



Regional Economic Report  
October - December 2012



BANCO DE MÉXICO

March 14, 2013

# Outline

- I. Introduction**
- II. Results October - December 2012**
  - A. Economic Activity**
  - B. Inflation**
  - C. Economic Outlook**
- III. Final Considerations**

# Introduction

- The Regional Economic Report is a quarterly publication on the recent trends in economic activity, inflation and business agents' expectations in the Mexican regions.<sup>1/</sup>
- This information is taken into account by Banco de México's Board of Governors when evaluating the economic situation and the forecasts for the Mexican economy.
- The economic performance of the regions in 4Q 2012 and the prospects for regional economic activity and inflation over the following 6 and 12 months are analyzed herein.

1/ For the purposes of this Report, the federal entities of Mexico are grouped into the following 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: Distrito Federal, Estado de México, Guanajuato, Hidalgo, Morelos, Puebla, Querétaro and Tlaxcala. Southern: Campeche, Chiapas, Guerrero, Oaxaca, Quintana Roo, Tabasco, Veracruz and Yucatán.

# Outlook

- I. Introduction
- II. Results October – December 2012**
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  - B. Inflation**
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- III. Final Considerations

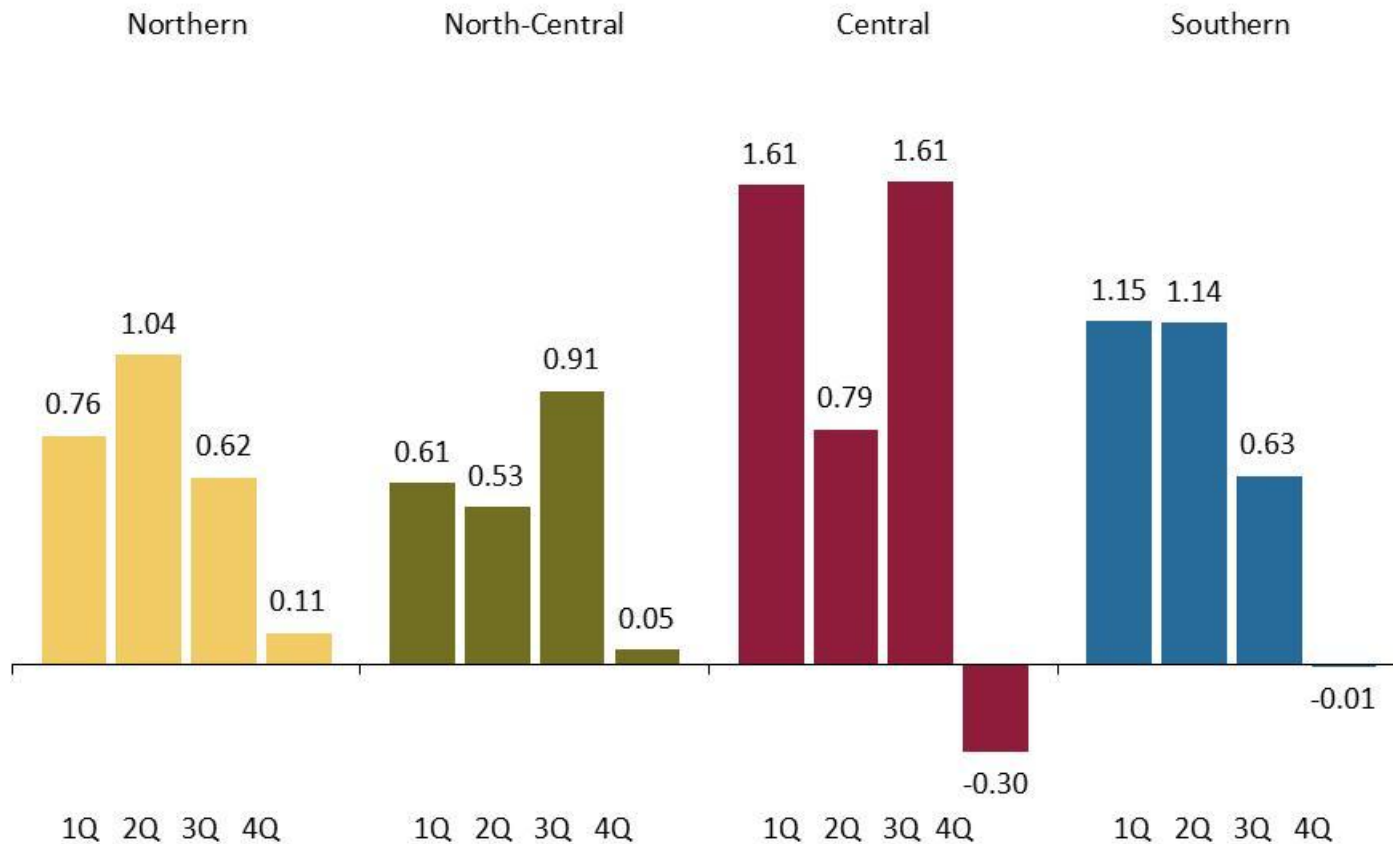
# Economic Activity

- During 4Q 2012 regional economies are estimated to have expanded at a pace that was moderate compared to the one observed in 1H 2012.
  - ✓ Thus, the deceleration in economic growth, which was first noticed in the north and in the south in 3Q 2012, extended to the central regions.
  - ✓ The slowdown was driven by an incipient weakening of the services' sector, as well as by the modest performance of the construction industry. Furthermore, in the center and in the south manufacturing activity contracted.
  - ✓ In contrast, in all regions the agricultural production recovered, due to more favorable weather conditions and the partial recovery of livestock production.
  - ✓ Financing to firms continued to grow in all regions, even though signs of deceleration were observed.

# Economic Activity

## Regional Coincident Index, 2012 <sup>1/</sup>

Average quarterly change in percent, s. a. <sup>2/</sup>



1/ This indicator's values in 4Q 2012 are a forecast.

2/ The magnitude of this indicator's changes is not directly comparable to that of GDP. In particular, it does not capture the activity fluctuations in the primary sector, which considerably affected the GDP change in 4Q 2012.

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

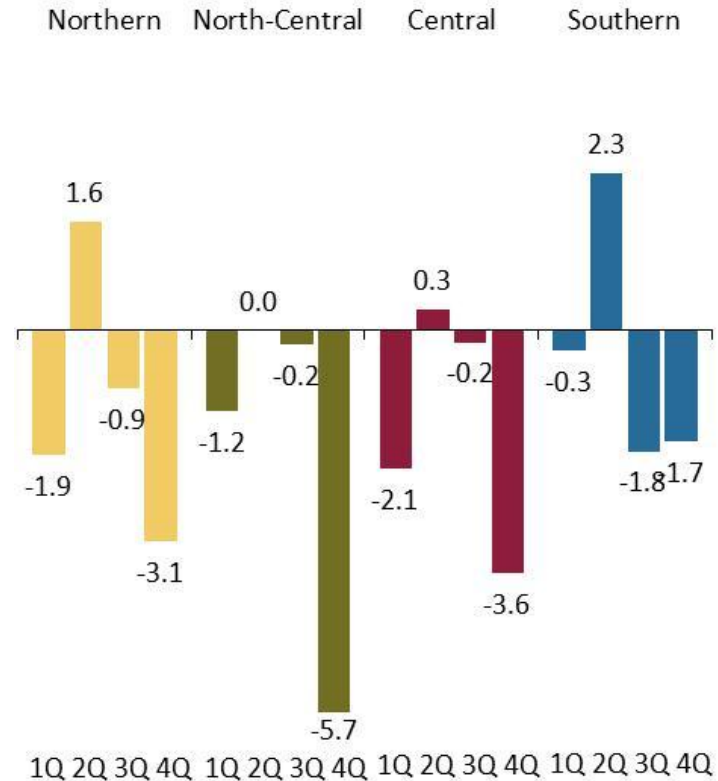
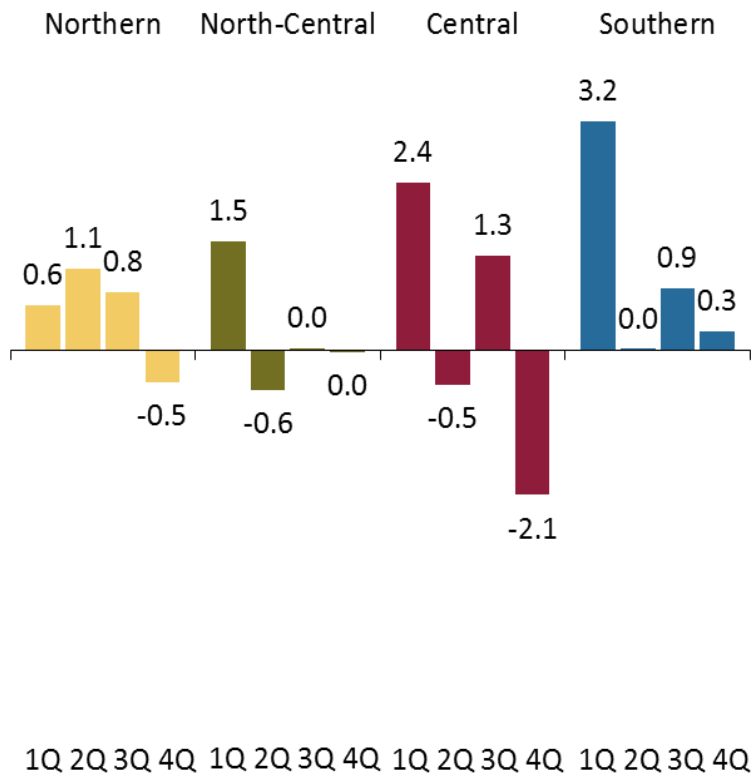
# Economic Activity

