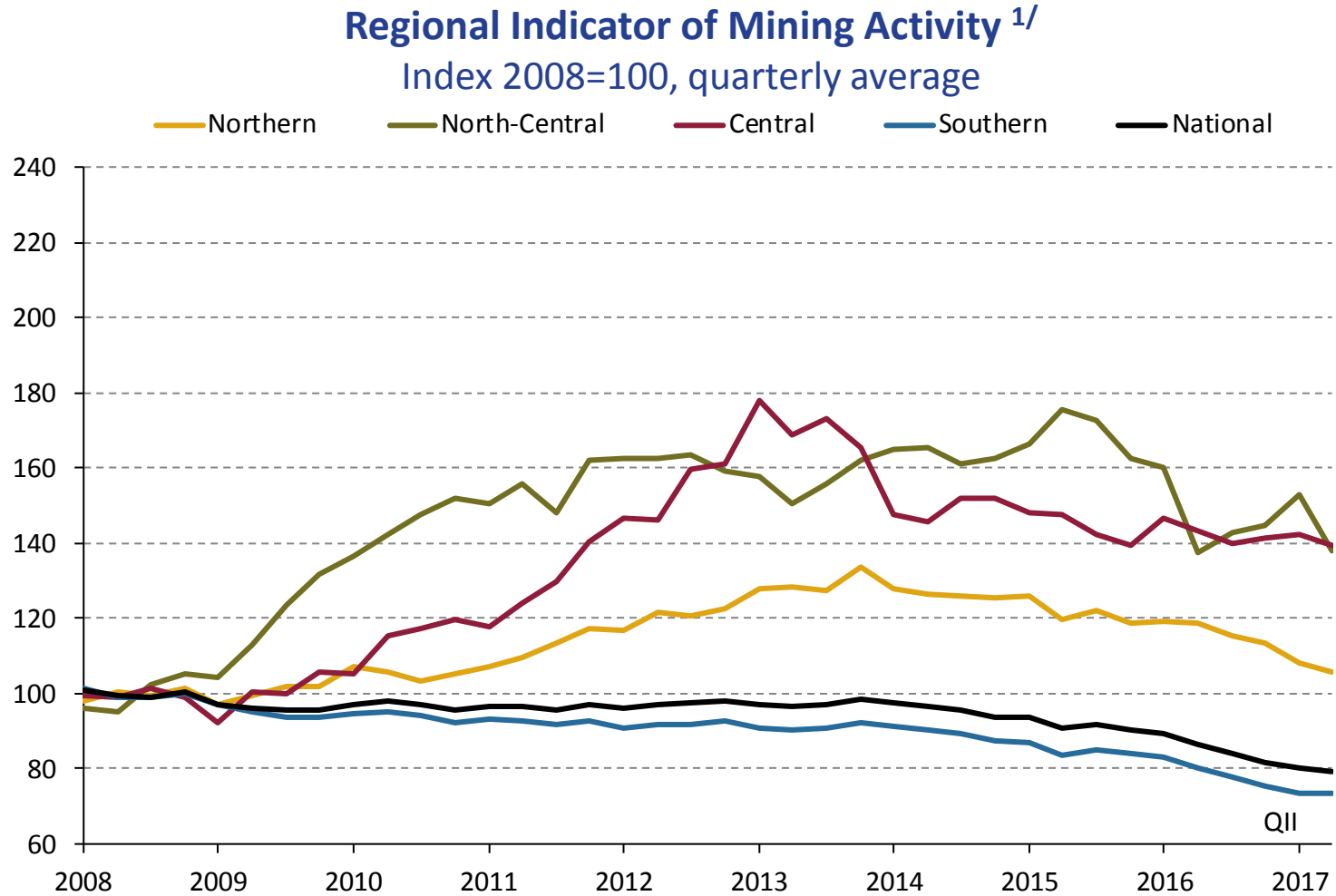
- The performance of economic activity in the Northern and Central regions reflected the expansion of the manufacturing sector in the said regions, as well as of some tertiary activities, particularly retail trade. In addition, tourism in the Northern and North-Central regions, and agricultural production in the Northern and Central ones also positively contributed to economic growth.
- Finally, in the South, economic activity kept declining, largely as a result of a decline in most of its sectors, except for tourism, and, in accordance with the interviewed business agents, some tertiary activities.

In Q2 2017, the manufacturing sector lost dynamism, with respect to the second half of 2016. In the North-Central, Northern and Central regions, manufactures are estimated to have continued expanding, although in the latter two regions at a lower rate than in Q1 2017, while in the South it contracted.



Source: Estimated by Banco de México with seasonally adjusted data from INEGI.

At the national level, mining maintained a downward trend. In particular, the referred activity kept declining in the Northern and Southern regions, while in the Central ones it contracted, following the expansion registered in Q1 2017.



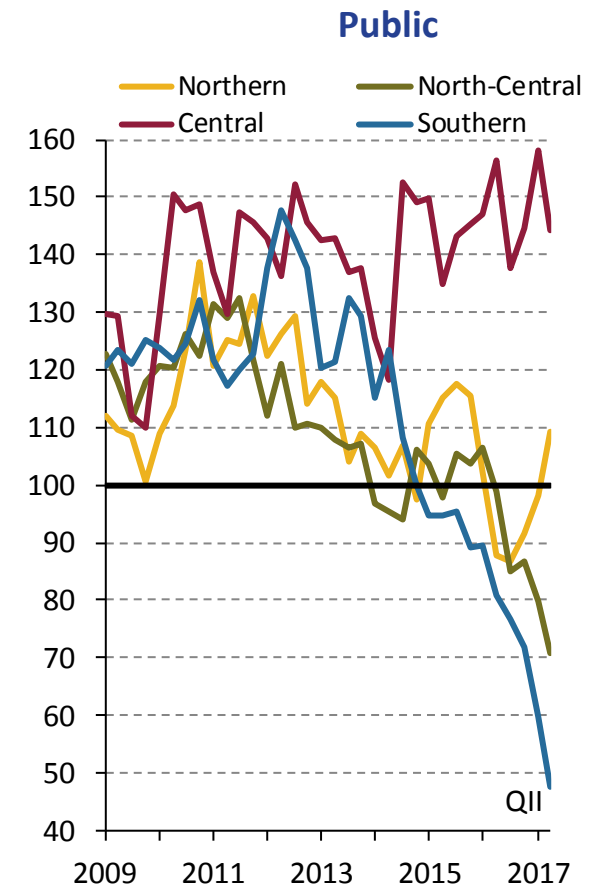
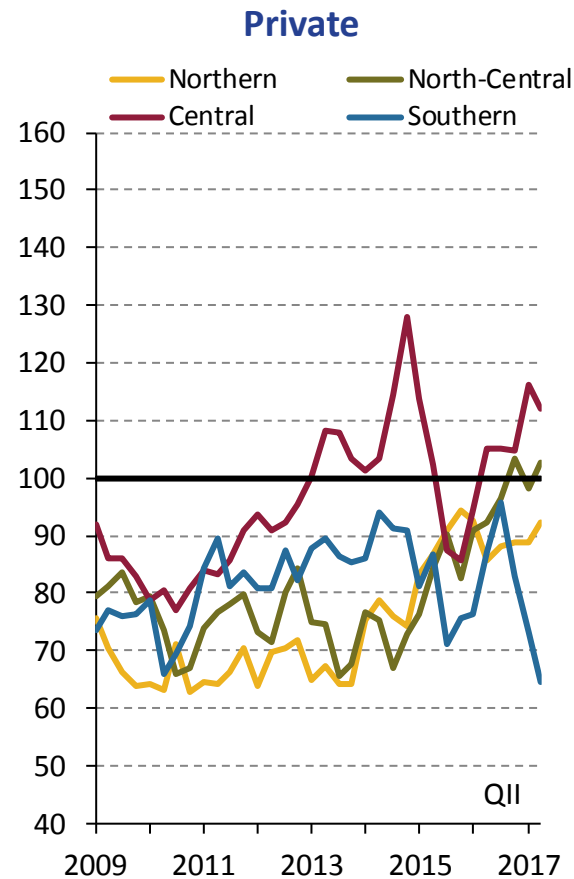
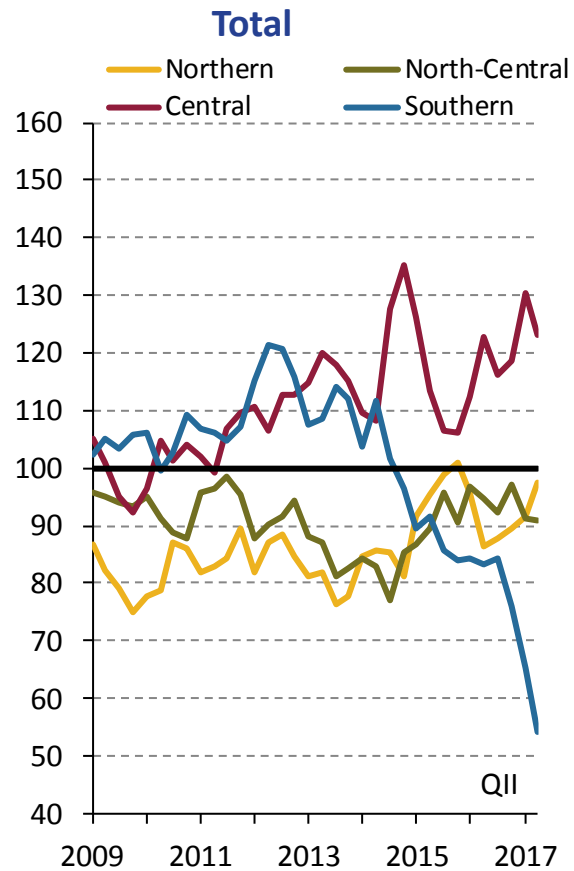
1/ Values in Q2 2017 are preliminary.

