

**BBVA**

RESEARCH

OCTOBER  
**2016**

**Digital Context:**

**Brazil**

# Outline

- Overview
- 1 Digital scenario
  - 2 Demand side
  - 3 Supply side
  - 4 Regulation side



# Overview

- ✓ In terms of **digital context**, Brazil has a **better position than other Latin American** countries such as Colombia, Mexico and Peru, especially for **individual usage**
- ✓ **80%** of Brazilians that use the Internet do it on a **daily** basis
- ✓ **Internet access** at home **reached** the level of **computer** access in 2014
- ✓ **Lack of skills** is the main barrier to use of the Internet, particularly for people over 45
- ✓ **Home** is becoming the **main place** to use the Internet, instead of private centres
- ✓ **The South** and **Southeast** regions make **more intensive** use of the Internet, e-banking and e-commerce
- ✓ **Monthly charges** for broadband subscriptions have **fallen sharply** (USD18 vs. USD36 in Spain, 2014)
- ✓ The proportion of **mobile broadband** subscriptions (**78.15%**) surpasses that of Spain (77.06%) in 2014
- ✓ Brazil **stands out** among its neighbours in terms of **new firm creation**, with a similar level to Spain

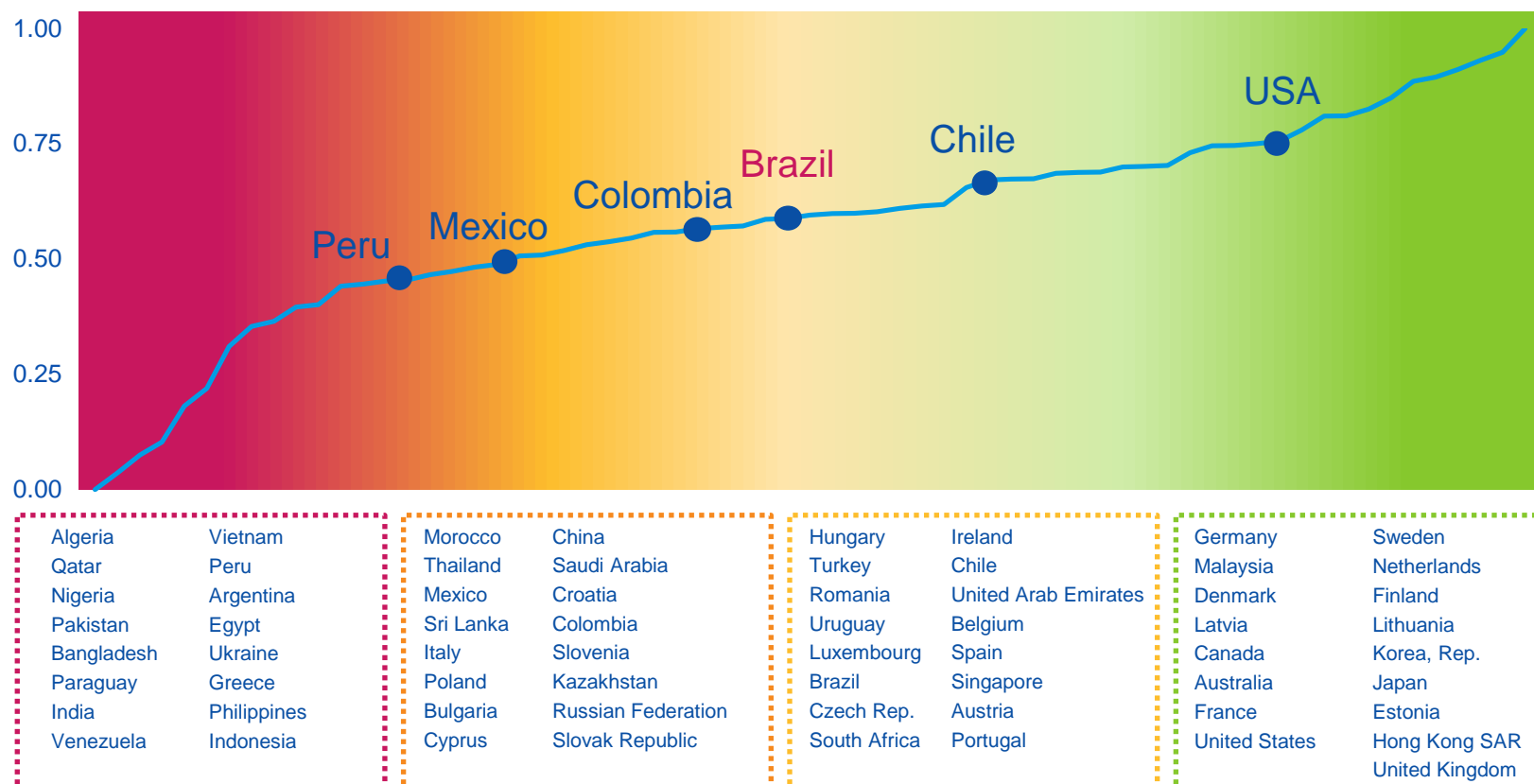




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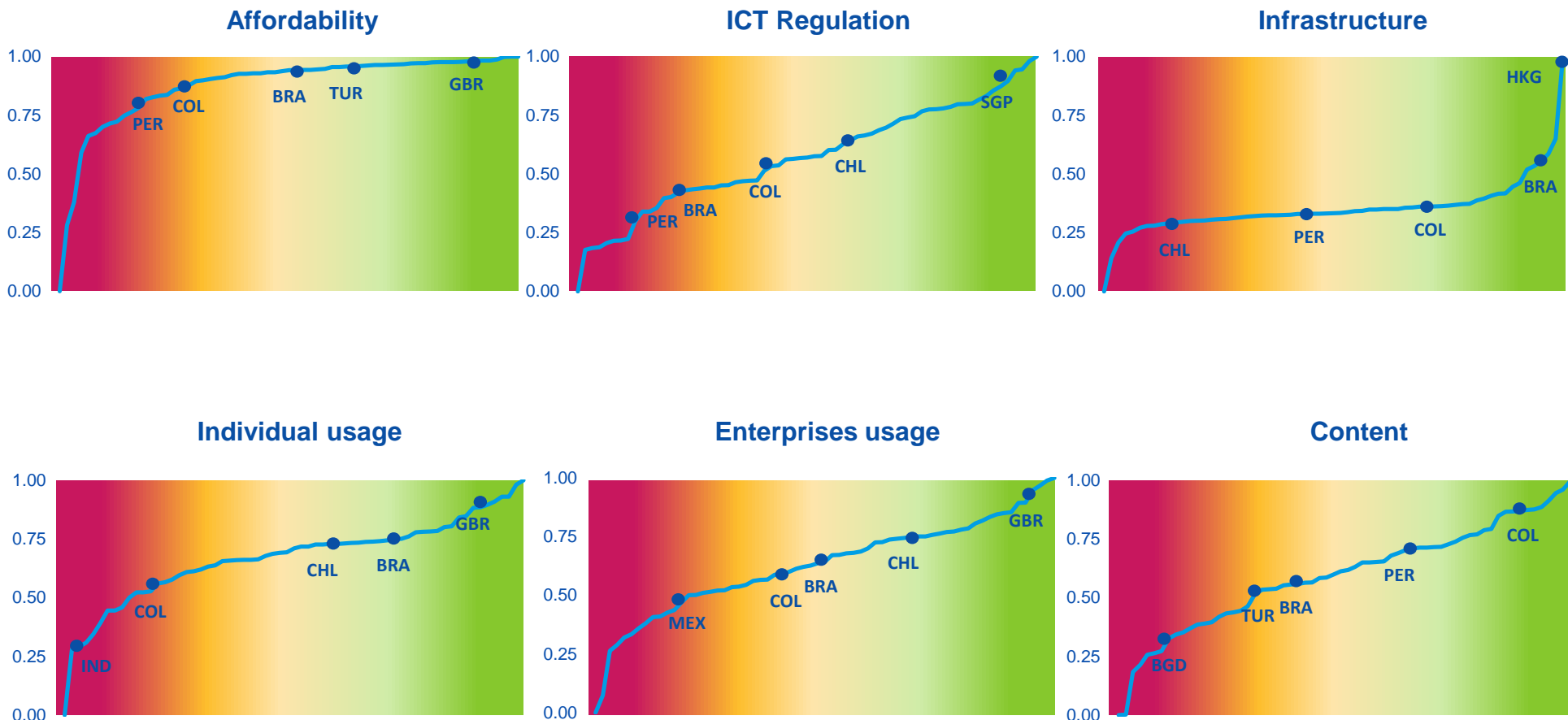
Digital scenario:  
**Digitisation Index**