## Regional Sales Indicators, 2012

Average quarterly change in percent, s. a.

### Retail

### Wholesale

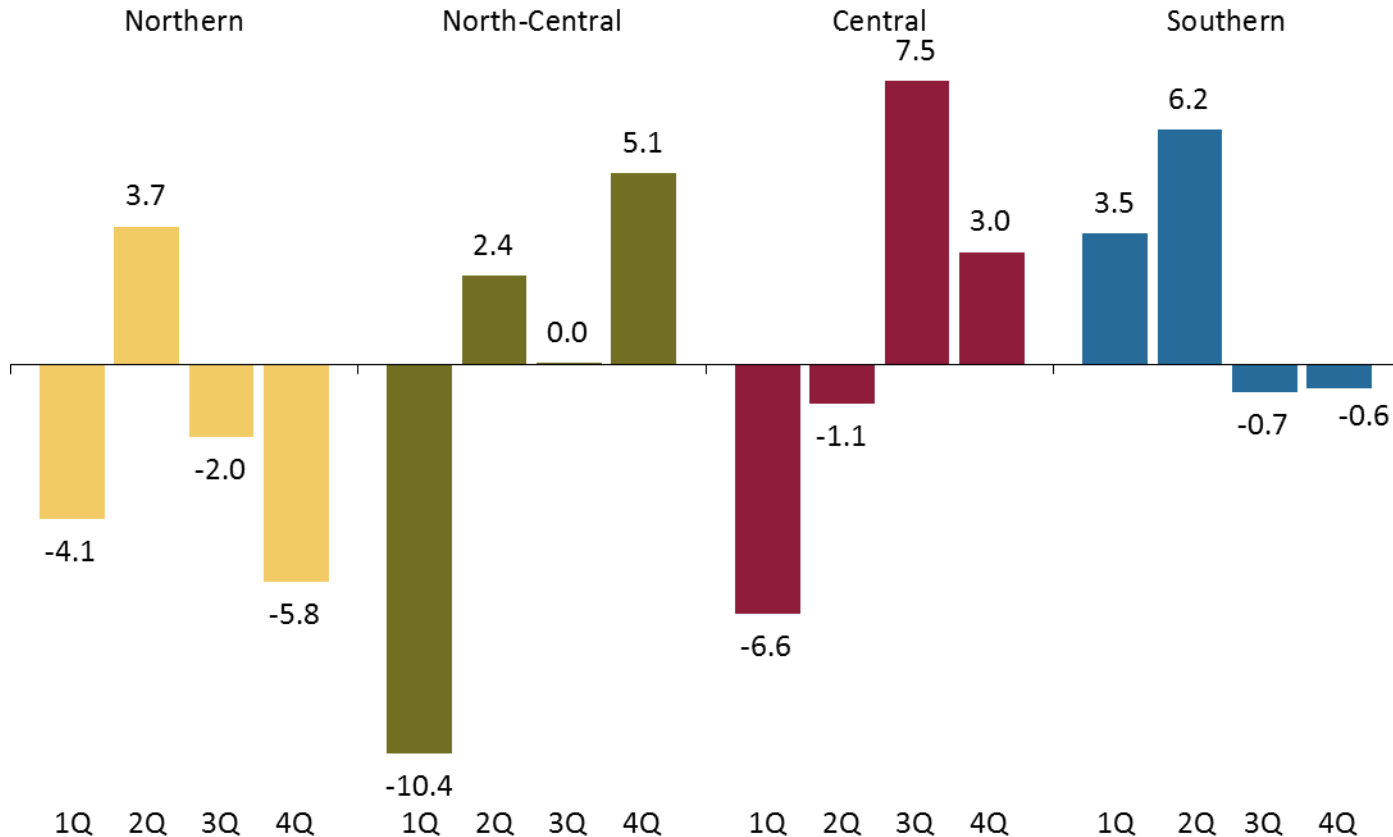


Source: Estimated by Banco de México with data from INEGI.

# Economic Activity

## Real Value of Production in the Construction Sector, 2012

Average quarterly change in percent, s. a.



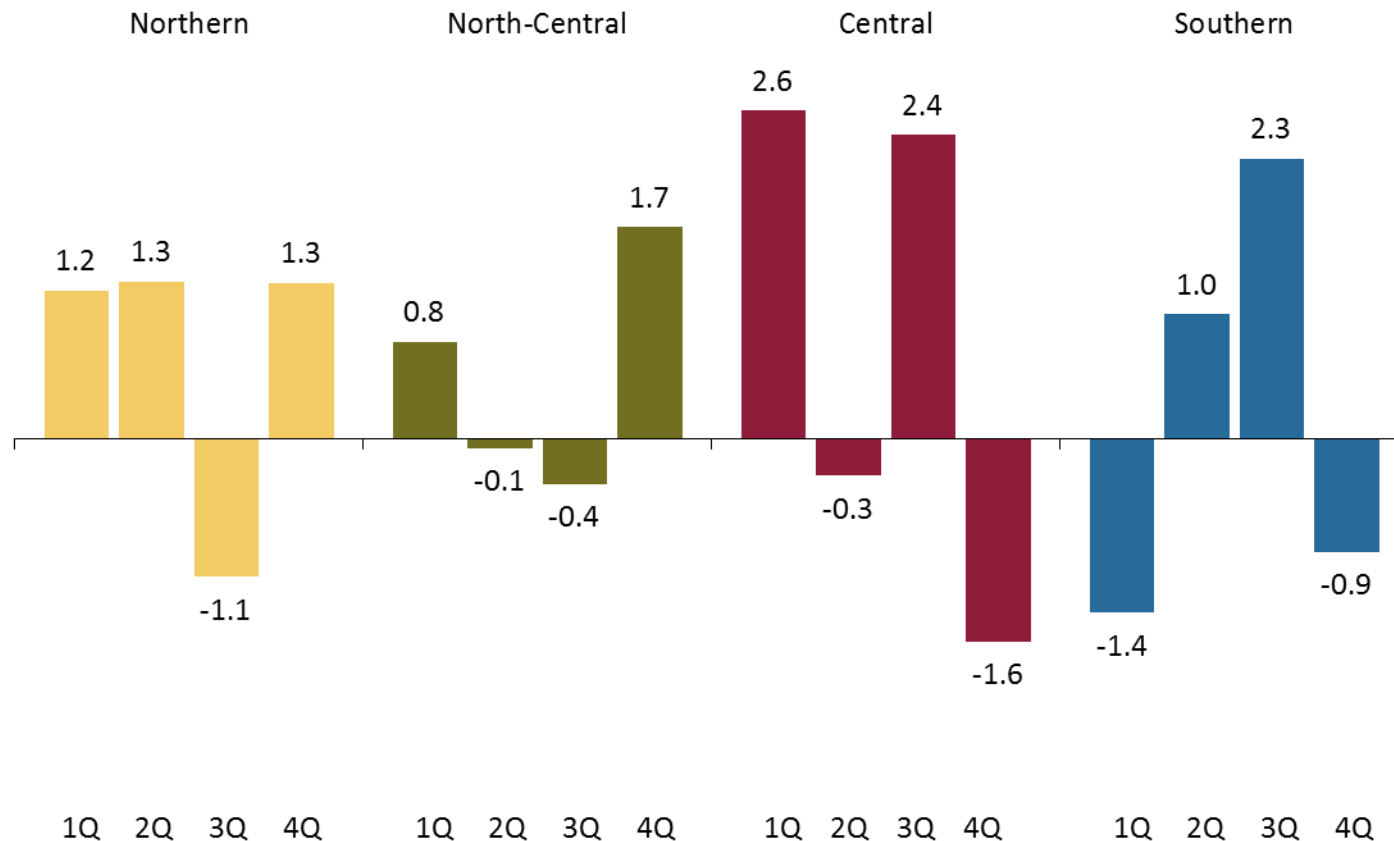
Source: Estimated by Banco de México with data from the National Survey of Construction Companies (ENEC) of INEGI.