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

During Q2 2017, the performance of construction remained weak. Indeed, the sector contracted in the Central regions and in the South, as a consequence of a lower level of public and private construction. However, the North-Central region private construction somewhat reactivated, after the decline observed in Q1 2017. Contrary to the above, in the North construction maintained an upward trend in the reference quarter, as a result of an improvement in both its public and private components.

Real Value of Production in the Construction Industry by Region

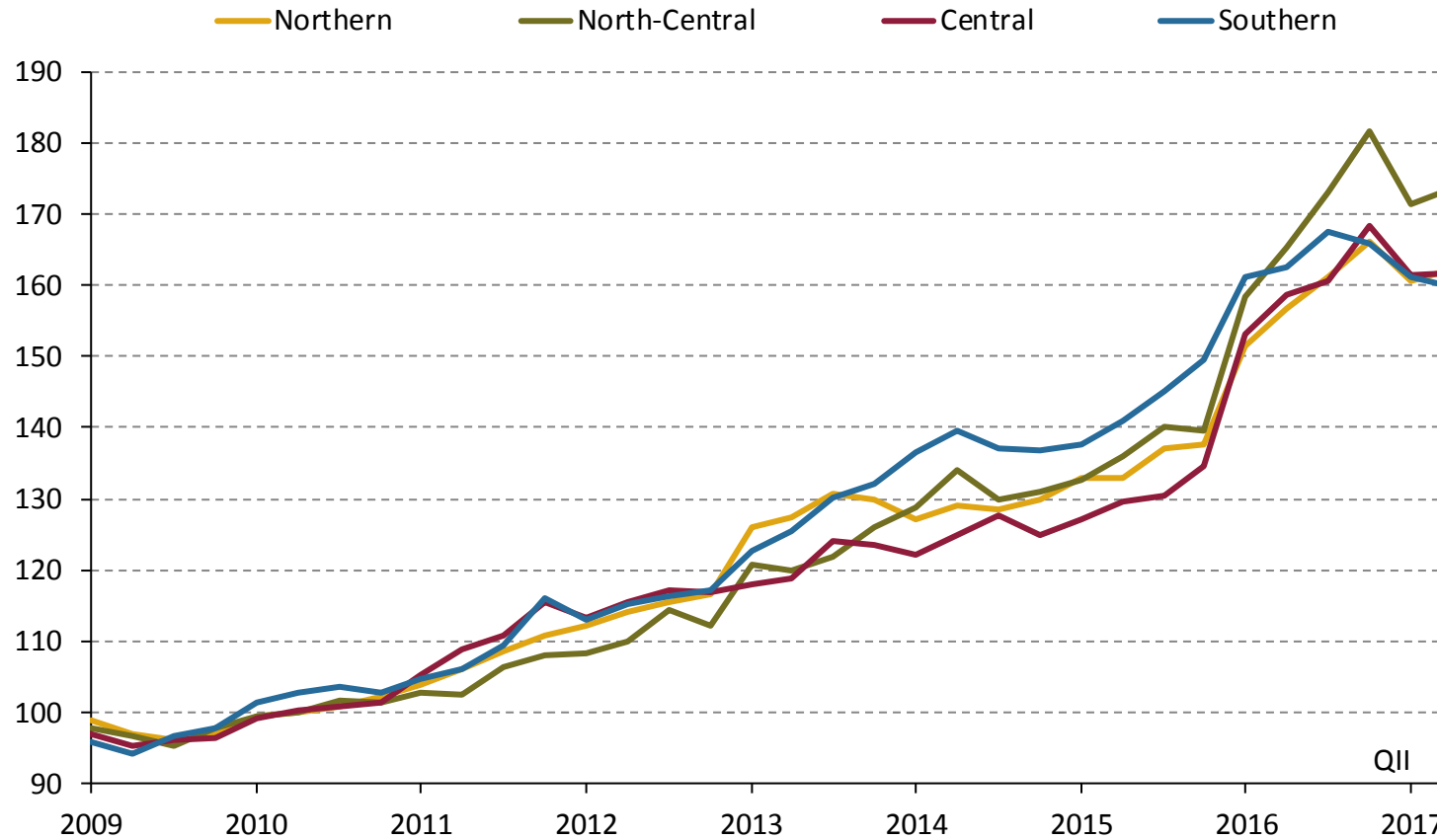
Index 2008=100, quarterly average



Source: Estimated by Banco de México with seasonally adjusted data from INEGI.

In Q2 2017, trade, measured with the index of revenues from the supply of goods and services by retail businesses, slightly expanded in the North-Central and Northern regions. On the other hand, in the Central regions it practically remained stagnant, while in the South this indicator continued contracting during the period analyzed in this Report.

Regional Indicator of Trade
Index 2008=100, quarterly average



Source: Estimated by Banco de México with seasonally adjusted data from INEGI.

Box:

Determinants of Retail Trade at the Regional Level: 2008 - 2016

- Progress in the regional economic activity in recent quarters has largely reflected the evolution of the tertiary sector.
 - ✓ In particular, retail trade, measured with the Revenues from the Supply of Goods and Services by Retail Businesses (ICM), displayed a significantly higher dynamism relative to the rest of the economy, as it registered an average annual growth rate of 5.35 percent between 2014 and 2016, compared to 2.32 percent of GDP.
 - ✓ However, its performance and its relative importance in Mexico's economic activity are no longer homogeneous across states.
- The Box uses this regional variability to analyze some determinants of the retail trade performance during the period 2008 – 2016.
 - ✓ Specifically, the impact of labor income, workers' remittances, local credit conditions and the financial development onto retail sales of goods and services is estimated.

Box:

Determinants of Retail Trade at the Regional Level: 2008 - 2016

- In the period of 2008 – 2016, entities in the North-Central region on average exhibited a higher annual growth rate in real terms in per capita ICM (5.54 percent), followed by the entities in the Southern region (5.27 percent), the Central region (5.12 percent) and the Northern one (4.47 percent).
- Nevertheless, the cities in the Northern region presented on average a higher level of per capita ICM in 2016 (1.23 times the national average), followed by the entities in the North-Central region (1.06), the Central region (1.02) and the Southern one (0.74).
- To estimate the impact of the said factors on retail trade in the Mexican states in the period of 2008 – 2016, a model of quarterly panel data was used, making use of the technique of generalized least squares, controlling for temporary fixed effects and for state, as well as for the first-order serial correlation in each state.

Box:

Determinants of Retail Trade at the Regional Level: 2008 - 2016

- The average labor income of entity's workers, remittances, the financial development and credit conditions have a positive and statistically significant effect on per capita ICM.
- In contrast, the unemployment rate has a negative and statistically significant relation with retail businesses' revenues.
- The variables with the strongest impact on retail businesses' revenues are the financial development, followed by the ITAEE (Quarterly Economic Activity Index by State), remittances, credit conditions by state, per capita labor income, and the unemployment rate, in this order.

Variables	Estimate Result	
	(1)	(2)
ITAEE	0.307***	0.072***
Average labor income	0.093***	0.044***
Remittances	0.063***	0.056**
Financial development	0.023**	0.075**
Total portfolio	0.024**	0.056**
Unemployment rate	-0.004*	-0.016*
Fixed effects	✓	✓
Temporary effects	✓	✓
Observations	1056	1056
Number of entities	32	32

Note: Symbols ***, ** and * denote statistical significance at 1, 5 and 10 percent, respectively.

Source: Estimated by Banco de México with data from INEGI, Banco de México and CNBV (National Banking and Securities Commission).

Box:

Determinants of Retail Trade at the Regional Level: 2008 - 2016

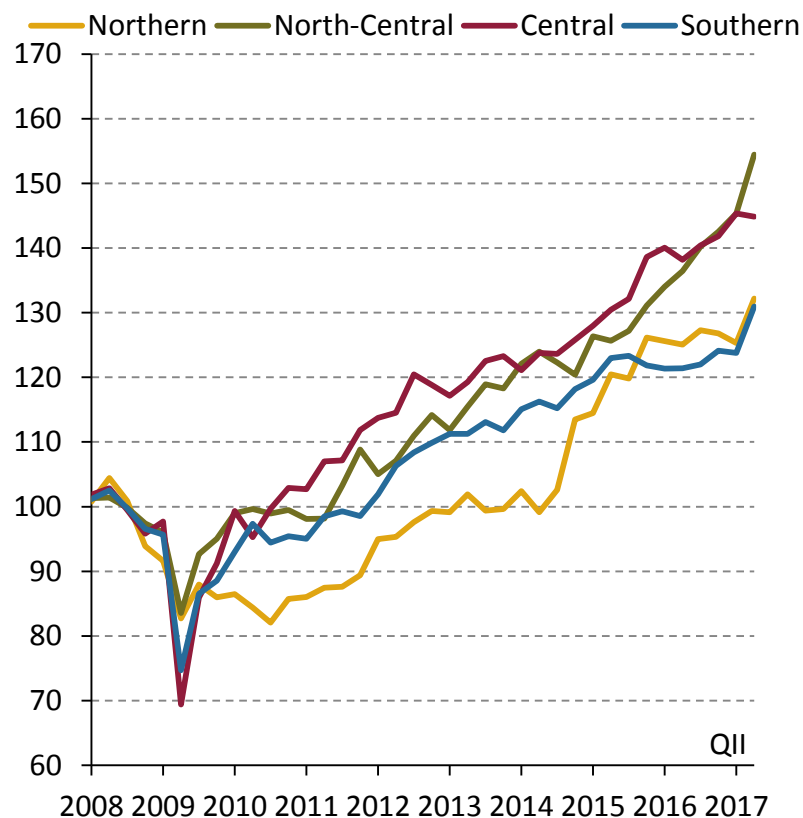
- This Box' results indicate that retail businesses' revenues in terms of per capita tend to be higher in the Mexican states, the population of which is characterized by a higher labor income and larger flows of remittances per capita.
- Likewise, the degree of financial development and local credit conditions positively affect the performance of retail trade.
- Thus, to strengthen domestic sources of growth, it is necessary to continue to foster public policies aimed at boosting labor productivity and the financial development at the local level, which will lead to a greater dynamism across the regional markets.