# 1.1. Structural digitisation Index in 2015



The index comprises the measure of infrastructure level indicators, adoption and use of technologies, costs and regulatory conditions

# 1.2. Structural digitisation Index in 2015: by dimension



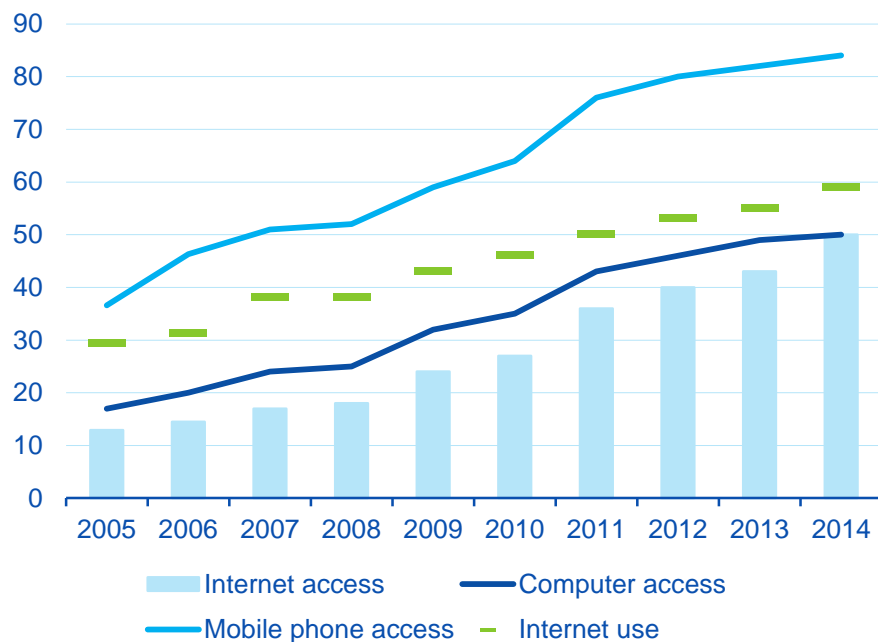


# 2 Demand side

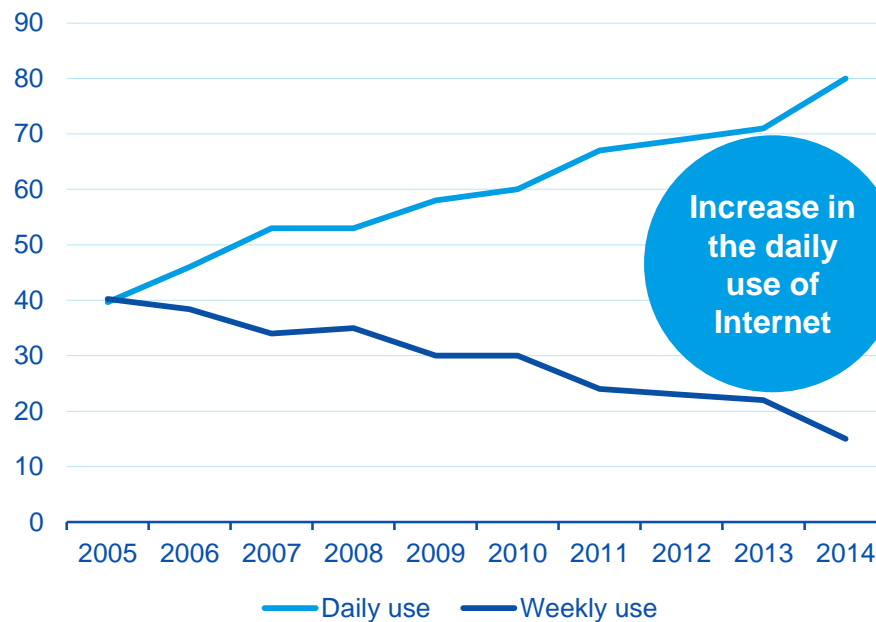


# 2.1. Computer and Internet: access at home and usage

ICT access and Internet use (%)



Frequency of Internet use (%)



Increase in the daily use of Internet

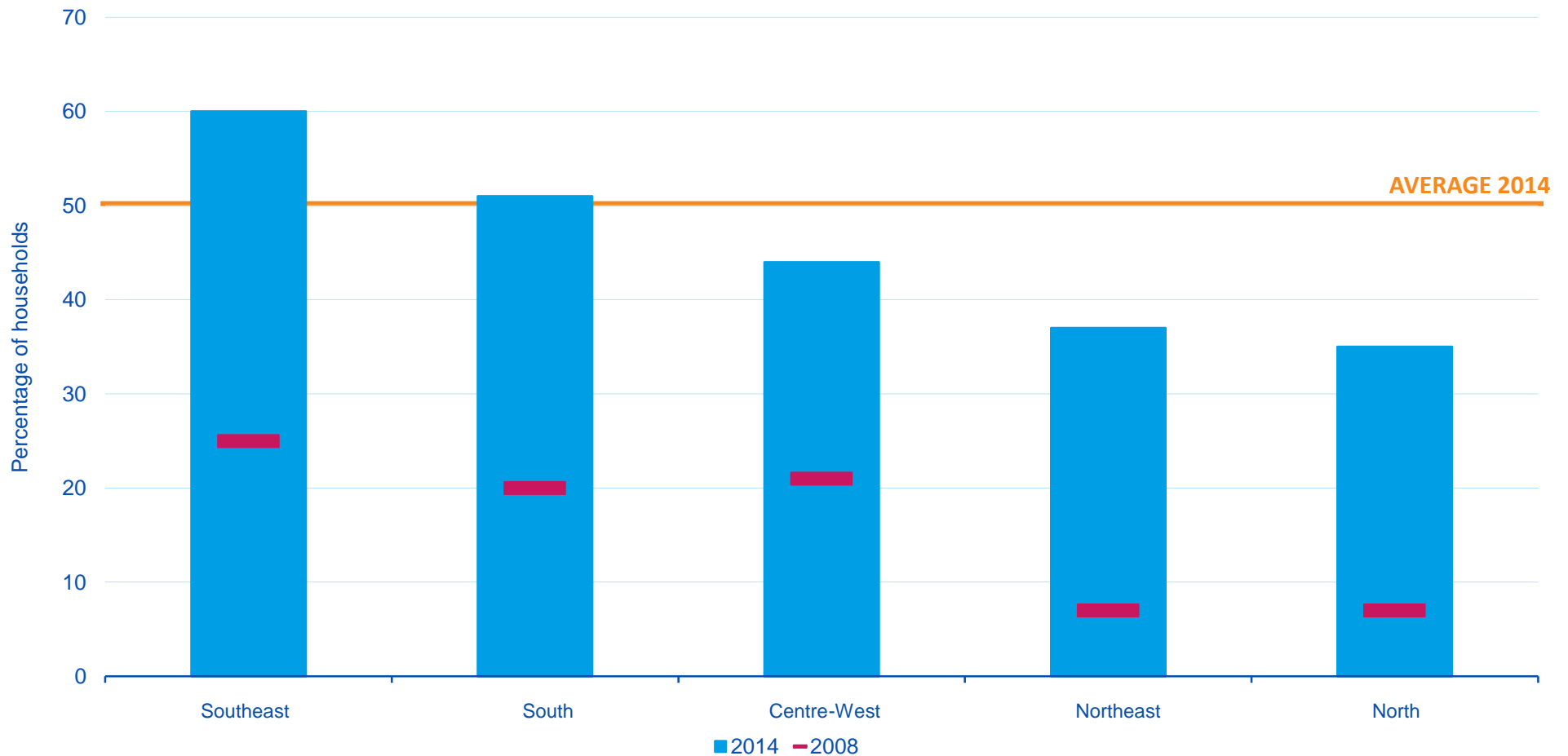
Internet access has quadrupled in the last ten years.



Note: Access to Internet/computer/mobile phone refers only to their availability in the home. "Internet use" corresponds to both inside and outside the home.