# Economic Activity

## Regional Manufacturing Indicator, 2012 <sup>1/</sup>

Average quarterly change in percent, s. a.



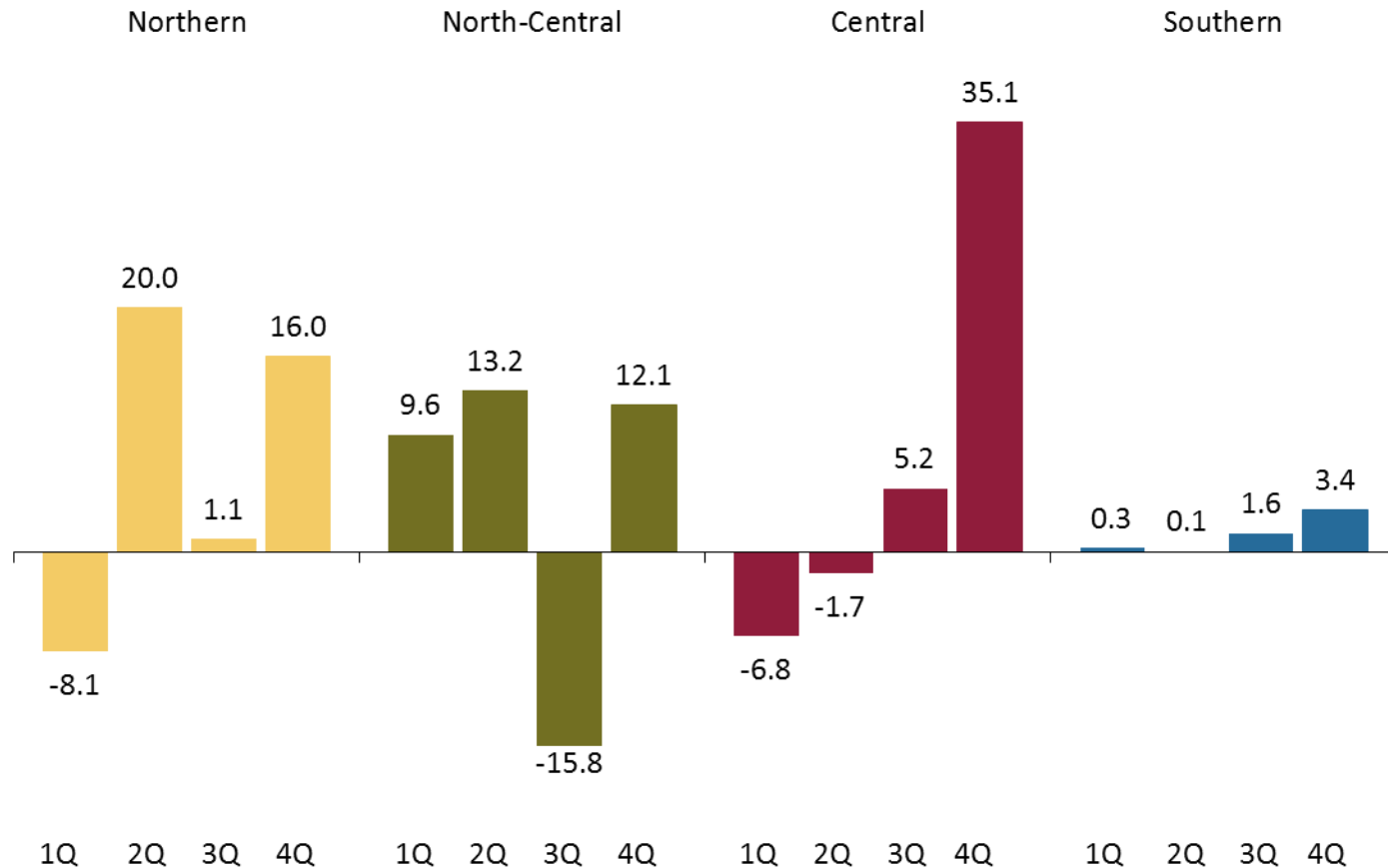
<sup>1/</sup> This indicator's values in 4Q 2012 are a forecast.

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

# Economic Activity

## Regional Agricultural Production Index, 2012

Annual change in percent



Source: Estimated by Banco de México with data from SAGARPA.