In Q2 2017, tourism, measured with hosting services and the inflow of passengers to airports, kept expanding, which was at an even greater rate than in Q1 2017. Indeed, hotel occupancy continued registering a positive trend in the North-Central regions, somewhat recovered in the Northern and Southern regions, and remained practically stagnant in the Central one. As regards the inflow of passengers, it maintained a positive trajectory in all regional economies.

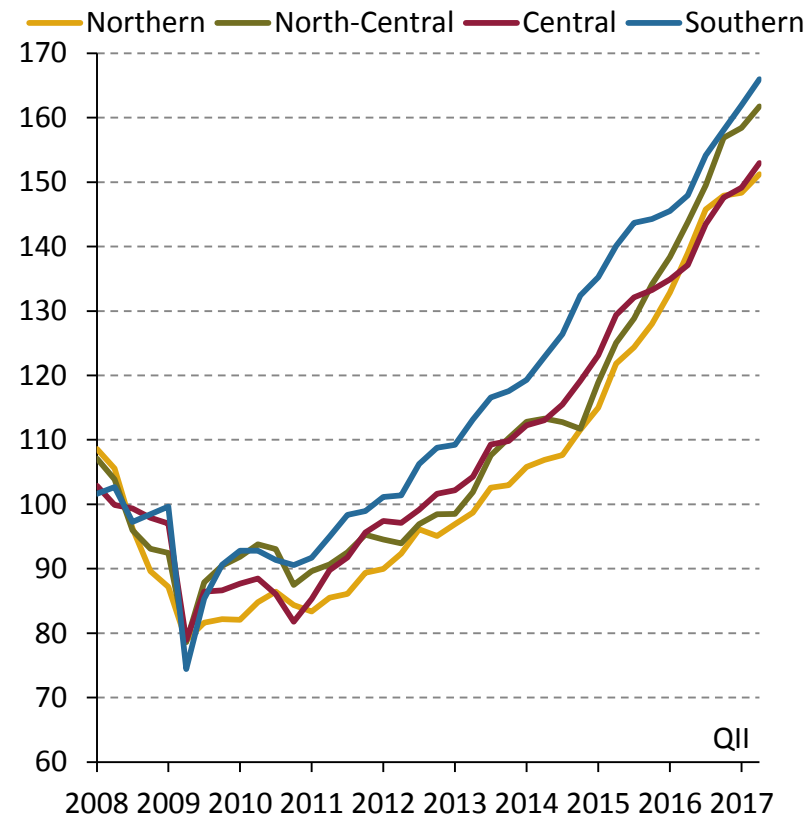
Regional Indicators of Activity in Tourism

Index 2008=100, quarterly average

Hotel Occupancy



Inflow of Passengers to Airports

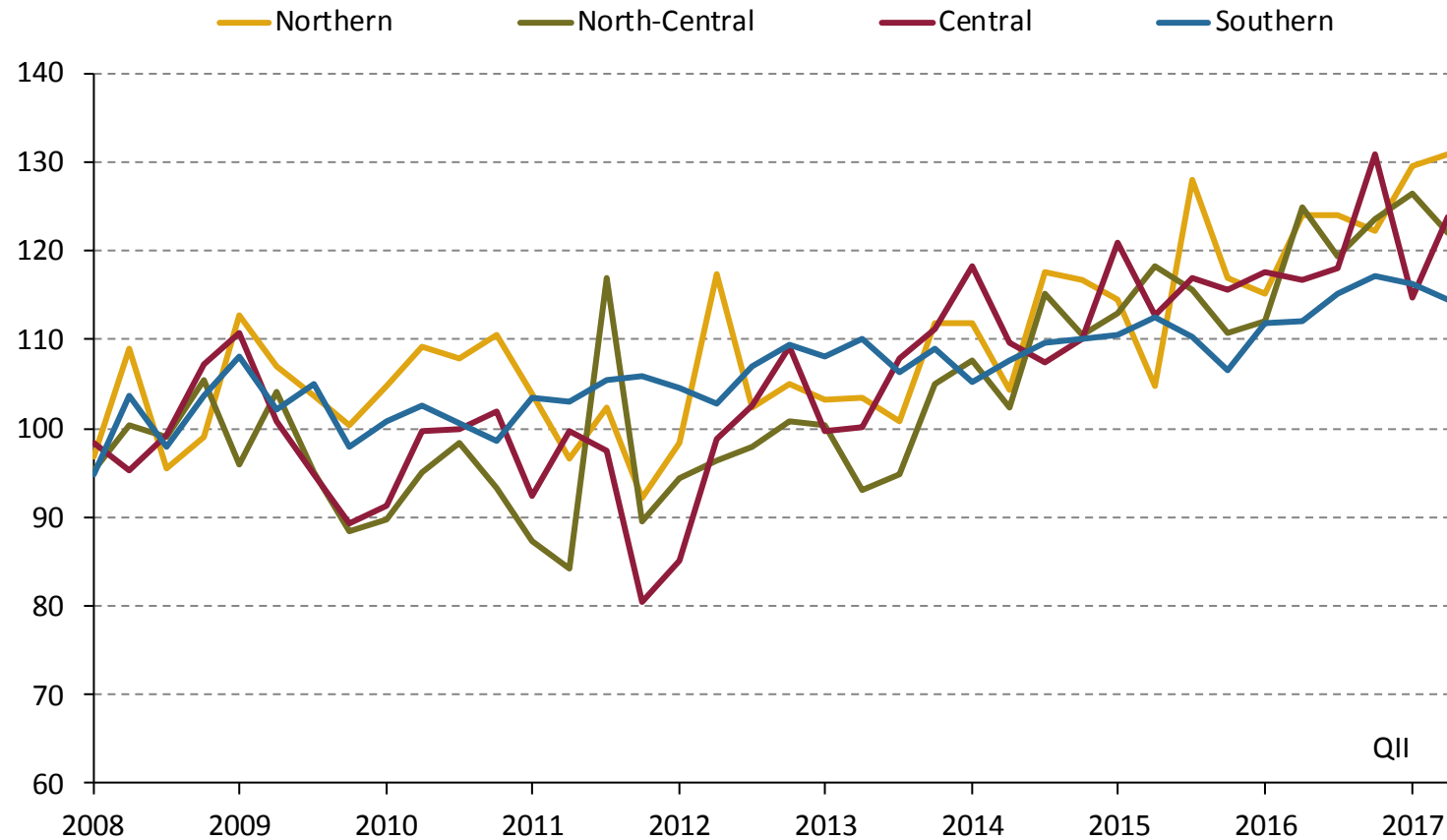


Source: Estimated and seasonally adjusted by Banco de México based on data from the Mexican Secretariat of Tourism and from Airport and Auxiliary Services (ASA).

During Q2 2017, agriculture and livestock production generally expanded, although the performance of the sector was heterogeneous across different regions. Thus, in the Northern and Central regions the level of agricultural activity increased in the reported quarter. In contrast, in the North-Central and Southern regions, production in this sector contracted at a quarterly rate.

Index of Regional Agriculture and Livestock Production

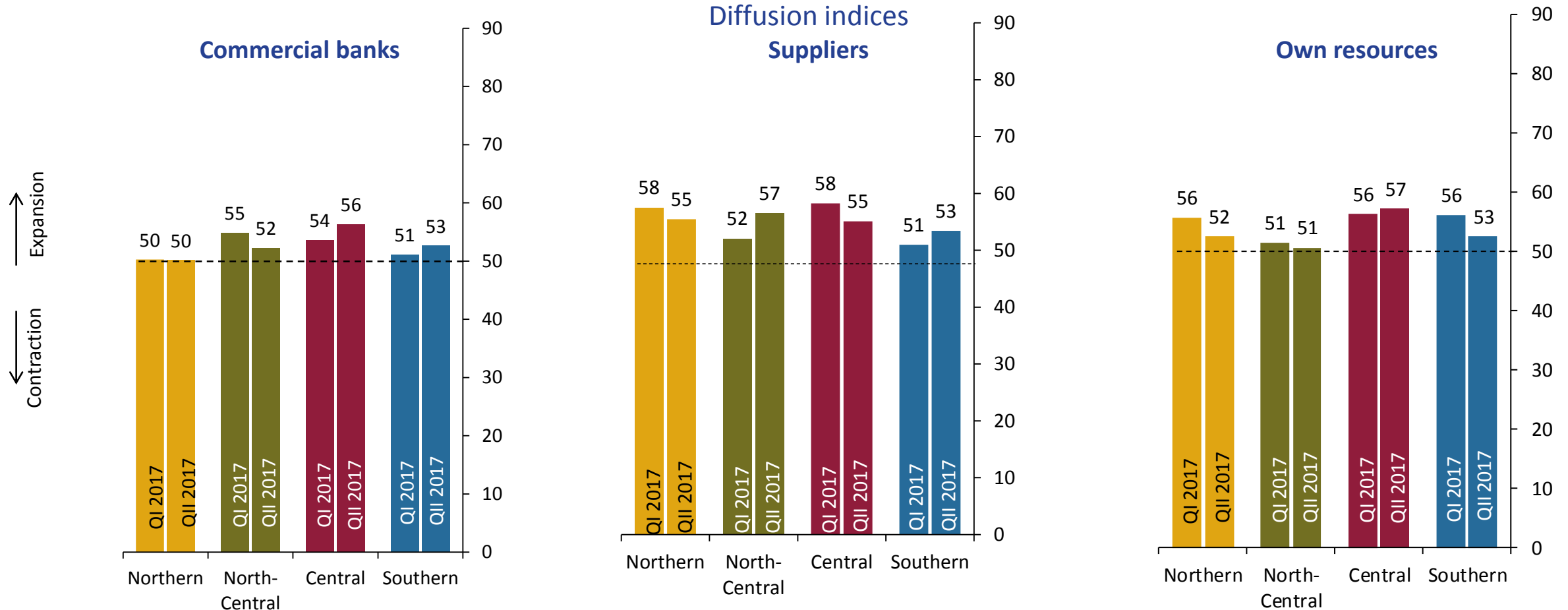
Index 2008=100, quarterly average



Source: Estimated and seasonally adjusted by Banco de México with data from SAGARPA. It should be noted that, unlike the GDP estimate, this indicator excludes information relative to the value generated by land cultivation and approximates a measurement of the gross production value, rather than that of value generated in the sector.