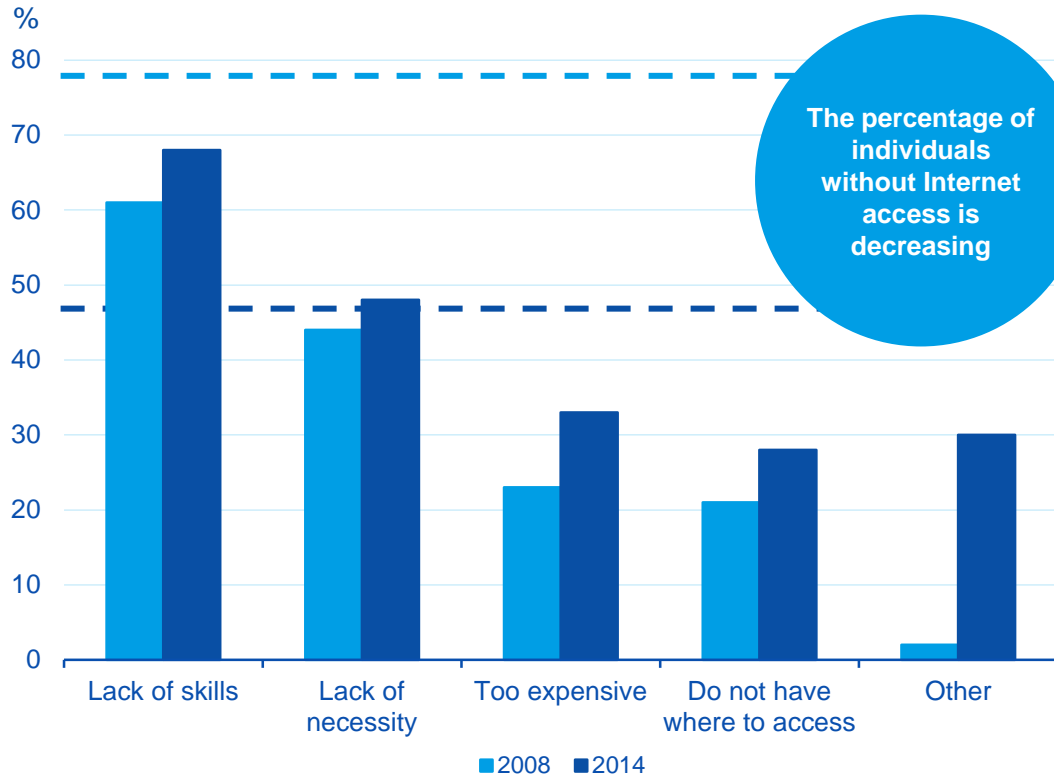


## 2.2. Internet access at home: growth by region



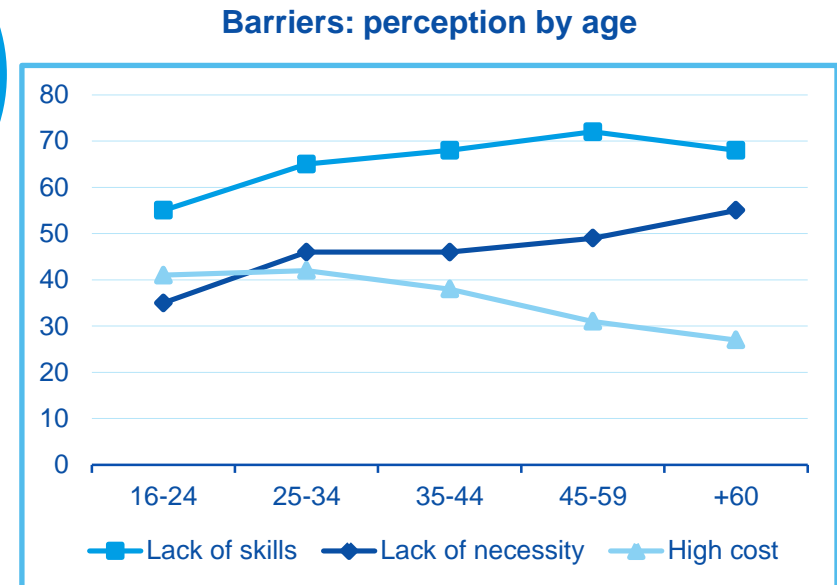
Note: See appendix for map of regions and states.

# 2.3. Reasons for not using the Internet



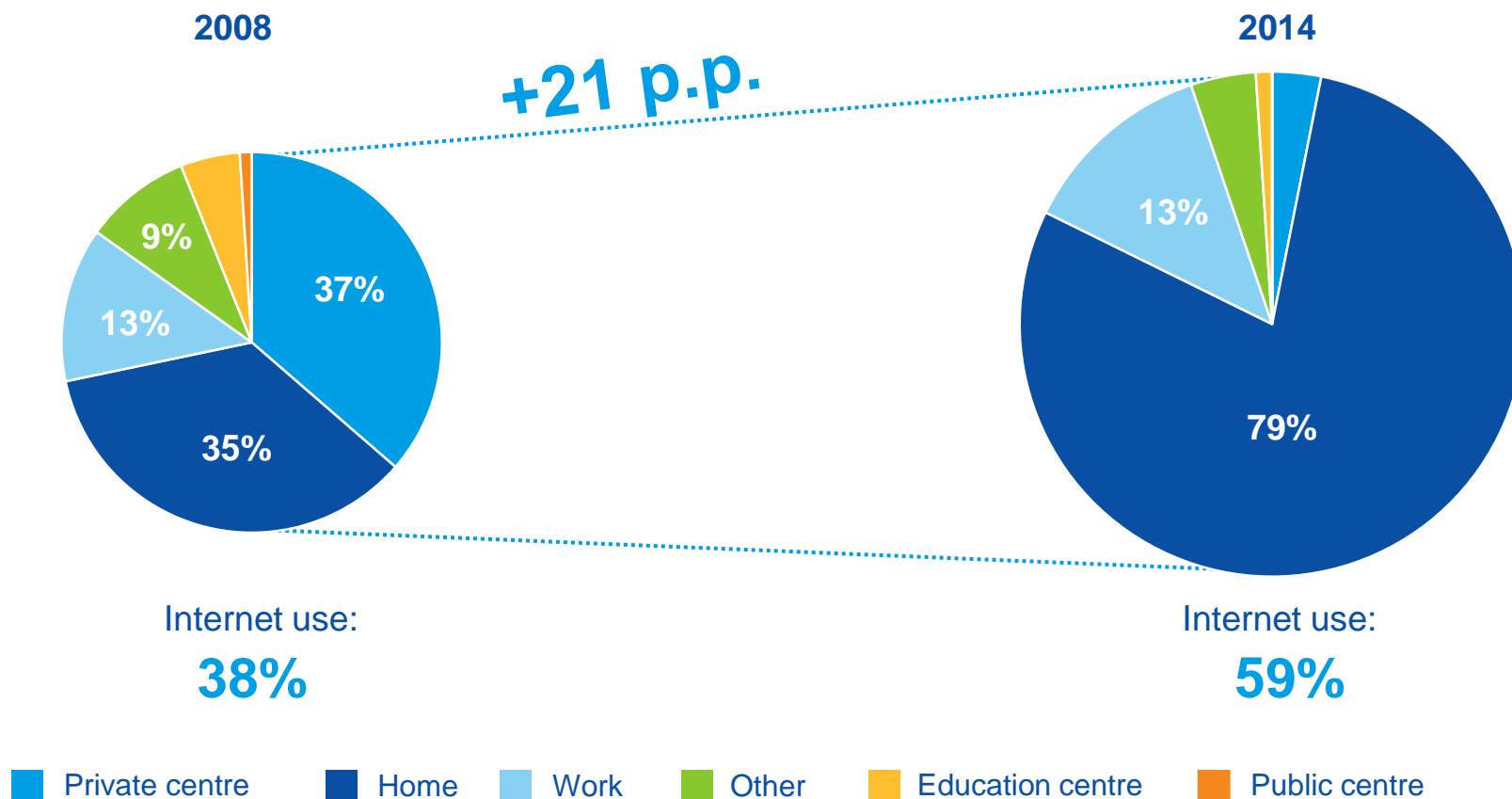
--- Households without Internet access in 2008  
 --- Households without Internet access in 2014