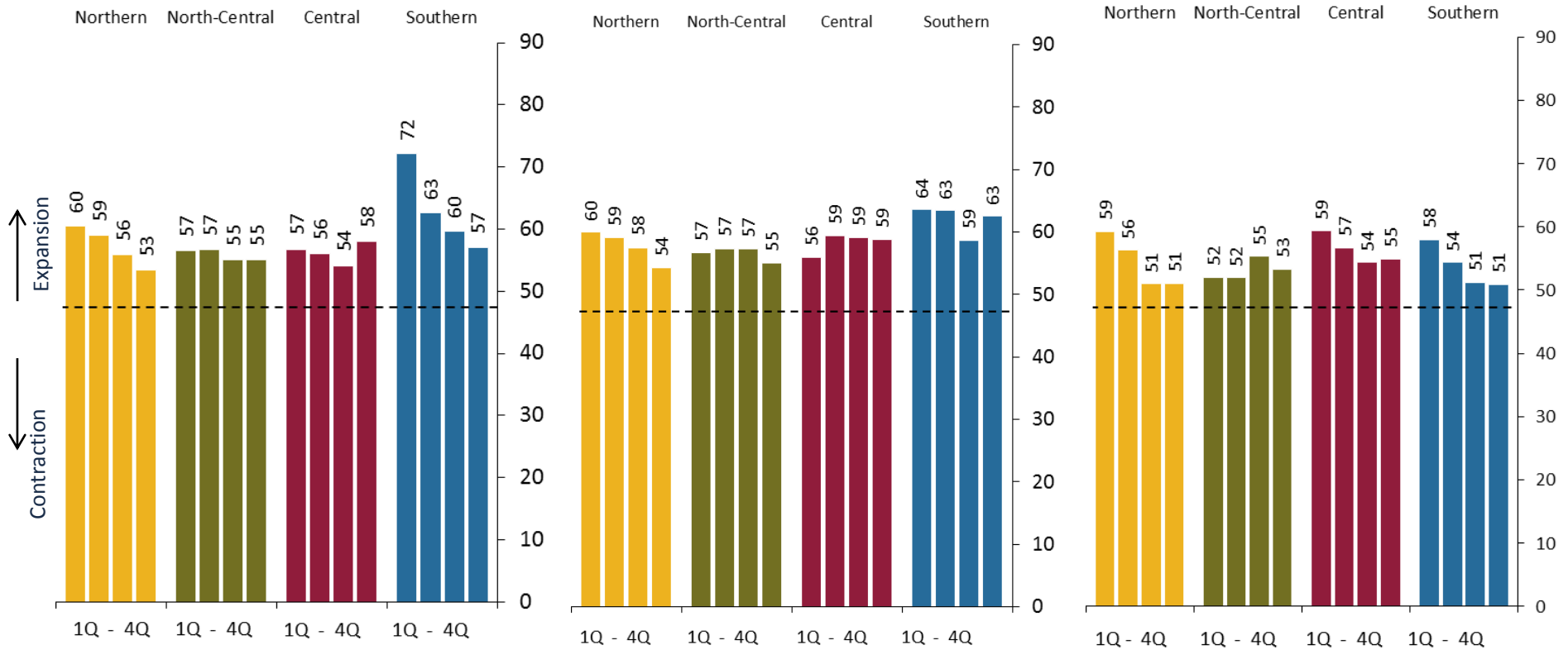
# Economic Activity

## Main Sources of Financing to Firms, 2012 <sup>1/</sup> Diffusion index

### Own Resources

### Suppliers

### Commercial Banks



1/ From 2Q 2012 a methodological change was introduced in this indicator, reason for which figures corresponding to 1Q 2012 are not strictly comparable to those of the subsequent quarters.

Source: Banco de México.

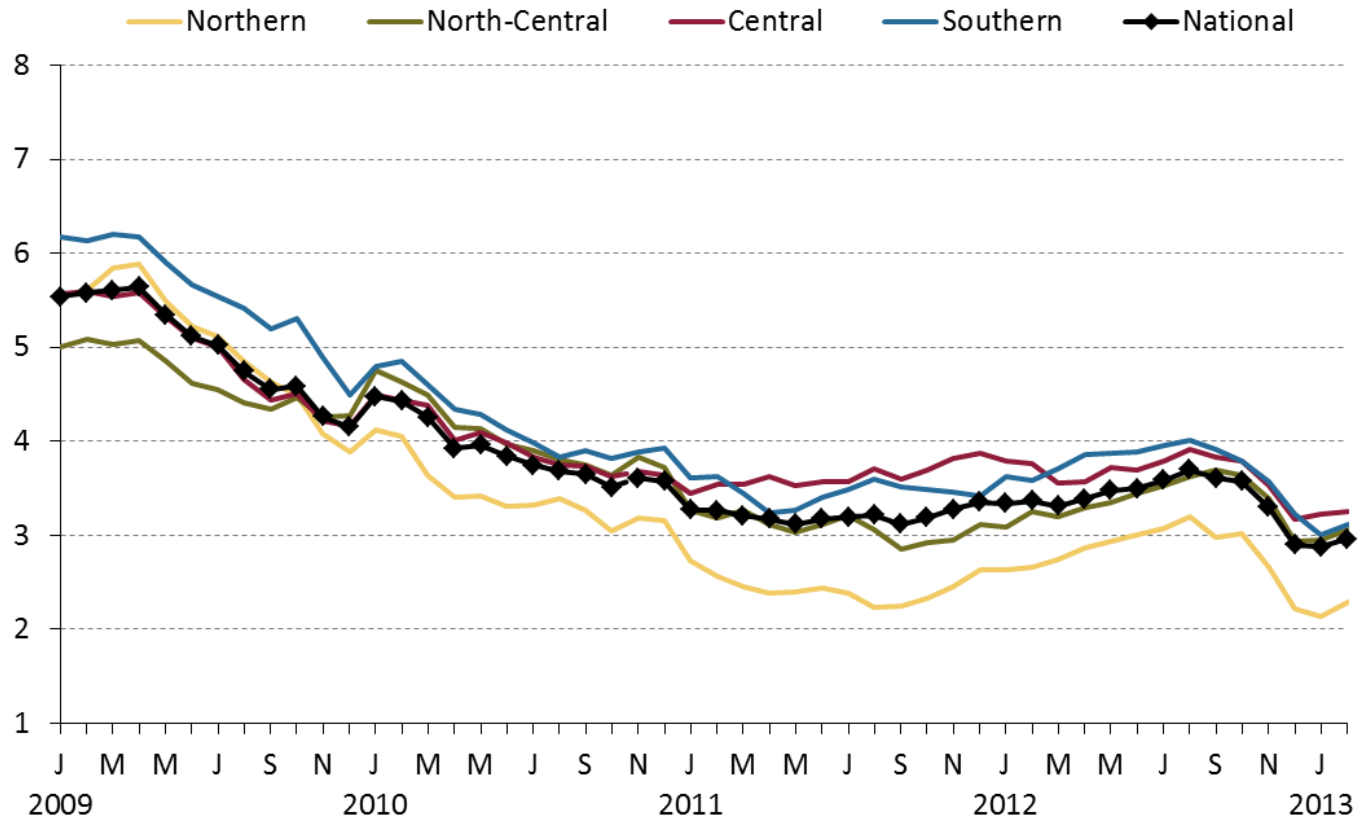
# Inflation

- During 4Q 2012, annual headline inflation in the four regions registered significantly lower levels as compared to 3Q 2012.
  - ✓ It was mainly driven by the fading away of shocks that had previously affected the short-term trajectory of inflation.
  - ✓ In January and February 2013 this variable remained at low levels, although, just as anticipated by Banco de México, it rebounded in the second month due to the arithmetic effect associated to a low comparative base in this indicator.



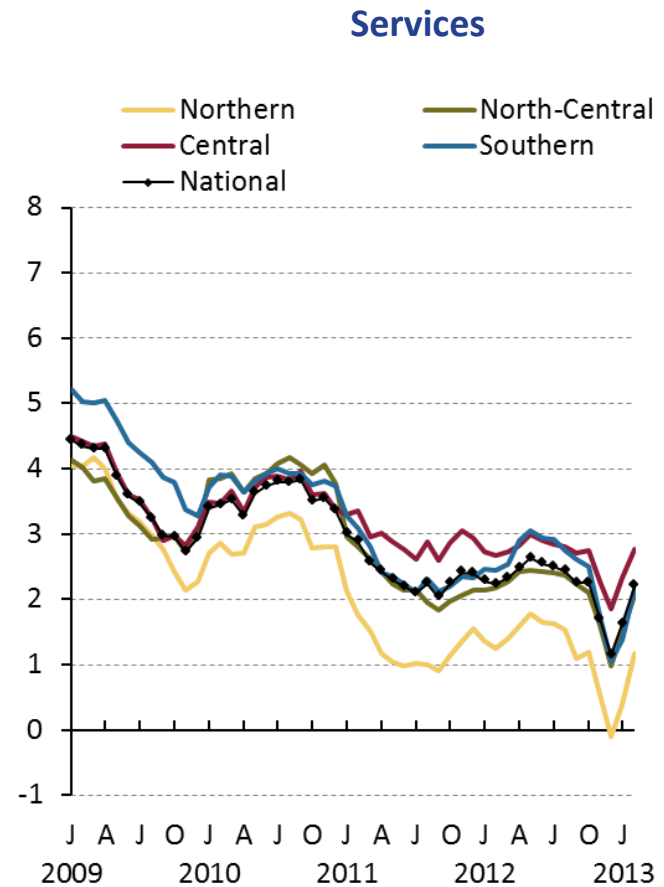
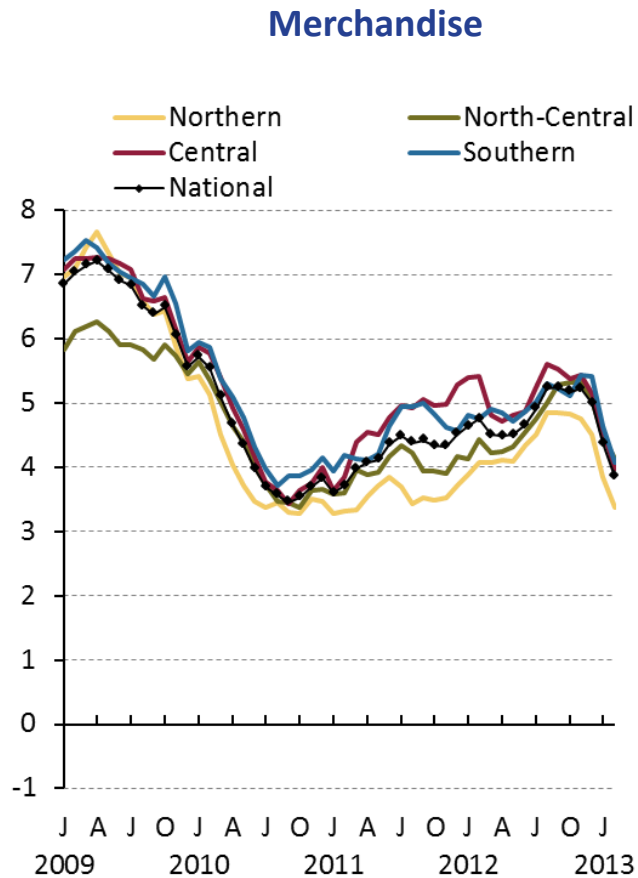
# Annual Core Inflation