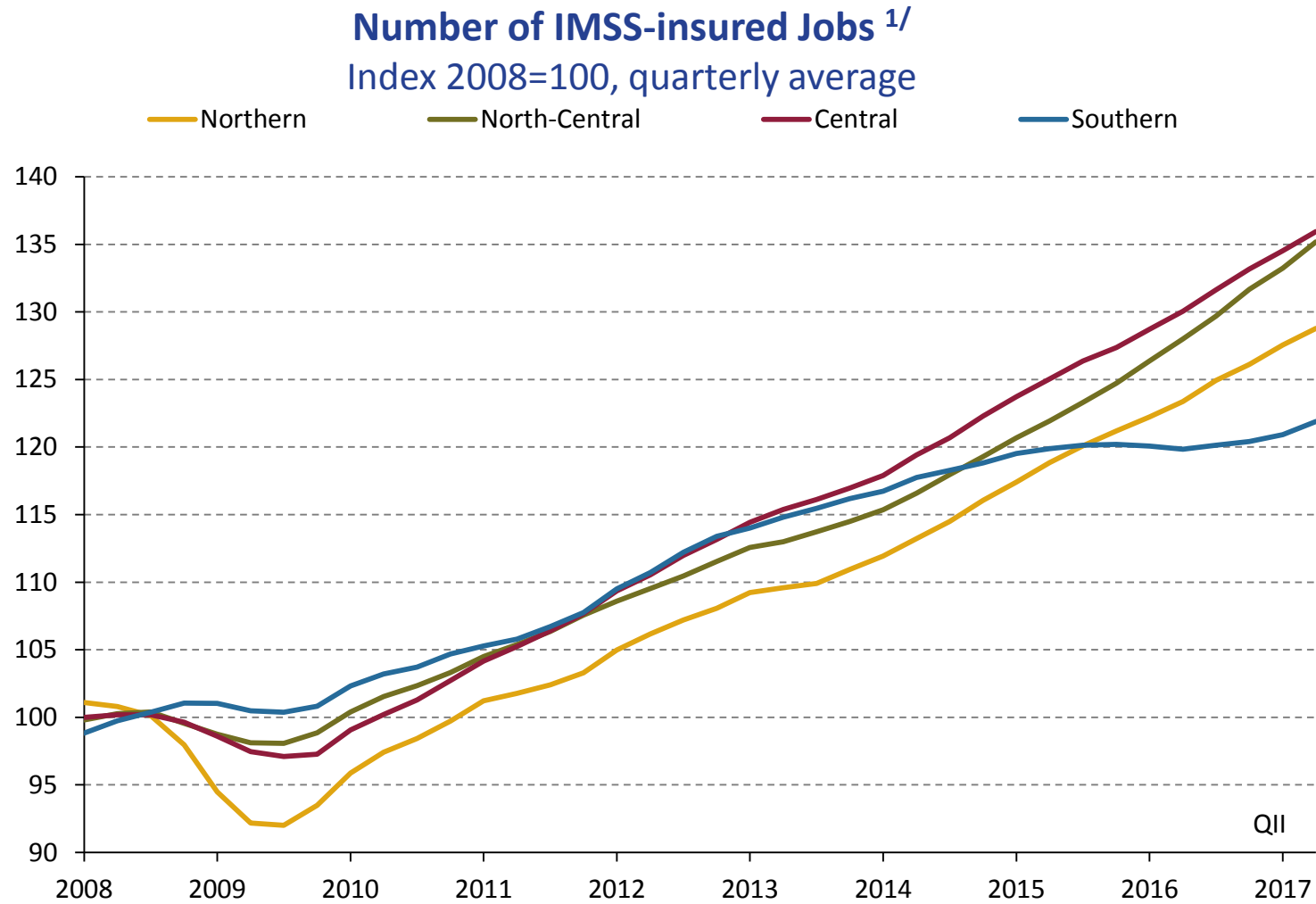
In the case of commercial banks, the sign of intensity in the financing use strengthened in the Central and Southern regions, remained unchanged in the North and weakened in the North-Central one. As regards the financing provided by suppliers, the signal strengthened in the North-Central and Southern regions, while in the Northern and Central ones the indicator presented a lower level than that observed in Q1 2017. Finally, the signal of a greater intensity in the use of own resources weakened or turned out similar to that of Q1 2017 in all regional economies.

Change in the Use of the Main Uses of Financing



Source: Banco de México.

During Q2 2017, the number of IMSS-insured jobs maintained a positive trend in the Northern and Central regions, while it accelerated in the South.



1/ Permanent and temporary jobs in urban areas.

Source: Estimated and seasonally adjusted by Banco de México with data from IMSS.

Box:

Millennials in the Labor Market: Stylized Facts and Businesses' Opinion

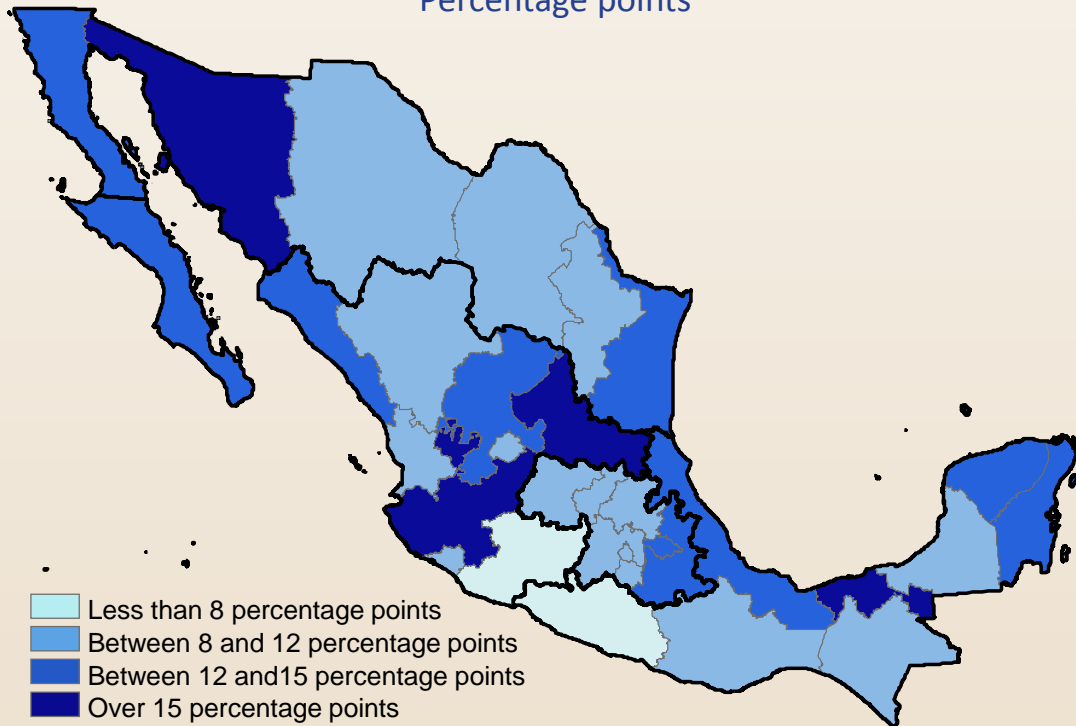
- Growth of manufacturing exports and the increasing consolidation of local value chains raised the demand for skilled labor.
- This phenomenon, along with a greater participation of the so-called Millennials in the labor market, who have socio-demographic characteristics and technological skills that differ from previous generations, encouraged the implementation of changes in the working practices in firms.
- In this context, this Box has two goals:
 - ✓ To present some stylized facts on the Millennials.
 - ✓ To show some of the main reasons for a greater trend of separation from employment that is characteristic of this generation, as well as the strategies implemented by firms to tackle this situation.

Box:

Millennials in the Labor Market: Stylized Facts and Businesses' Opinion

- Consistent with their higher educational level, Millennials have participated more in both in the labor market and in the formal sector, as compared to the Generation X.