Note: Options are not exclusive; each household can perceive more than one obstacle



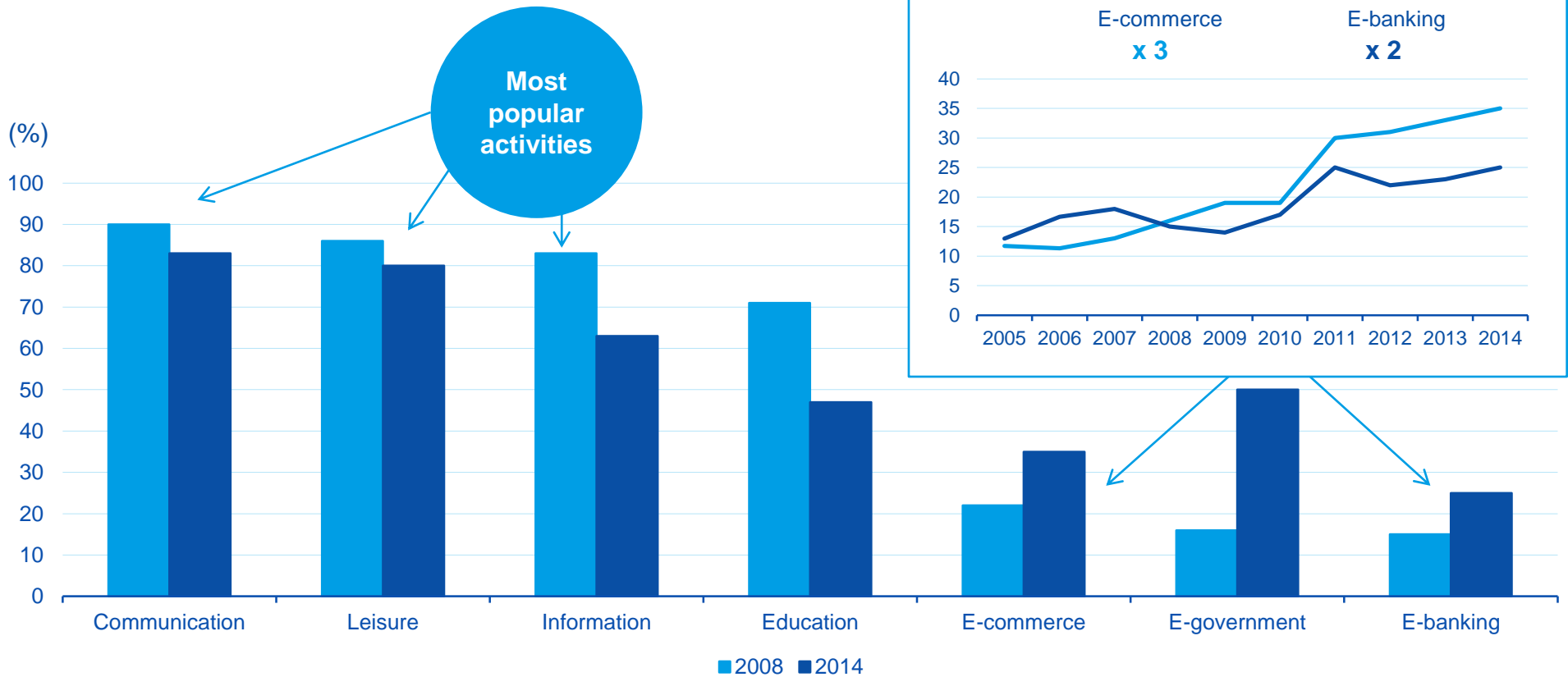
Lack of skills is the main barrier to Internet access in households

## 2.4. Places for Internet use



**Home is the main place where Internet is used**

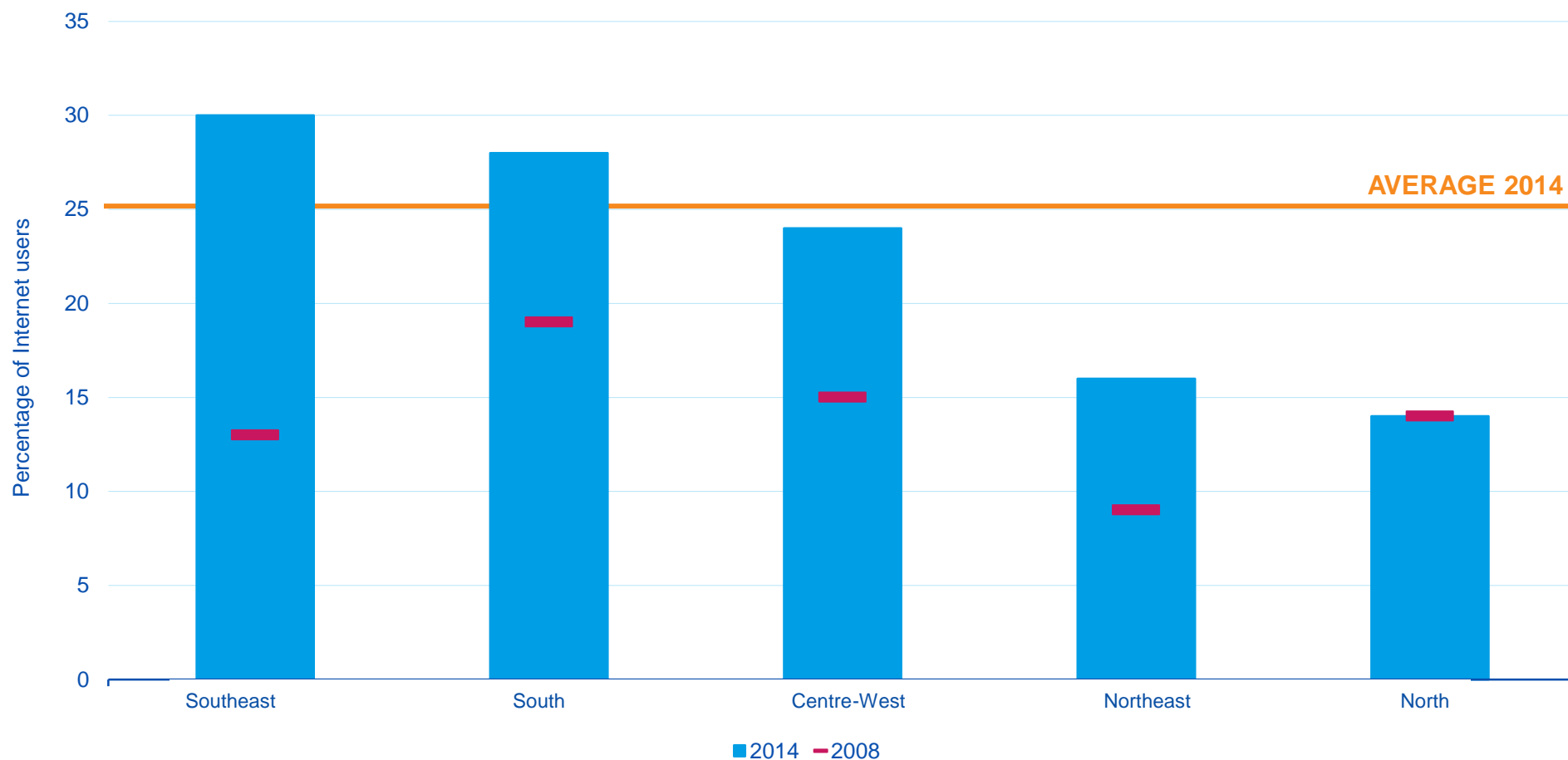
# 2.5. The most popular Internet uses



\*Note: Options are not exclusive, all activities can be selected by one individual simultaneously