## Percent



# Annual Core Inflation by Type of Product

Percent



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

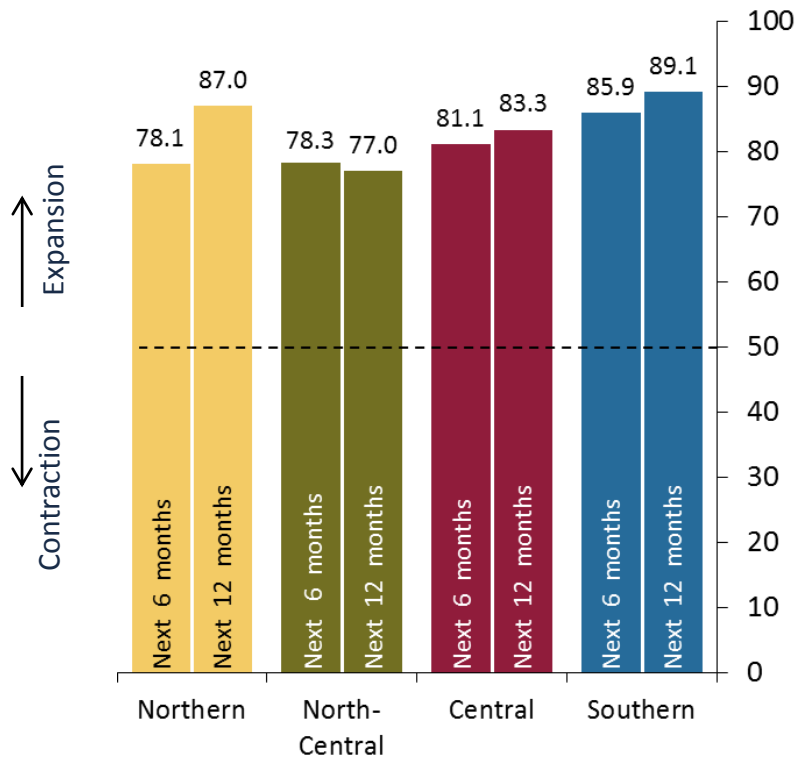
# Economic Outlook

- The business agents interviewed by Banco de México in all regions during December 2012 and January 2013 mostly estimated that the regional economies will continue growing over the next 6 and 12 months.
- In the opinion of these business contacts, the main risks to regional economic growth are:
  - ✓ External: the evolution of the world economy.
  - ✓ Domestic: the vulnerability of public finances at the state and municipal level and its potential impact on public works.
- Most business agents interviewed by Banco de México pointed out that they expect lower inflationary pressures for 2013 as compared to 2012.

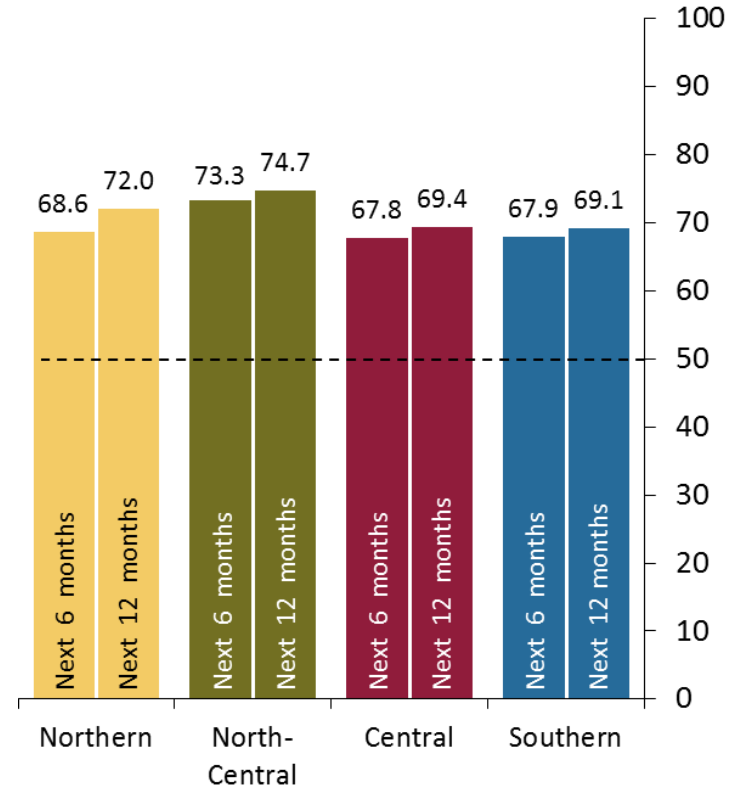


# Economic Outlook

**Demand Expected by Business Agents <sup>1/</sup>**  
Diffusion index



**Personnel Hired as Expected by Business Agents <sup>1/</sup>**  
Diffusion index



1/ Results obtained from responses to the question: “With respect to the situation in 4Q 2012, how do you expect the demand for your own products and services to change over the next 6 and 12 months?”, from the interviews conducted by Banco de México between December 17, 2012 and January 31, 2013.

Source: Banco de México.