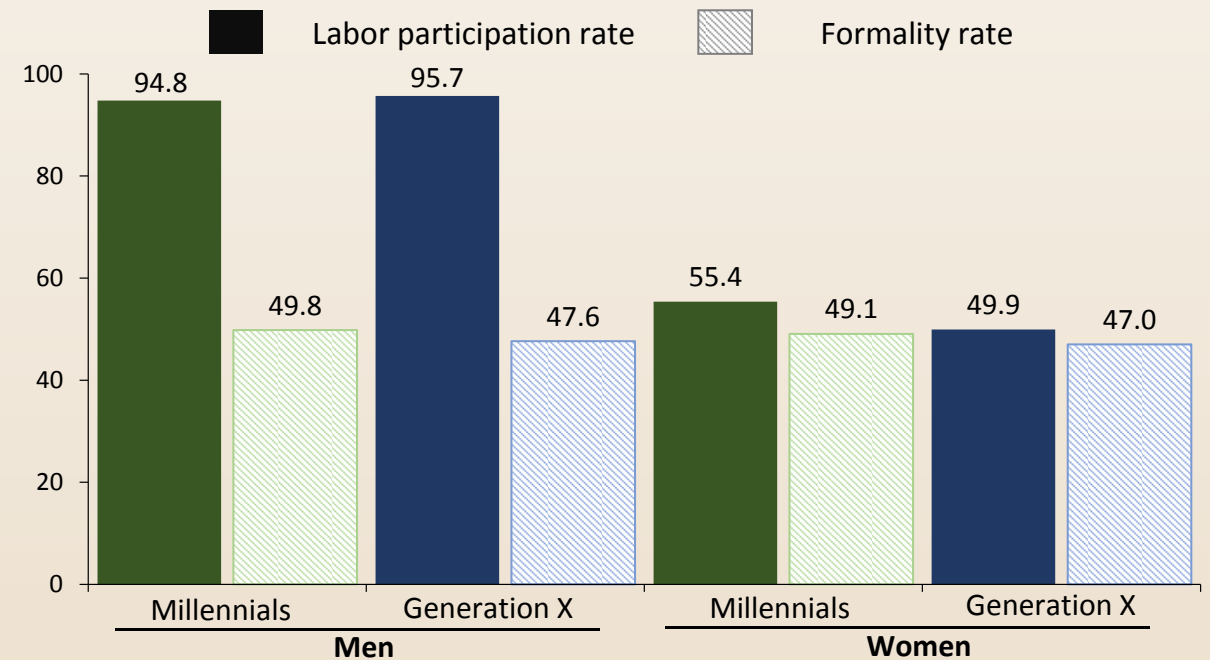
Differences in the Educational Level between Generations ^{1/}
Percentage points



^{1/} Difference in the share of individuals with at least higher secondary education among the Millennials and the Generation X.

Source: Prepared by Banco de México with micro data from ENOE 2005 and 2016, INEGI.

Labor Participation and Formality Rates ^{1/}
Percentage



^{1/} The Labor Participation Rate is defined as the quotient of the Economically Active Population and the Working Age Population (15 years or older). The formality rate is defined as the percentage of employed population in an economic activity in which the worker, by the context, can invoke the corresponding legal or institutional framework.

Source: Prepared by Banco de México with micro data from ENOE 2005 and 2016, INEGI.

Box:

Millennials in the Labor Market: Stylized Facts and Businesses' Opinion

- In July 2017, Banco de México consulted business agents in the manufacturing sector regarding the factors that, in their opinion, lead to the separation of Millennials and Generation X workers from firms.
- Likewise, it presents more effective strategies that, in line with the consulted agents, increase the tenure of the labor force among the Millennials.

Main Factors Causing Millennials' Separation from Employments

Percentage distribution of responses

Region	Generation	Search for higher salaries	Greater competition among firms to hire skilled personnel	Lack of opportunities for professional growth	Other
National	Millennials	76.4	8.9	4.7	10.1
	Generation X	62.6	14.0	14.7	8.6
Northern	Millennials	80.3	13.8	1.4	4.5
	Generation X	66.0	12.8	14.4	6.8
North-Central	Millennials	75.9	11.5	1.9	10.7
	Generation X	62.7	18.1	10.8	8.4
Central	Millennials	73.1	3.6	8.7	14.6
	Generation X	59.8	13.7	16.3	10.2
Southern	Millennials	76.8	9.1	4.0	10.2
	Generation X	62.0	12.5	16.4	9.1

Source: Prepared by Banco de México based on the results of the Monthly Survey of Regional Economic Activity for the Manufacturing sector.

Main Measures Implemented in Firms to Lower Millennials' Separation from Employments

Percentage distribution of responses

Region	Generación	Greater economic benefits	Further training and development opportunities	Better work benefits	Greater flexibility	Other
National	Millennials	48.2	36.6	5.9	6.1	3.2
	Generation X	47.0	30.1	9.0	7.6	6.4
Northern	Millennials	61.9	29.0	3.6	2.5	3.1
	Generation X	52.1	27.1	7.0	7.8	6.0
North-Central	Millennials	45.2	32.4	11.8	7.0	3.6
	Generation X	45.8	33.3	13.3	5.4	2.3
Central	Millennials	36.6	45.8	5.3	9.1	3.3
	Generation X	42.5	32.0	8.1	9.0	8.3
Southern	Millennials	56.9	29.2	7.9	4.0	2.0
	Generation X	51.0	25.5	15.9	1.7	5.9

Source: Prepared by Banco de México based on the results of the Monthly Survey of Regional Economic Activity for the Manufacturing sector.

Box:

Millennials in the Labor Market: Stylized Facts and Businesses' Opinion

- The generation of Millennials is characterized by a higher educational level as compared to the Generation X, as well as by its increased participation in the formal sector and a more active role of women in the labor market.
- The characteristics of this new generation and the current competitive environment of firms have demanded, in opinion of the interviewed business contacts, the development of new strategies in firms to manage personnel.
- Among these strategies, a relatively more widespread use of these should be noted:
 - ✓ Training the personnel.
 - ✓ Greater economic benefits.