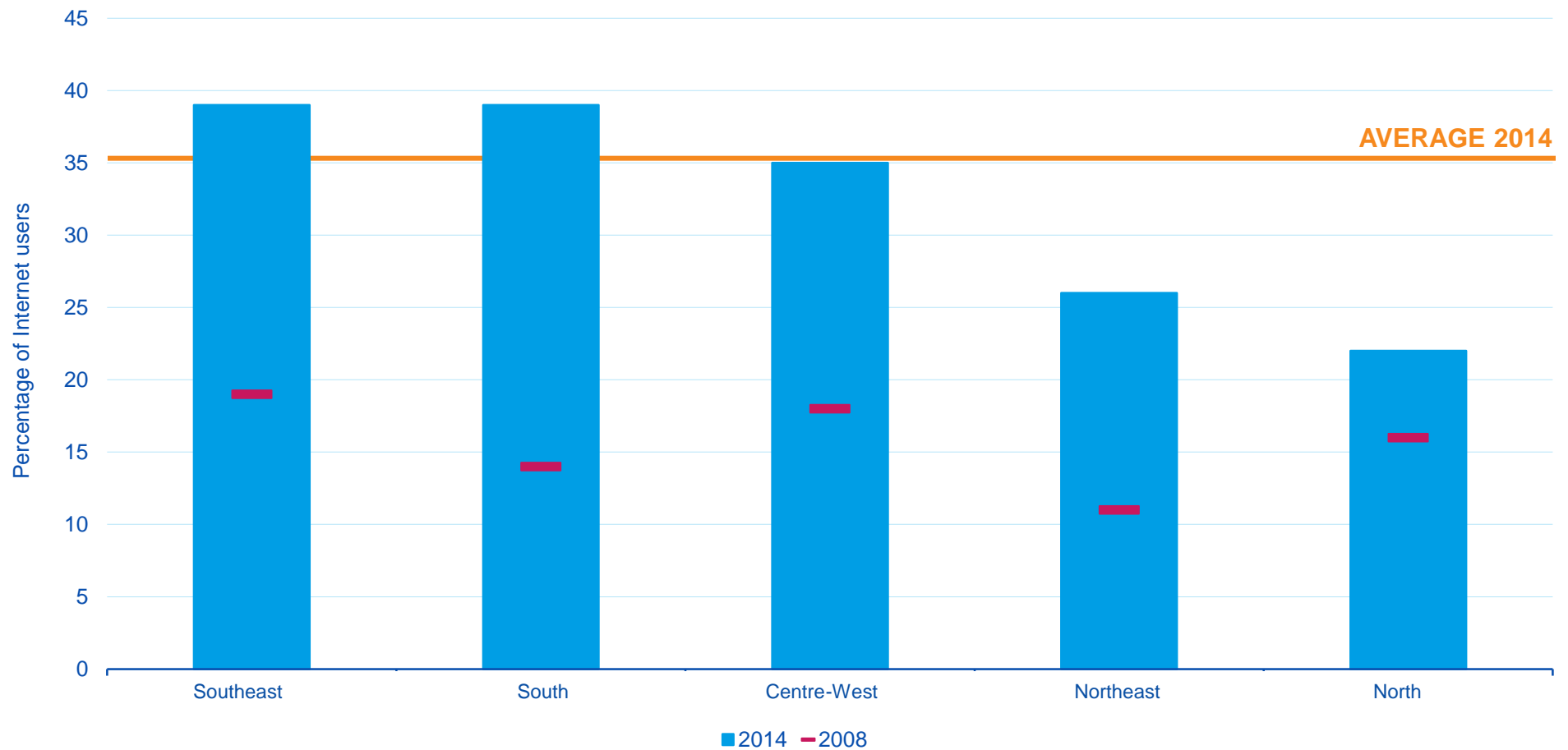
**Internet use has increased for e-commerce and e-banking**

## 2.6. E-banking: growth by region



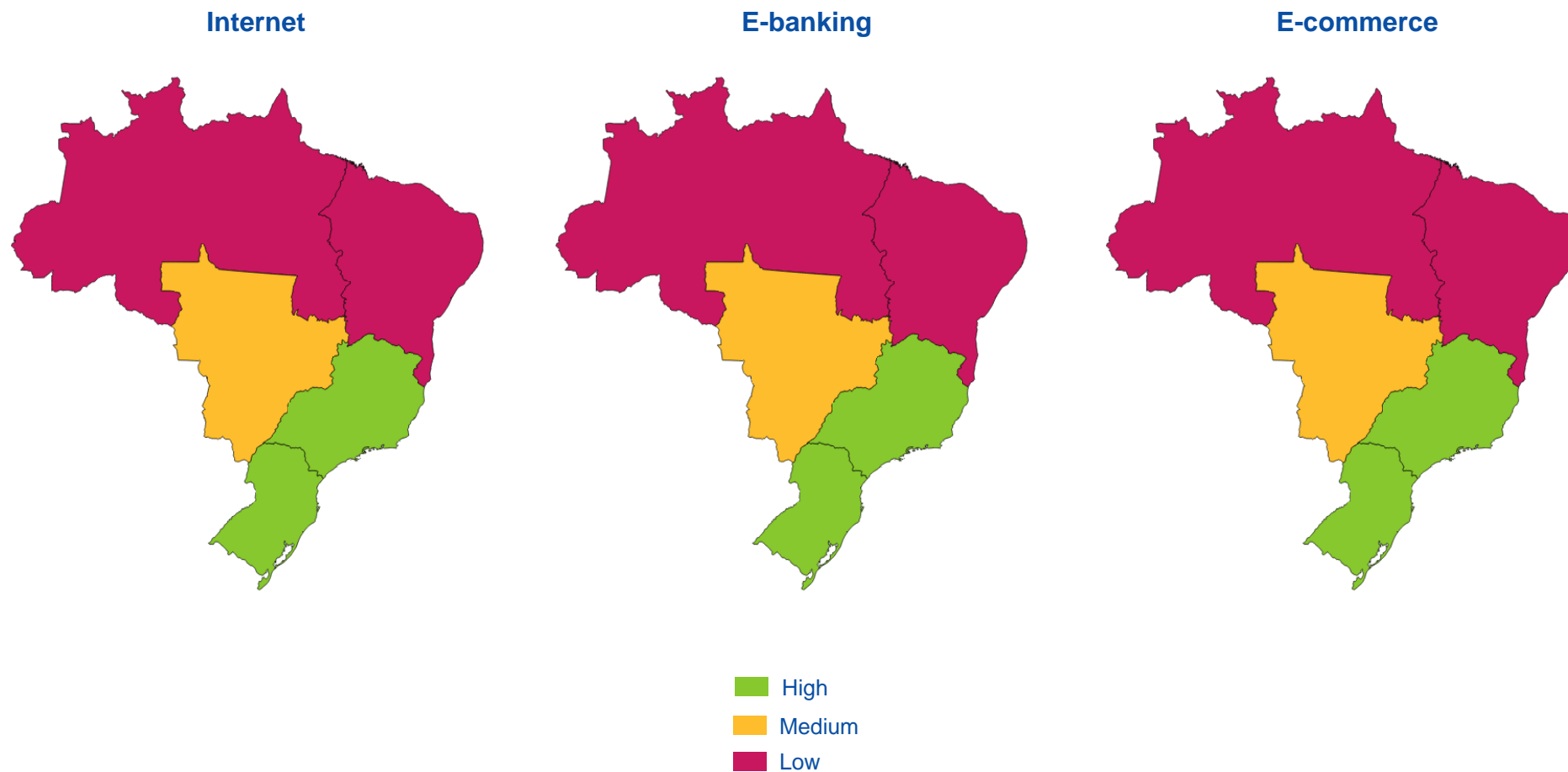
Note: See appendix for map of regions and states.