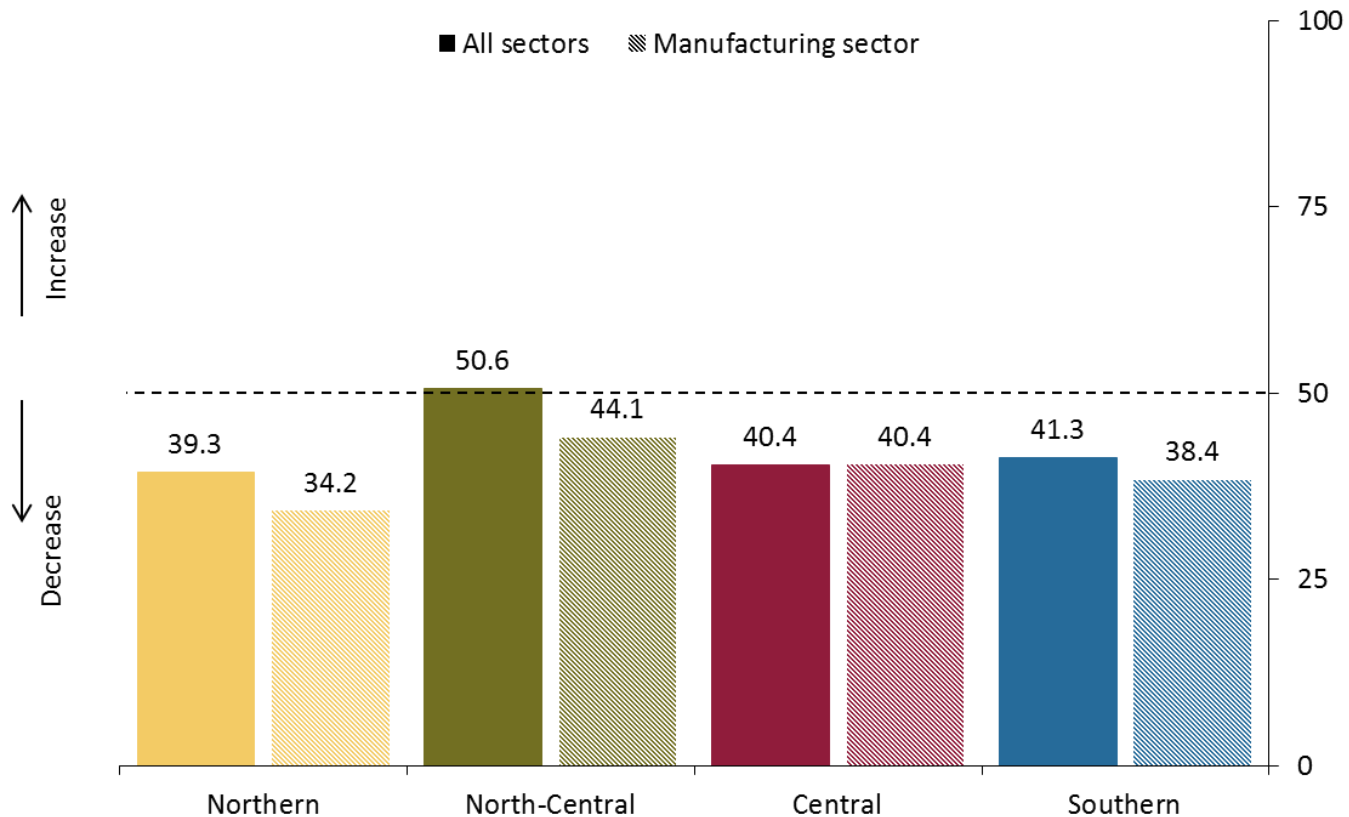
1/ Results obtained from responses to the question: “With respect to the situation in 4Q 2012, how do you expect the personnel hired by your firm to modify over the next 6 and 12 months?”, from the interviews conducted by Banco de México between December 17, 2012 and January 31, 2013.

Source: Banco de México.

# Economic Outlook

## Opinion of Business Agents Interviewed by Banco de México: Expected Change in the Growth Rate of Demand, Next 6 Months <sup>1/</sup>

Diffusion index

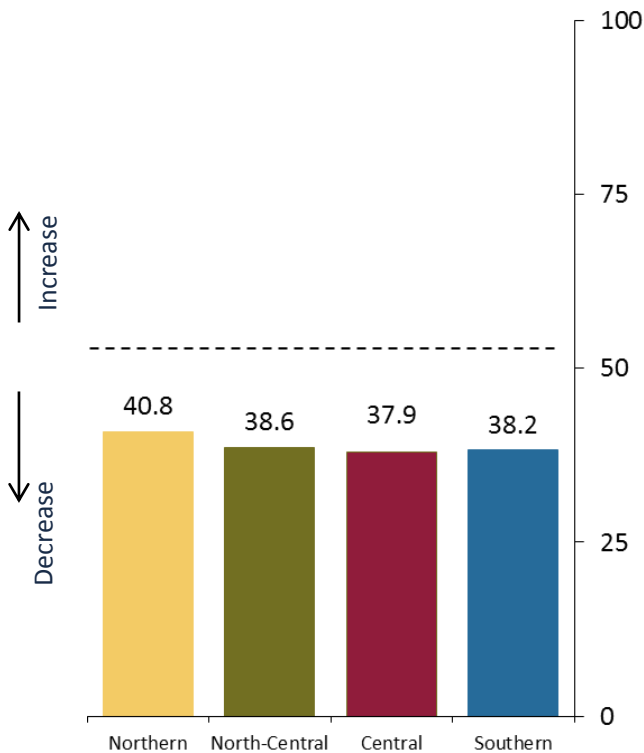


<sup>1/</sup> Results obtained from responses to interviews carried out by Banco de México between December 17, 2012 and January 31, 2013.  
Source: Banco de México.

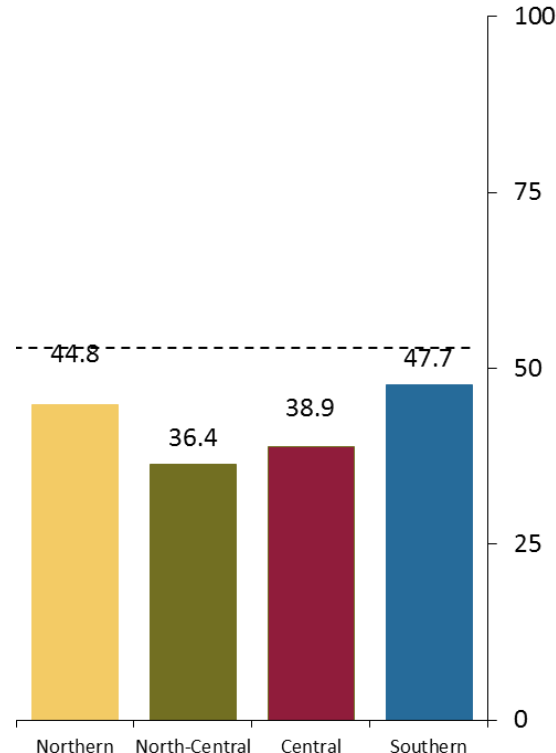
# Economic Outlook

## Business Agents' Inflation Expectations over Next 6 Months <sup>1/</sup> Diffusion index

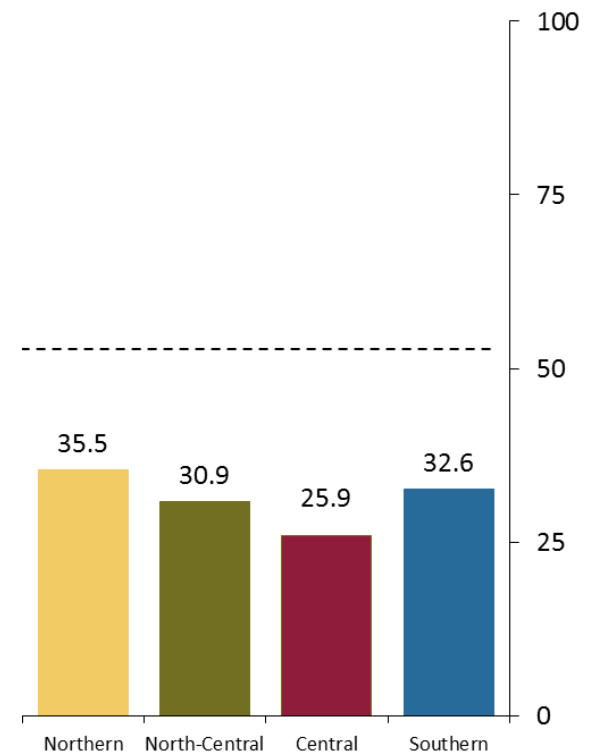
### Commodity Price Increase



### Labor Cost Increase



### Own Products' Price Increase



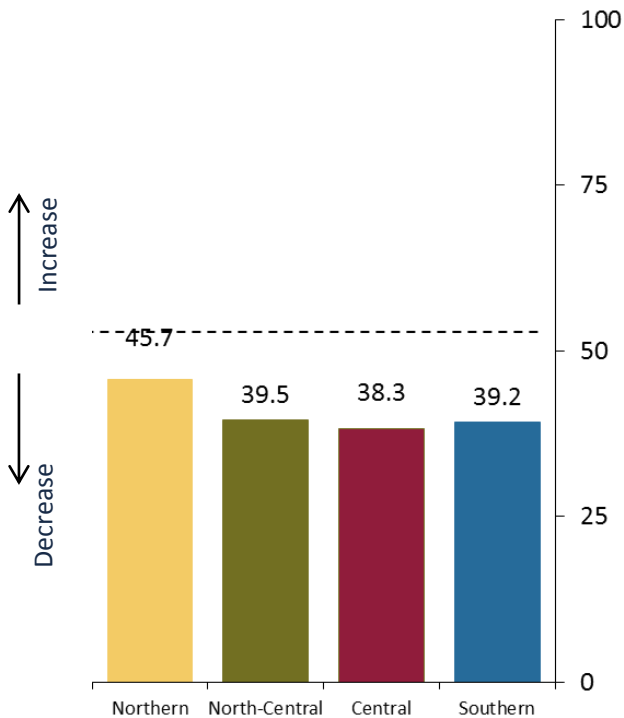
<sup>1/</sup> Results obtained from responses to the questions: "With respect to the situation in 4Q 2012, do you expect any adjustment in commodity prices, labor costs and own products' prices over the next 6 months?" and "In comparison with the same period of last year, what magnitude of adjustment do you expect? Greater, same or lower?", from the interviews conducted by Banco de México between December 17, 2012 and January 31, 2013.