Outline

I. Regional Economic Report

II. Results April – June 2017

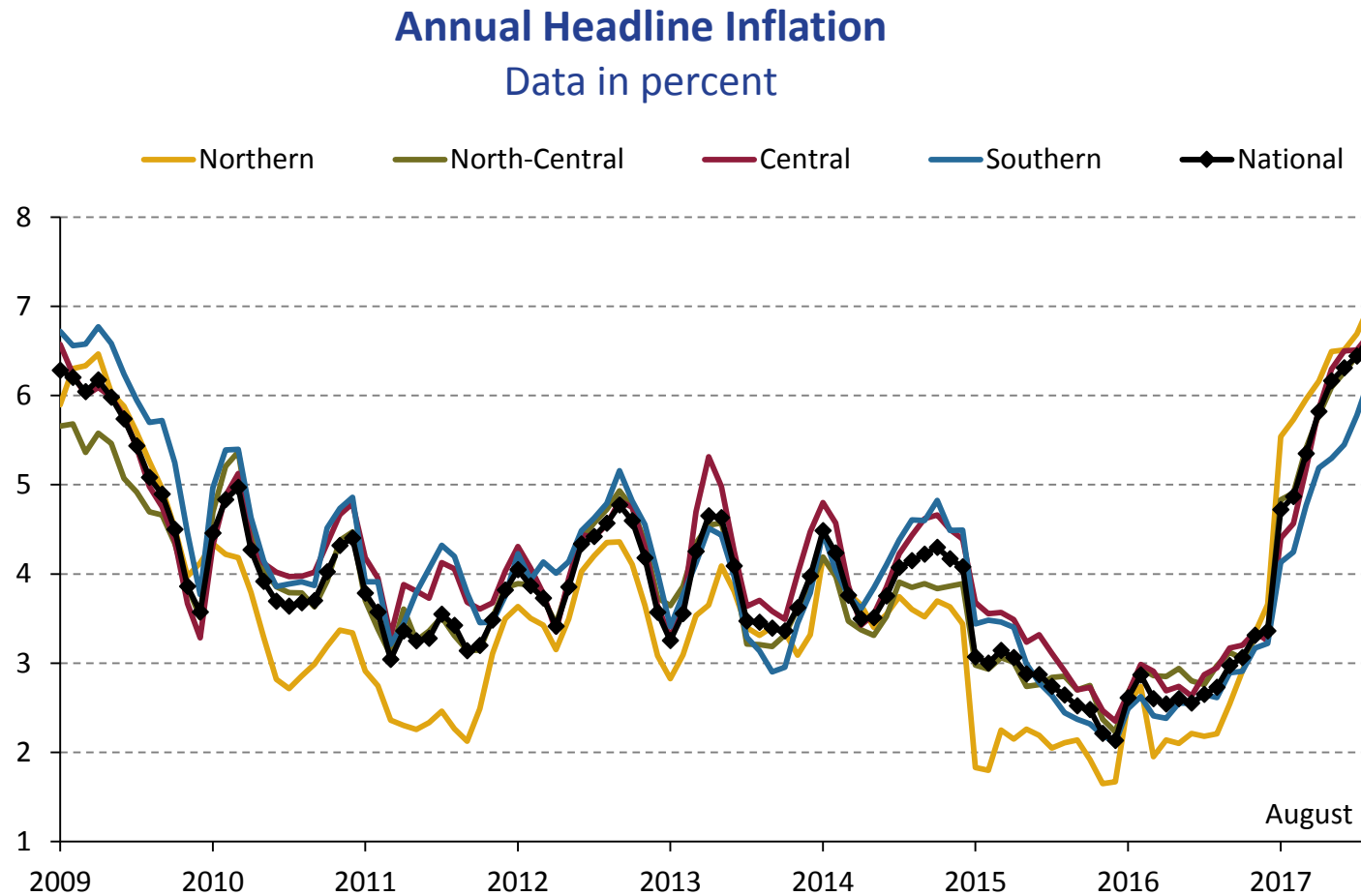
A. Economic Activity

B. Inflation

C. Economic Outlook

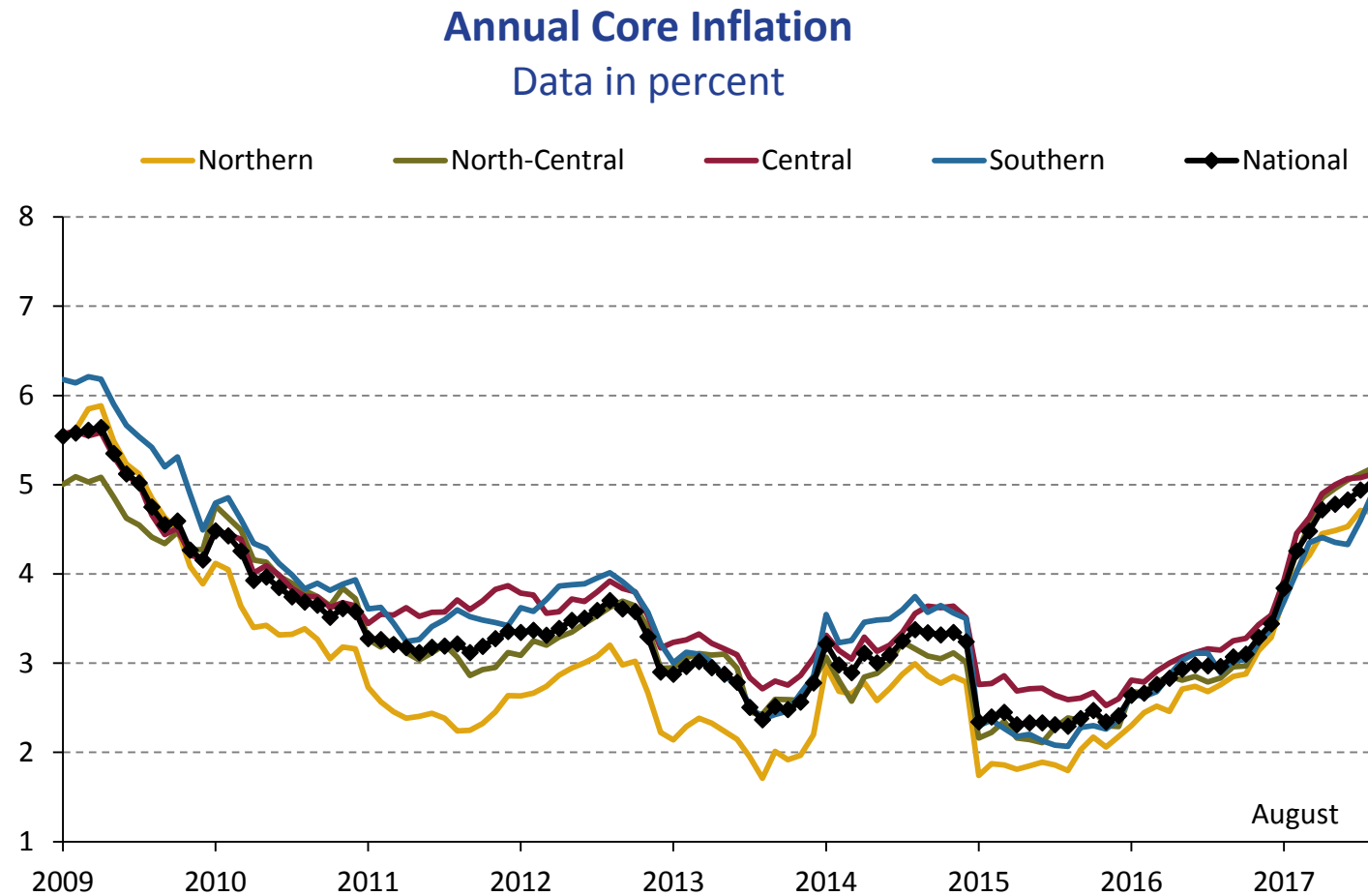
III. Final Remarks

Annual headline inflation has maintained an upward trend in all regions included in this Report, even though there is heterogeneity among their growth rates.



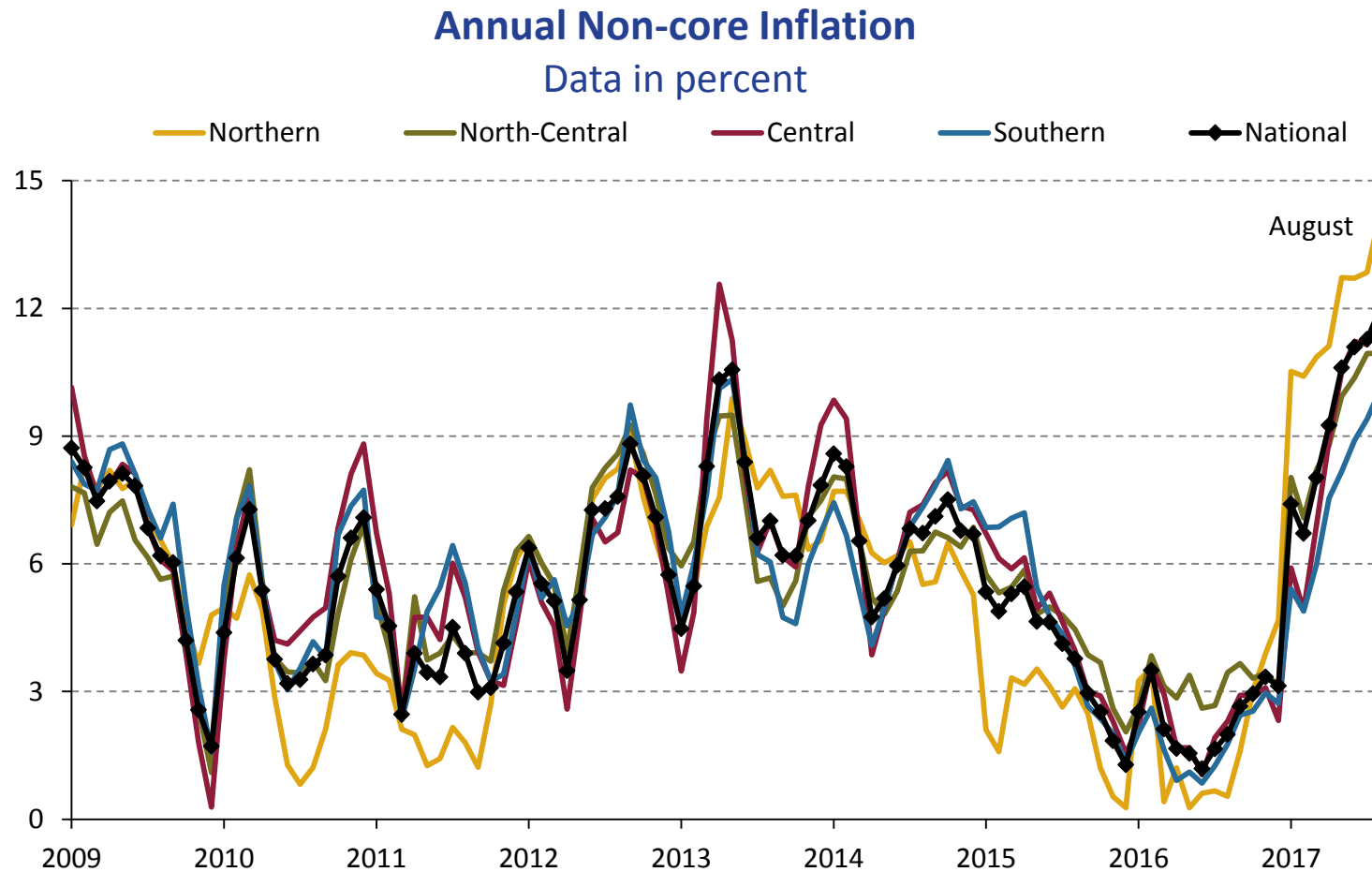
Source: Prepared by Banco de México with data from INEGI and own data.

In all regions, annual core inflation maintained an upward trend, which was more noticeable in the Southern region, while in the Northern one it practically exhibited a lateral movement at the margin.



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

Across all regions, high levels of non-core inflation that had been registered since the beginning of 2017 received an additional boost in Q2 2017.



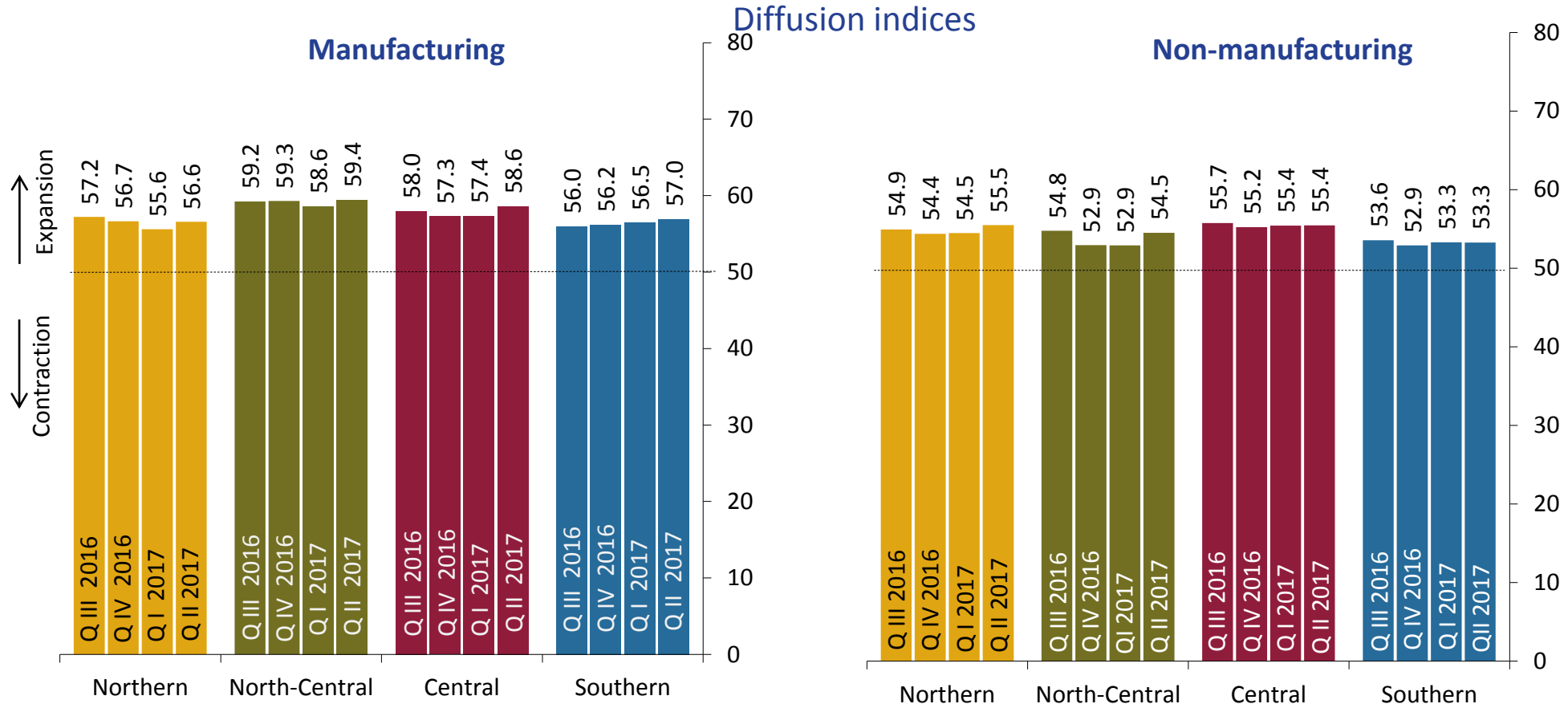
Source: Prepared by Banco de México with data from INEGI and own data.