## 2.7. E-commerce: growth by region



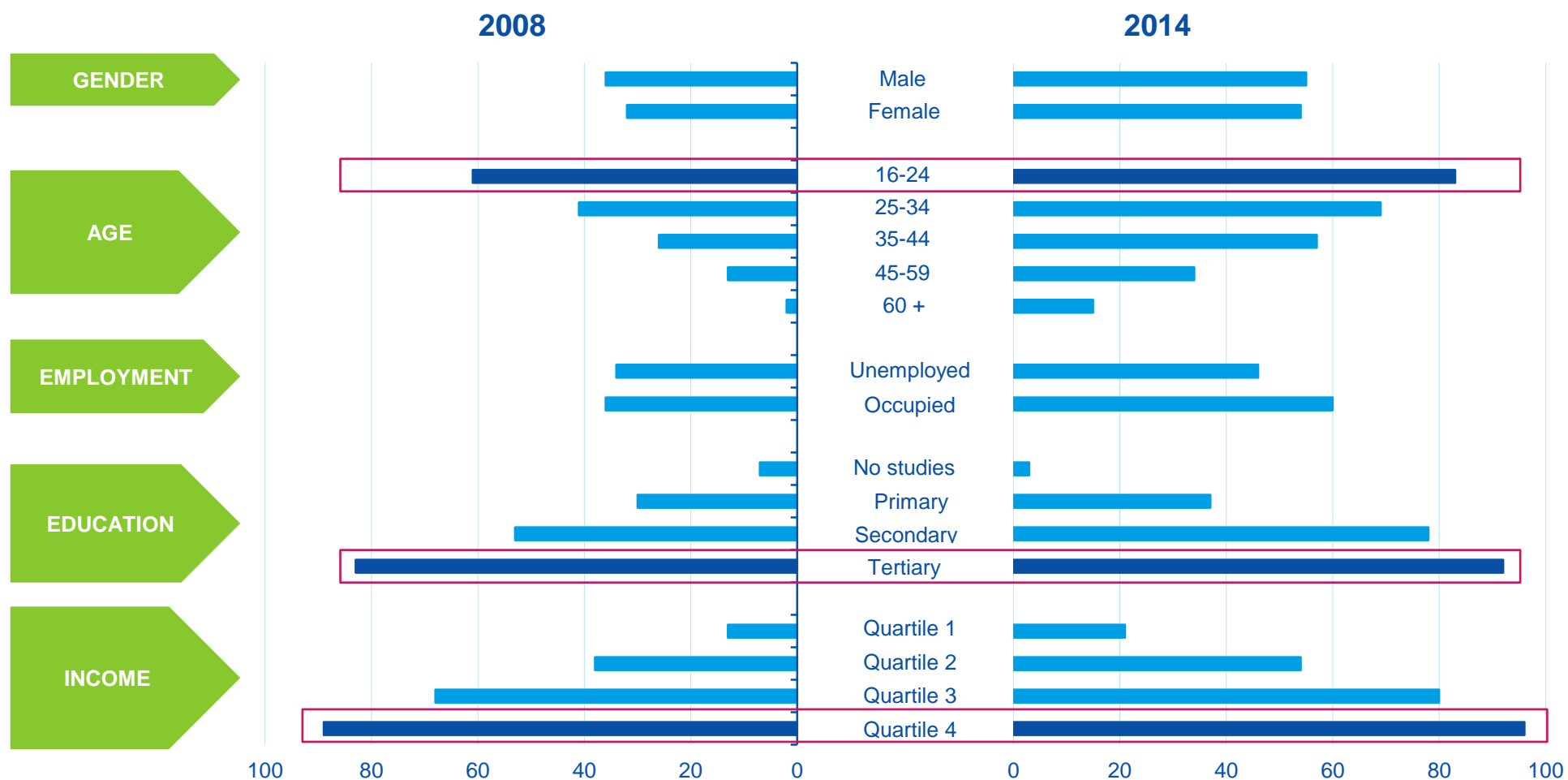
Note: See appendix for map of regions and states.

## 2.8. Geographical distribution in 2014: usage in the last month





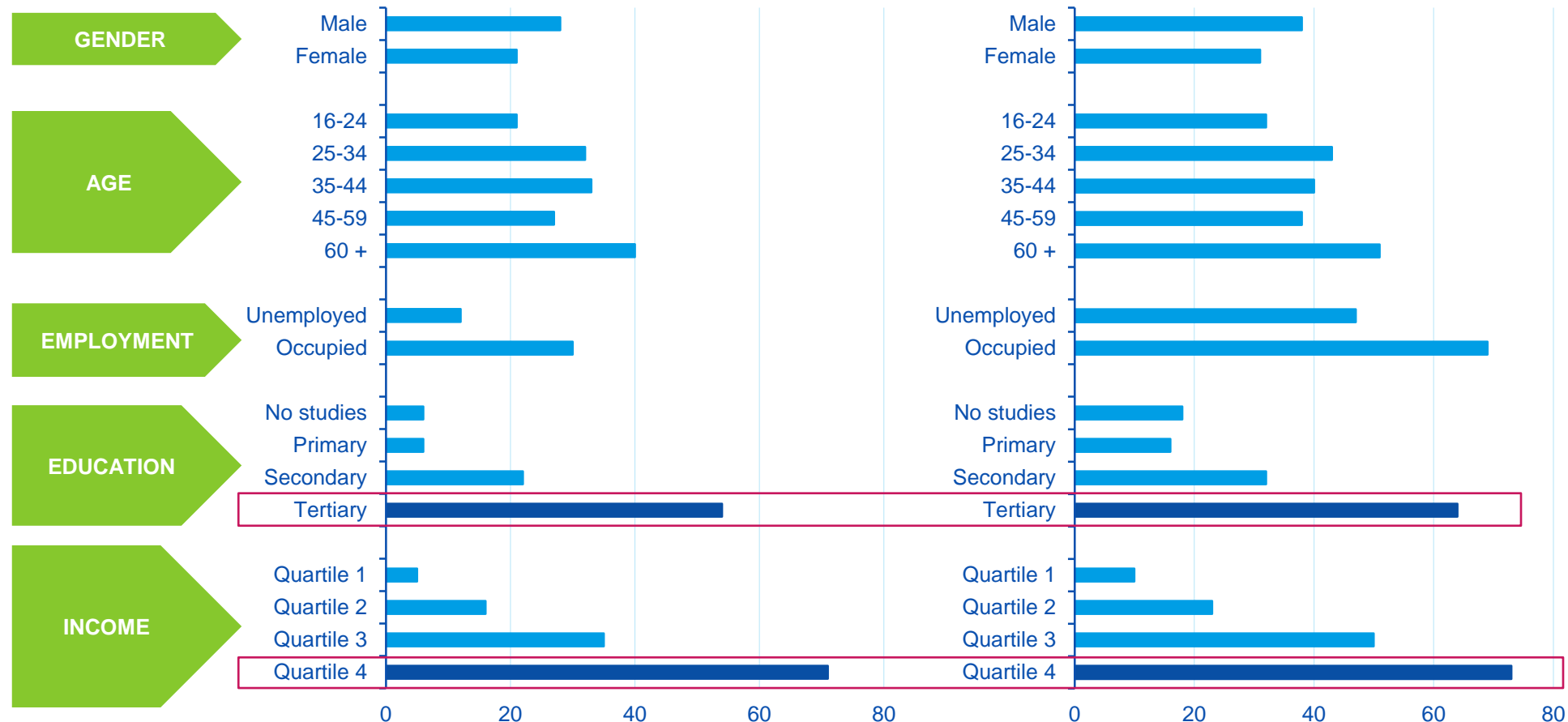
# 2.9. Population characteristics: Internet use (%)



# 2.10. Population characteristics (% of Internet users, 2014)

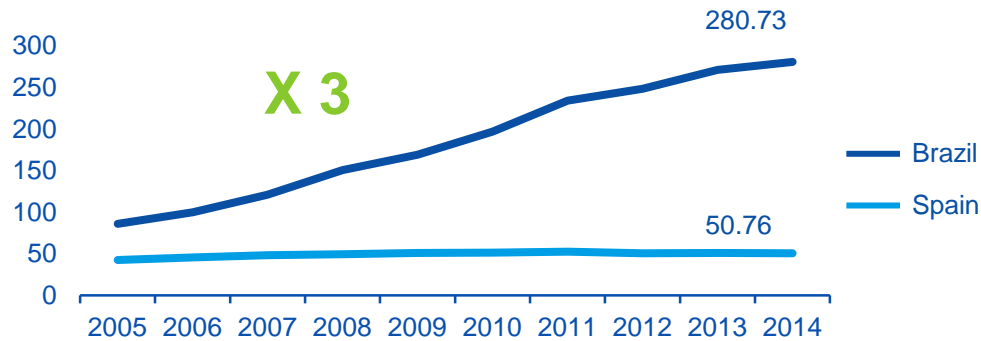
E-banking

E-commerce

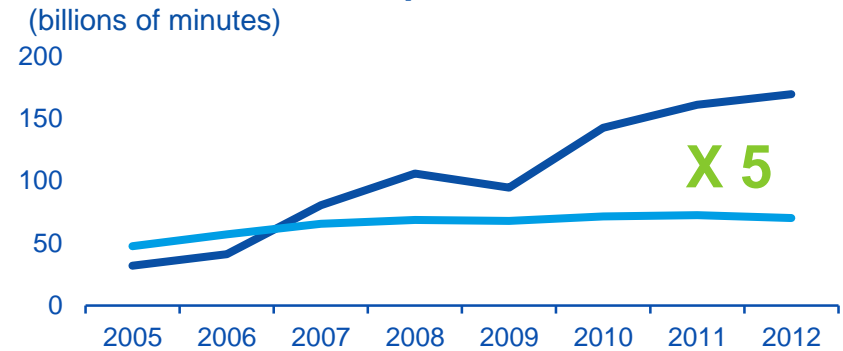


# 3.1. Mobile situation

Mobile-cellular telephone subscriptions (millions)