Source: Banco de México.

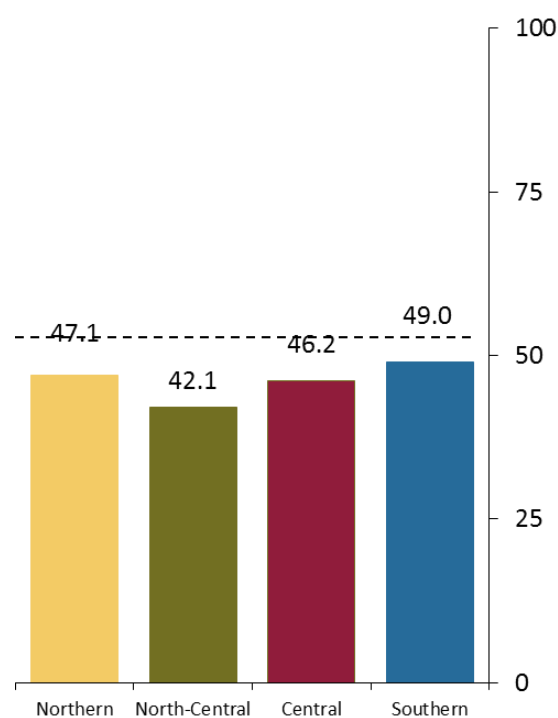
# Economic Outlook

## Business Agents' Inflation Expectations over Next 12 Months <sup>1/</sup> Diffusion index

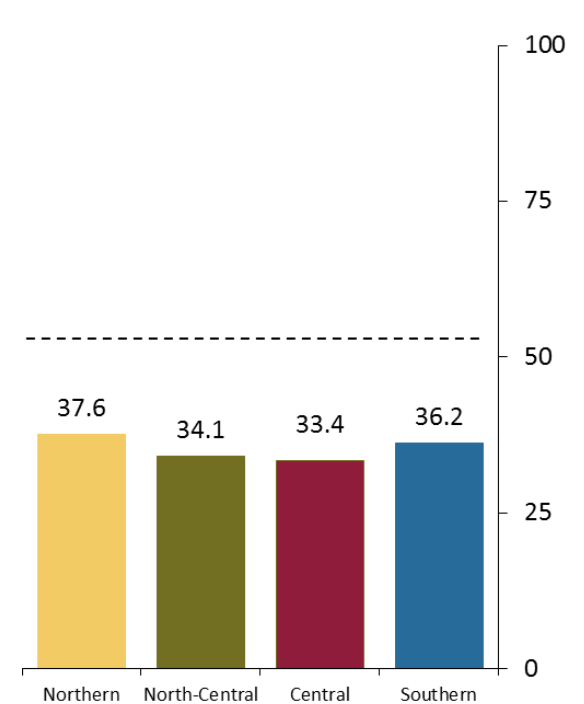
### Commodity Price Increase



### Labor Cost Increase



### Own Products' Price Increase



1/ Results obtained from responses to the questions: "With respect to the situation in 4Q 2012, do you expect any adjustment in commodity prices, labor costs and own products' prices over the next 12 months?" and "In comparison with the same period of last year, what magnitude of adjustment do you expect? Greater, same or lower?", from the interviews conducted by Banco de México between December 17, 2012 and January 31, 2013.

Source: Banco de México.

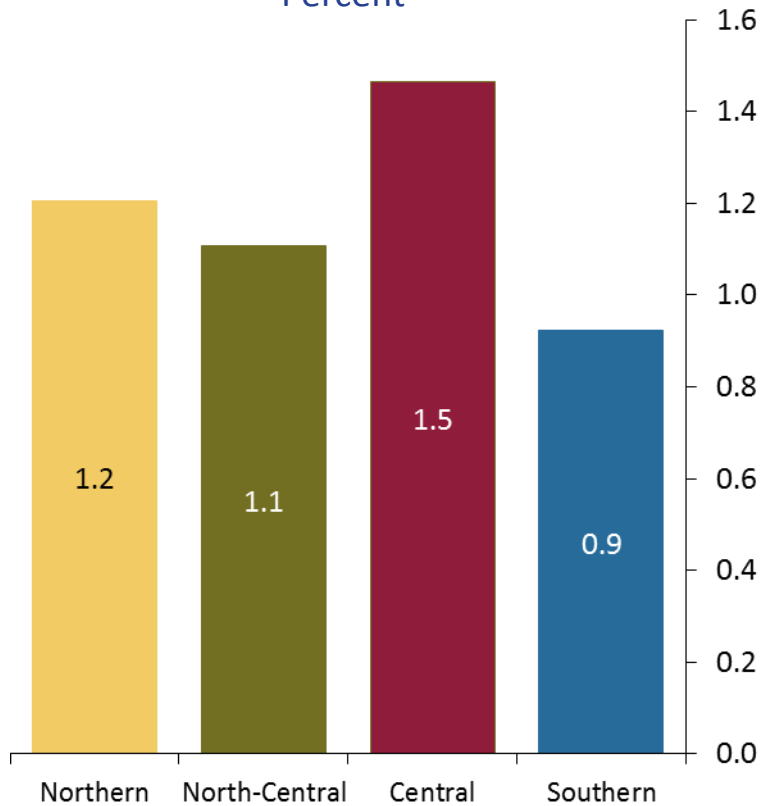
# Economic Outlook

- A majority of the interviewed business contacts pointed out that the process of structural reforms in Mexico would contribute to strengthening the potential for economic growth. This Report includes two Boxes, which are related to the abovementioned.
  - ✓ The first Box discusses the results of a survey of businesses on the impact of the labor reform at the regional level.
    - Mostly, firms in all regions expect that the labor reform will contribute to a greater incorporation of the labor force into the economy's formal sector.
  - ✓ The second Box analyzes the regional differences in the labor productivity of the manufacturing industry and its relation to the infrastructure endowment.
    - The results imply that the development of greater public infrastructure will contribute to enhancing labor productivity in the manufacturing industries of all regions.

# Survey of Businesses on the Impact of the Labor Reform at the Regional Level in 2013 <sup>1/</sup>

As a Result of the Labor Reform, By what Percentage do you Anticipate the Hired Personnel to be Modified in 2013?

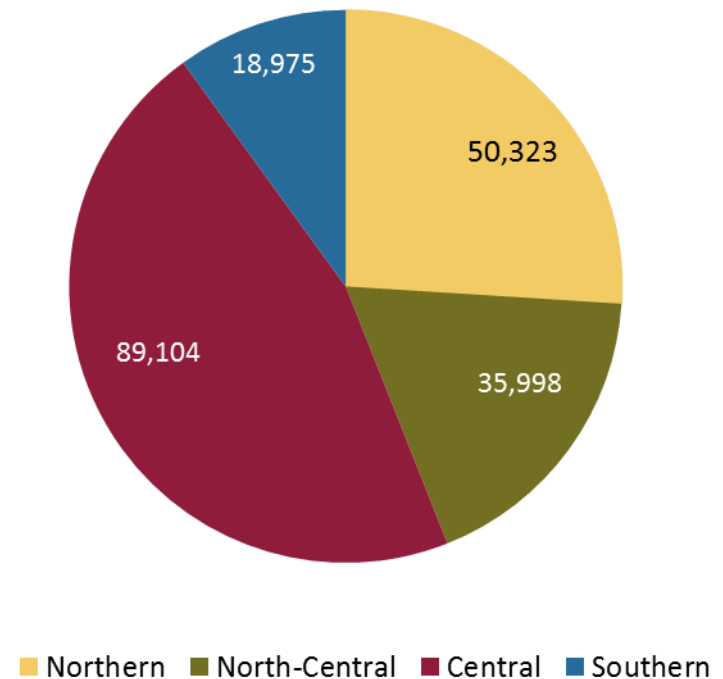
Percent



Source: Banco de México.