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Regional indices of manufacturing and non-manufacturing orders indicate that manufacturing and non-manufacturing activity will keep growing over the next three months in each regional economy of Mexico. In the manufacturing sector, the signal of growth strengthened across all regions. In the non-manufacturing one, the indicator marked a level above that presented in Q1 2017 in the Northern and North-Central regions, while in the Central and Southern ones it remained stable.

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

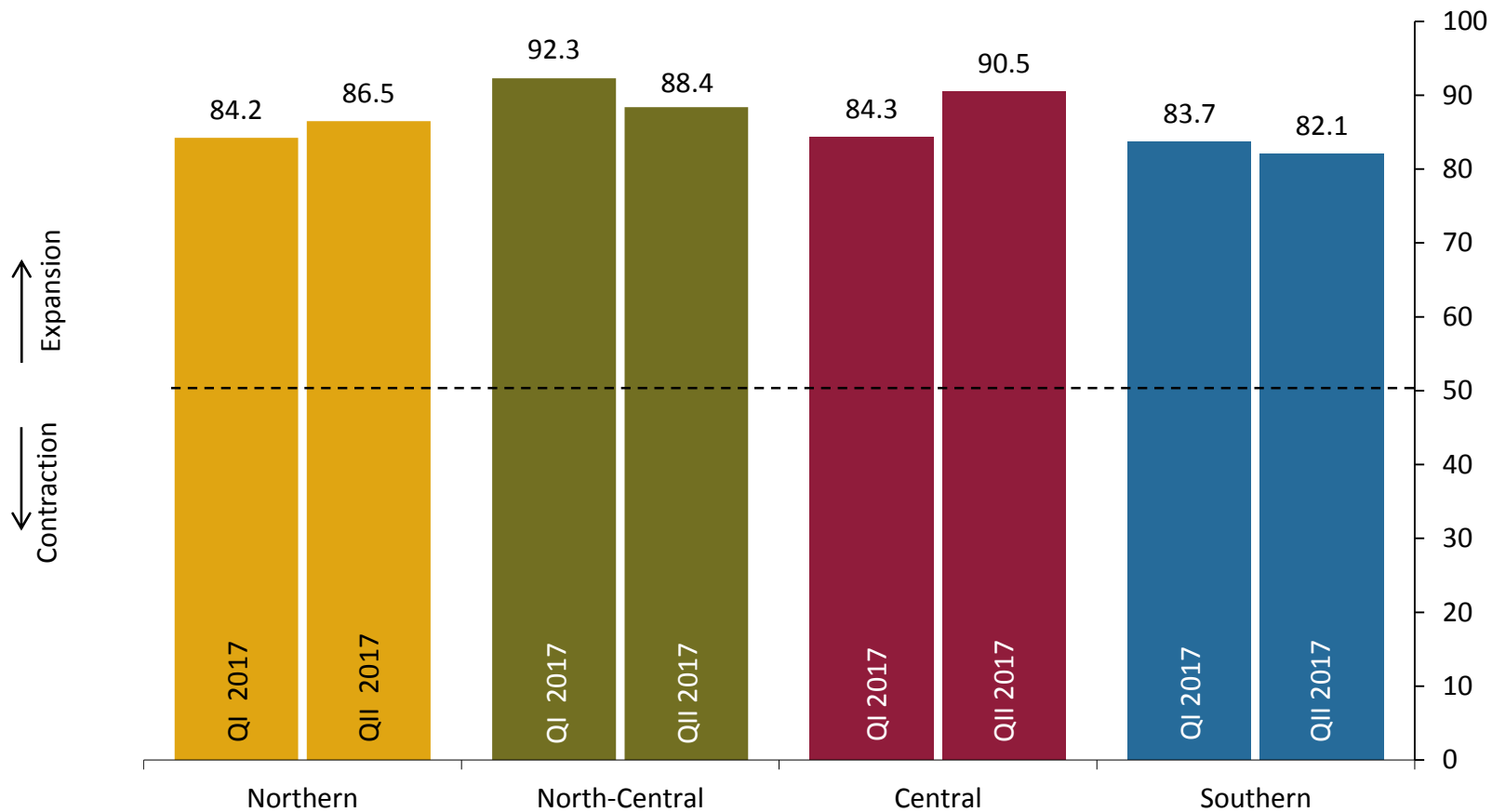


^{1/} Seasonally adjusted data.
Source: Banco de México.

Business agents in all regional economies generally anticipate higher demand for own goods and services in the next 12 months, this signal being stronger than the one reported in Q1 2017 in the Northern and Central regions.

Business Agents' Expectations: Demand over the Next 12 Months ^{1/}

Diffusion indices

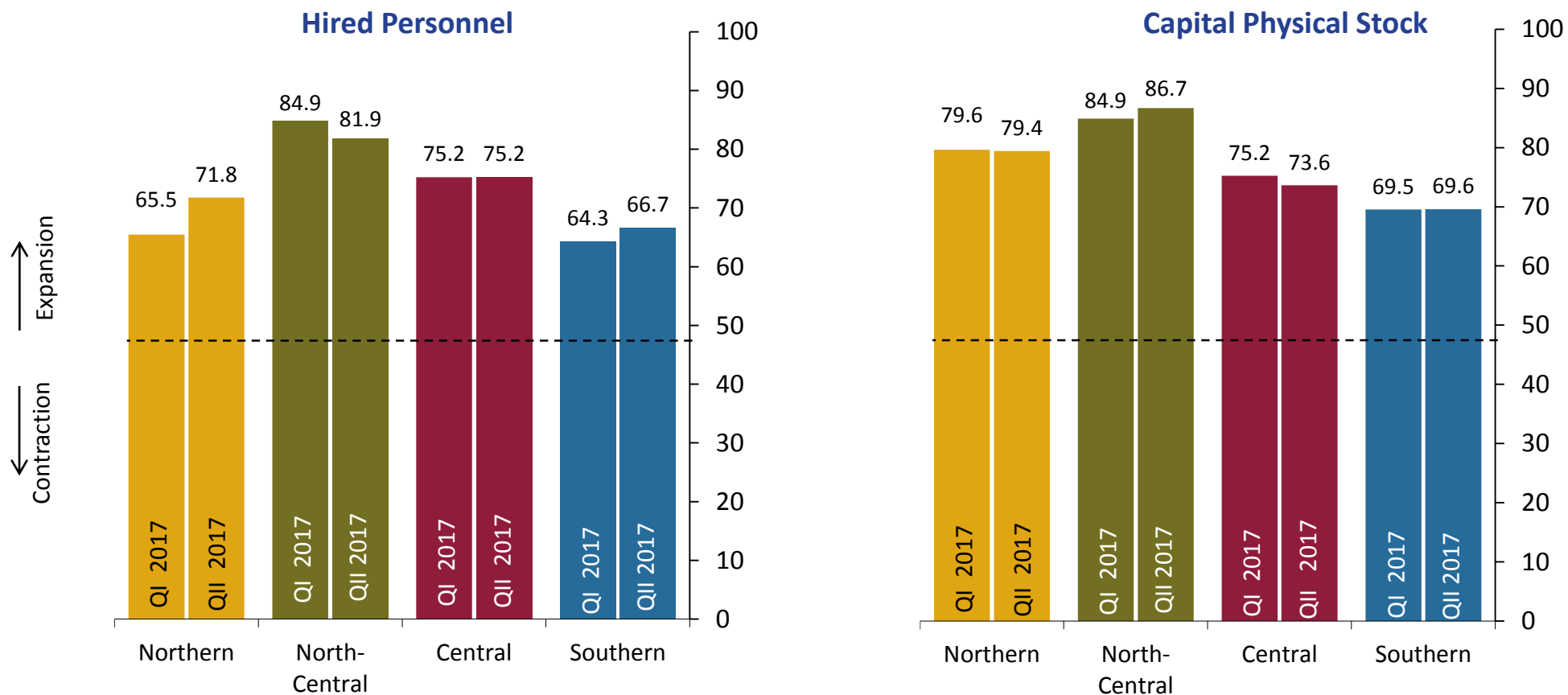


^{1/} Results obtained from responses to the question: "With respect to the volume of sales of own goods and services over the previous 12 months, how do you expect the volume of sales to modify in the next 12 months?", from interviews conducted by Banco de México.

In a context of the expected increase in demand for own goods and services, the interviewed business agents also anticipate an expansion of hired personnel and the capital physical stock across all regions.

Business Agents' Expectations: Hired Personnel and Physical Capital Stock, Next 12 Months ^{1/}

Diffusion indices



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

Risks to Regional Economies

Upward risks



- ✓ That the flow of investment, both national and foreign, is greater than expected.
- ✓ That the NAFTA renegotiation turns out favorable for Mexico.
- ✓ That the level of activity in the energy sector is greater than estimated.
- ✓ In the same vein, in the North-Central and Southern regions the consulted agents stressed the possibility that the performance of tourism turns out better than expected.