Domestic mobile-telephone traffic (billions of minutes)



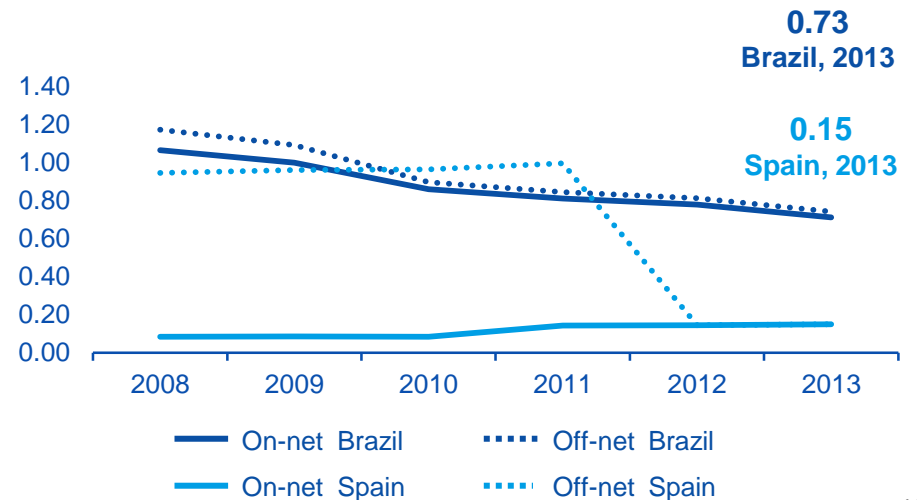
Mobile population Coverage



Brazil 99.98%

Spain 99%

Tariffs: Mobile-cellular prepaid-1 min call (USD)

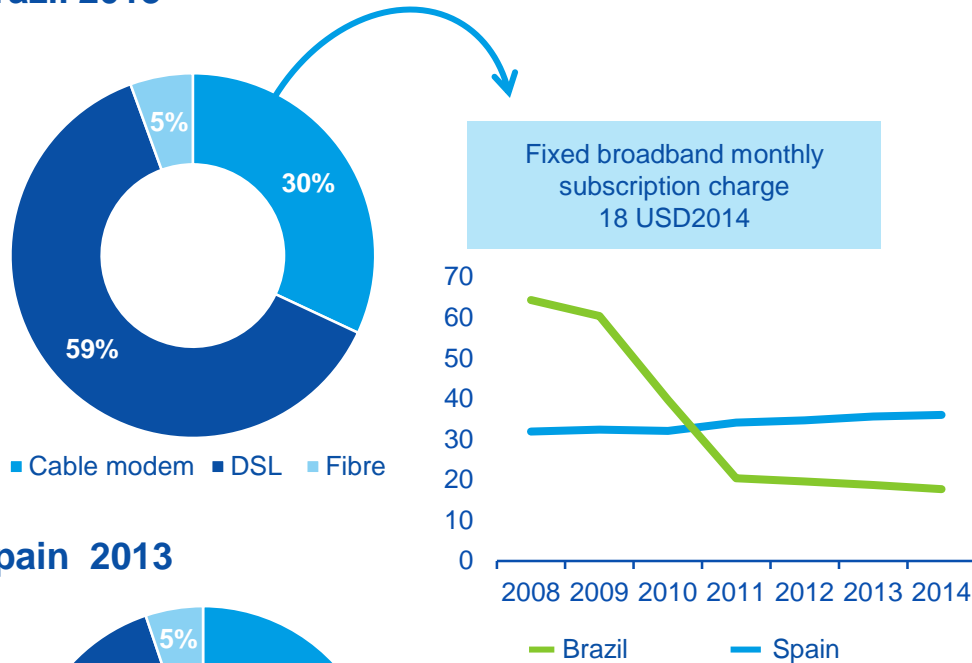




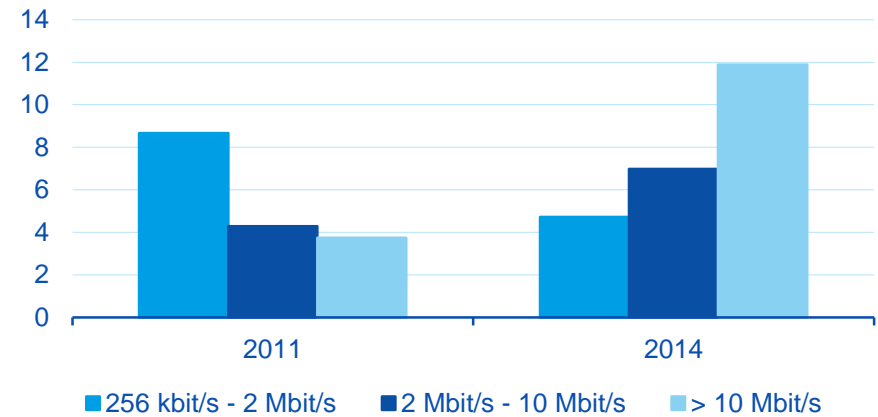
# 3 Supply side

# 3.2. Fixed broadband by technology

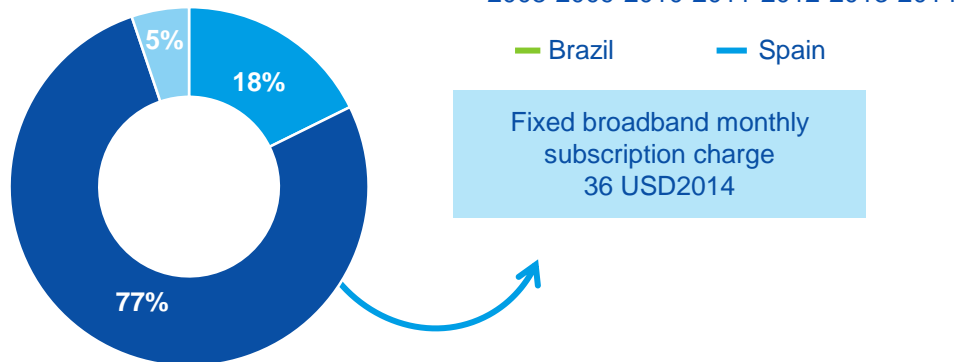
Brazil 2013



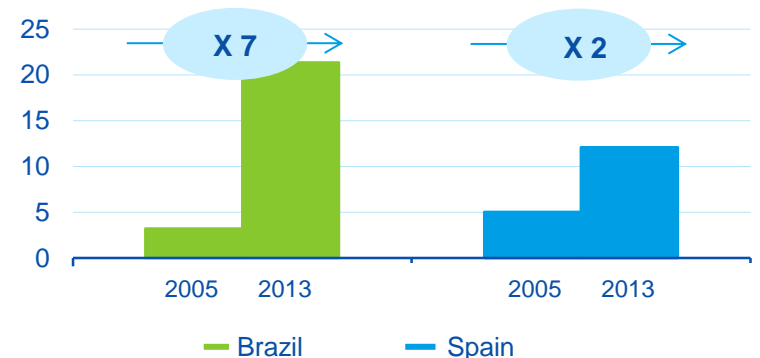
Fixed broadband subscriptions by speed (millions)