Impact of the Labor Reform on the Regional Employment in 2013

Number of employees by region

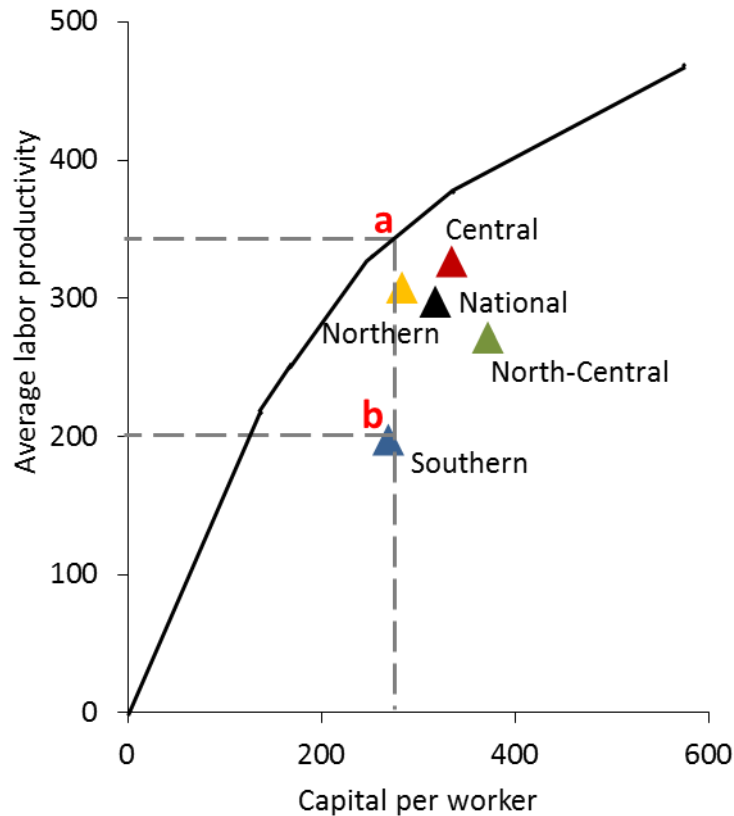


Source: Banco de México.

<sup>1/</sup> Survey conducted among 1,884 firms of the manufacturing and non-manufacturing sectors.

# Technical Efficiency of the Manufacturing Industry and Public Infrastructure

**Production Frontier and Average Labor Productivity in the Manufacturing Industry**  
Thousands of current pesos (2008)



Source: Own estimate with data from INEGI.

**Decomposition of Average Labor Productivity into Technical Efficiency and Capital per Worker <sup>1/</sup>**  
Deviation of the national mean, percent

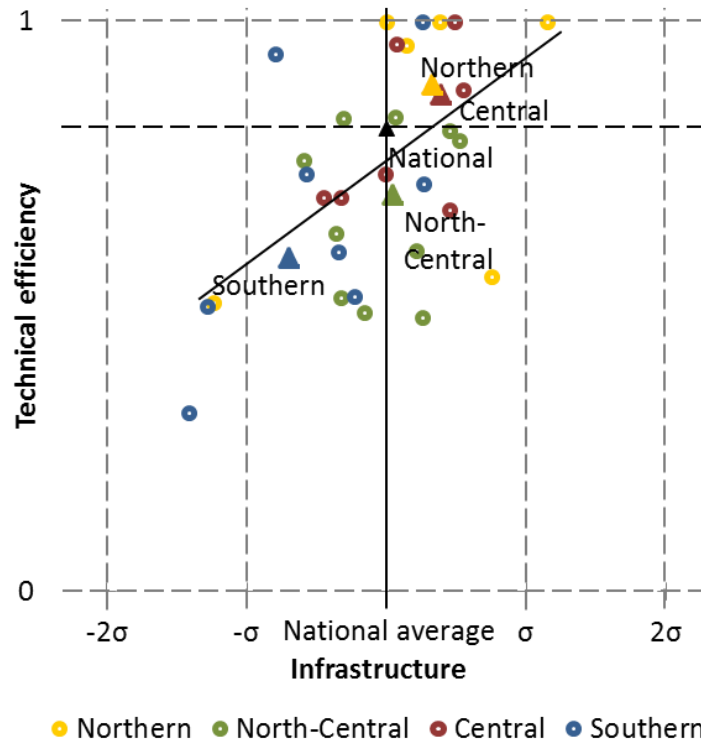
|                      | Average labor productivity<br>(1) = (2) + (3) | Technical efficiency<br>(2) | Capital per worker<br>(3) |
|----------------------|---|-----------------------------|---------------------------|
| <b>Northern</b>      | 3.2   | 8.7                         | -5.5                      |
| <b>North-Central</b> | -8.7  | -15.0                       | 6.3                       |
| <b>Central</b>       | 9.8   | 7.0                         | 2.8                       |
| <b>Southern</b>      | -33.4   | -27.1                       | -6.3                      |

<sup>1/</sup> Decomposition according to Shapley value.

Source: Own estimate with data from INEGI.

# Technical Efficiency of the Manufacturing Industry and Public Infrastructure

Relation between the Technical Efficiency of the Manufacturing Industry and the Infrastructure Index <sup>1/ 2/</sup>



Impact of the Infrastructure Index on the Technical Efficiency of the Manufacturing Industry <sup>3/</sup> Percent

| Type of infrastructure       | Efficiency change |
|------------------------------|-------------------|
| Communications and transport | 9.3               |
| Urban                        | 7.3               |
| Social                       | 4.1               |
| Financial                    | 5.3               |
| <b>Total</b>                 | <b>28.6</b>       |

1/ Data from the federal entities that make up each region are presented by yellow, green, red and blue colors and stand for the Northern, North-Central, Central and Southern regions, respectively. The regional and national averages are represented by triangles and data at the level of the federal entity, by the circles.

2/ A change of  $\sigma$  in the infrastructure index amounts to a change of 1 standard deviation in all the components of the index.

Source: Own estimations with data from Banxico, CNBV, CONAPO and INEGI.

3/ The efficiency change associated to an increase of 1 standard deviation in the infrastructure.

Source: Own estimations with data from Banxico, CNBV, CONAPO and INEGI.



# Outlook

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# Final Considerations

Based on the analysis of the regional economic information and the business agents' opinions, the following can be concluded:

- ❶ In 4Q 2012 the deceleration in economic growth, observed in the north and in the south in the previous quarter, extended to the central regions.
- ❷ Annual headline inflation resumed its trend towards the 3 percent permanent target in all regions; this was driven by the partial fading away of the shocks that had previously affected the short-term trajectory of inflation.
- ❸ The business agents interviewed by Banco de México in December 2012 and in January 2013 anticipated that the regional economies will continue growing over the next 6 and 12 months. Nonetheless, they considered that economic growth will keep decelerating during the 1H 2013.

# Final Considerations

- ④ Regarding risks that could affect the expected growth, most interviewed business contacts indicated that they will mainly be the following:
  - ✓ An environment of lower world economic growth.
  - ✓ The impact on public works at the regional level by the state and municipal public finances.
  
- ⑤ Regarding inflation, the business contacts interviewed by Banco de México specified that lower inflationary pressures are anticipated for 2013 as compared to 2012. This is in line with the expectation of smaller annual percentage increases in commodity prices and labor costs.
  - ✓ An element of concern is the evolution of egg and chicken prices, which could be affected by the recent new outbreak of avian flu. However, its impact on headline inflation is transitory, given that no second round effects on the price formation process are anticipated.



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