Downward risks



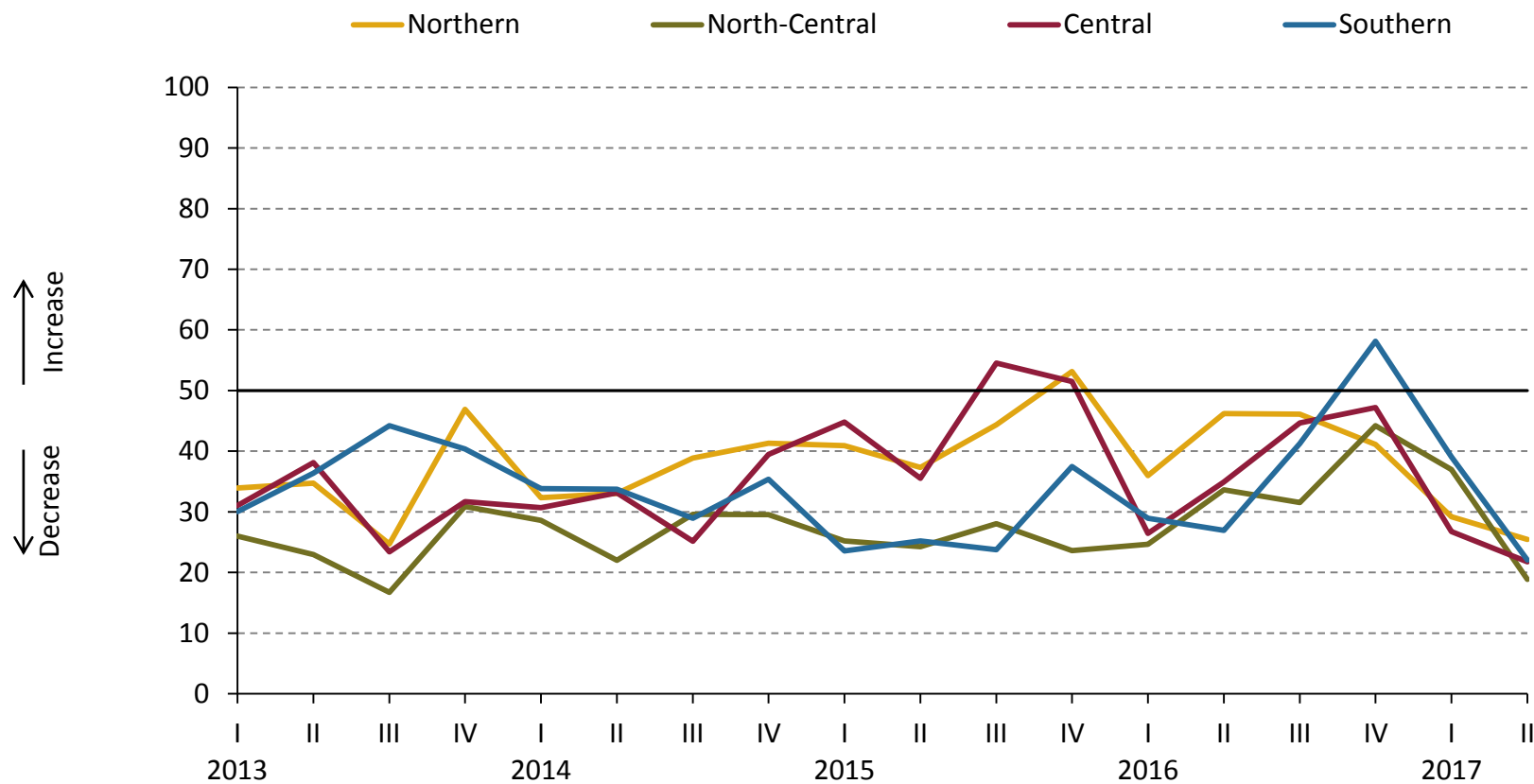
- ✓ The possibility of the deterioration in public safety.
- ✓ That uncertainty related to the upcoming 2018 electoral process negatively affects private spending, especially investment.
- ✓ That the NAFTA renegotiation turns out unfavorable for Mexico.
- ✓ In addition, some business agents interviewed in the North and in the South highlighted the possibility that domestic demand weakens and that there is a rebound in international financial volatility.

Economic Outlook

- With respect to the expected evolution of prices for the next 12 months, business contacts interviewed in all regions estimate smaller annual changes of sales' prices of own goods and services as compared to last year. It should be noted that this signal kept strengthening in all regional economies, after it had been less favorable at the beginning of the year.
- In line with the above, business agents also anticipate a decrease in annual growth rates of wage costs and input prices for the next 12 months with respect to the reference quarter.

As regards the sales' prices of own goods and services, business contacts interviewed in all regions generally anticipated lower annual changes as compared to those registered over the previous 12 months.

Business Agents' Expectations: Annual Change of Sales' Prices, Next 12 Months ^{1/} Diffusion indices

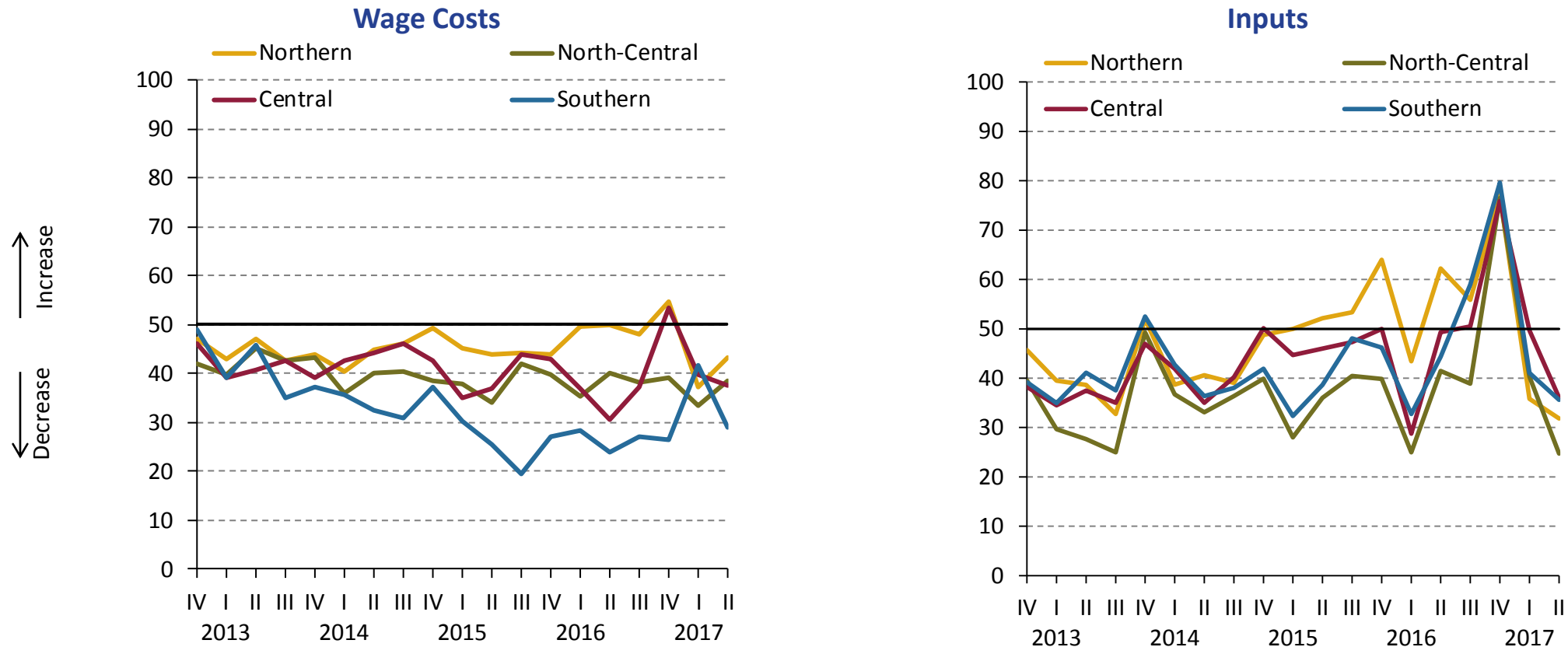


^{1/} Results obtained from responses to the question: "With respect to the previous 12 months, how do you anticipate the adjustment in your sector's sales prices for the next 12 months", from interviews conducted by Banco de México.

As regards wage costs, business agents interviewed in all regions anticipated, in general, a decrease in their annual growth rate, although in the Northern and Central regions this signal slightly weakened with respect to Q1 2017. Relative to input prices, the signal of an increase in their growth rate for the next 12 months kept weakening across all regional economies.

Business Agents' Expectations: Annual Change of Wage Costs and Input Prices, Next 12 Months ^{1/}

Diffusion indices



^{1/} Results obtained from responses to the question: "With respect to the previous 12 months, how do you anticipate the adjustment in input prices (goods and services) and in wage costs used in this sector, for the next 12 months?", from interviews conducted by Banco de México.

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Final Remarks

- Despite a complex external environment, characterized by persisting uncertainty, most regional economies presented a favorable performance, in part, as a result of the adopted monetary and fiscal policies, and the progress in the implementation of structural reforms.
- Nonetheless, it should be remembered that considerable challenges to the regional development still persist, reason why it is essential to continue strengthening the macroeconomic fundamentals, as well as the institutional framework, both at the national and local levels.
 - ✓ In particular, it is a priority to continue enhancing the rule of law, legal certainty and public safety at all levels.
- In this way, regional economies will be in a better position to successfully tackle the complex nature of both the external and internal environment, and to benefit from the opportunities that may arise.



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