Spain 2013

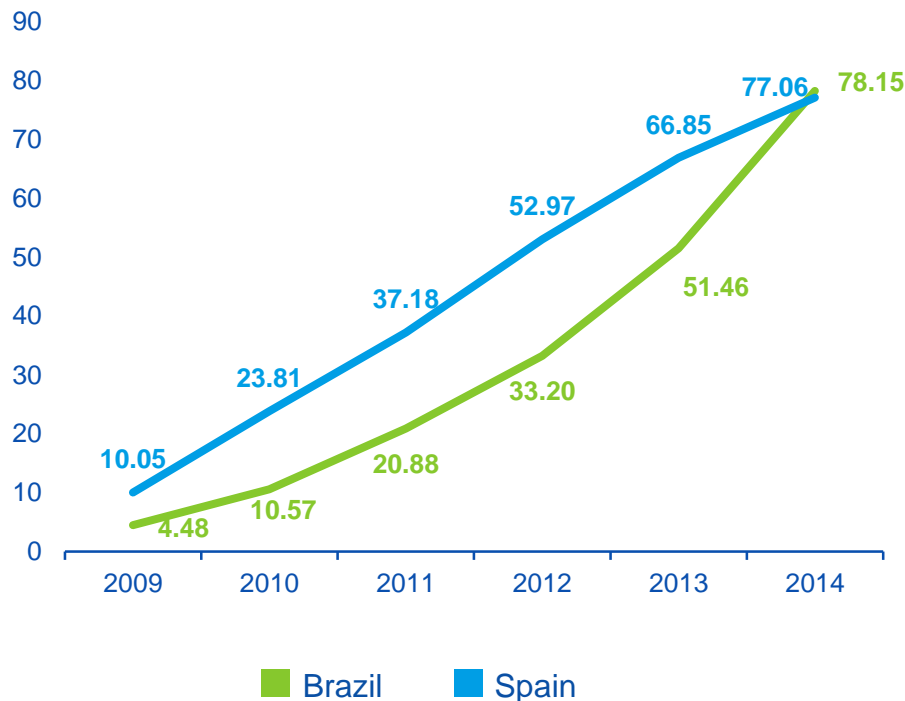


Fixed broadband subscriptions (millions)

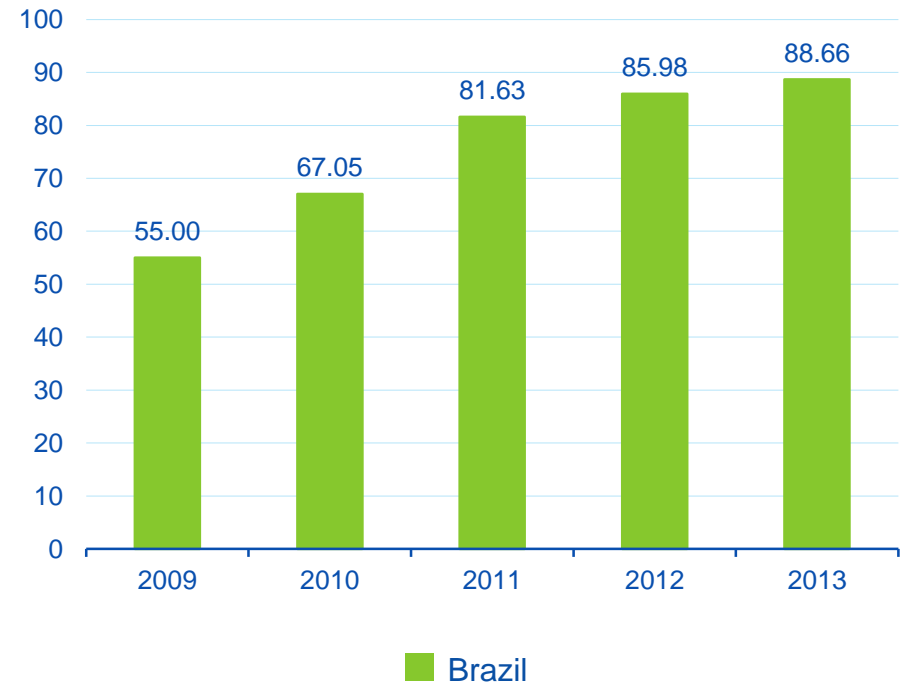


### 3.3. Mobile-broadband

Mobile-broadband subscriptions (%)



Mobile-broadband population coverage (%)



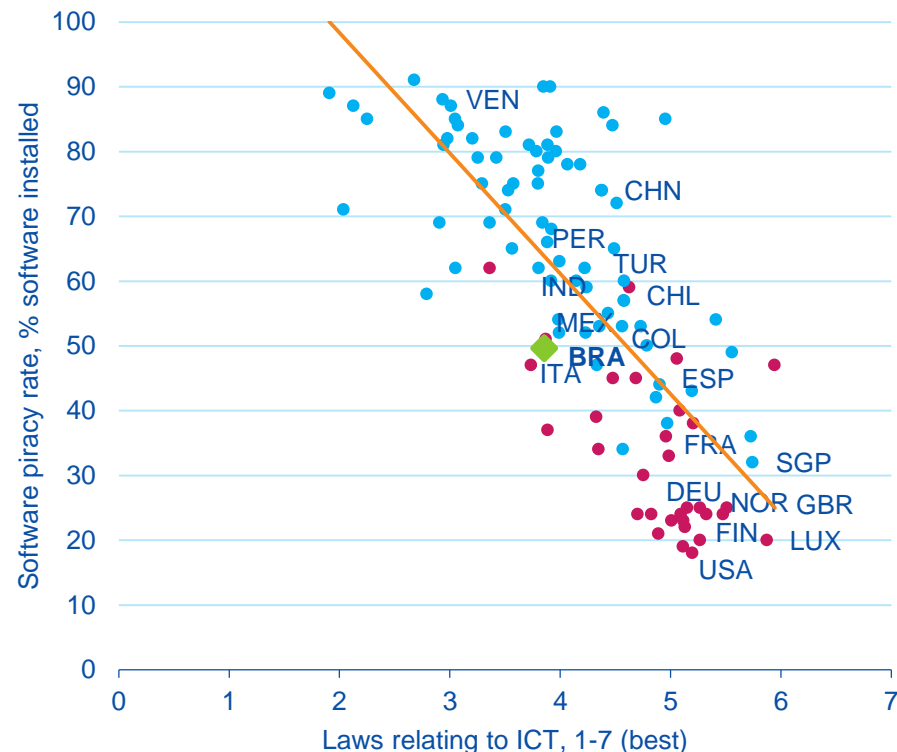
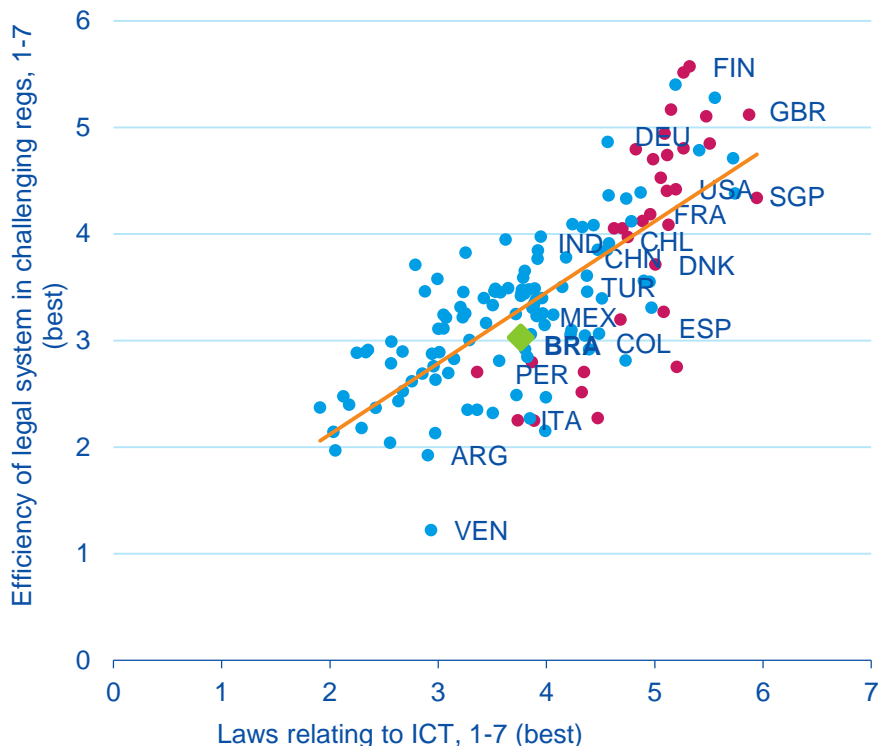
**Brazil surpassed to Spain in terms of percentage of mobile-broadband subscriptions in 2014**



# 4 Regulation side



# 4.1. ICT laws: Relation between regulatory efficiency and piracy



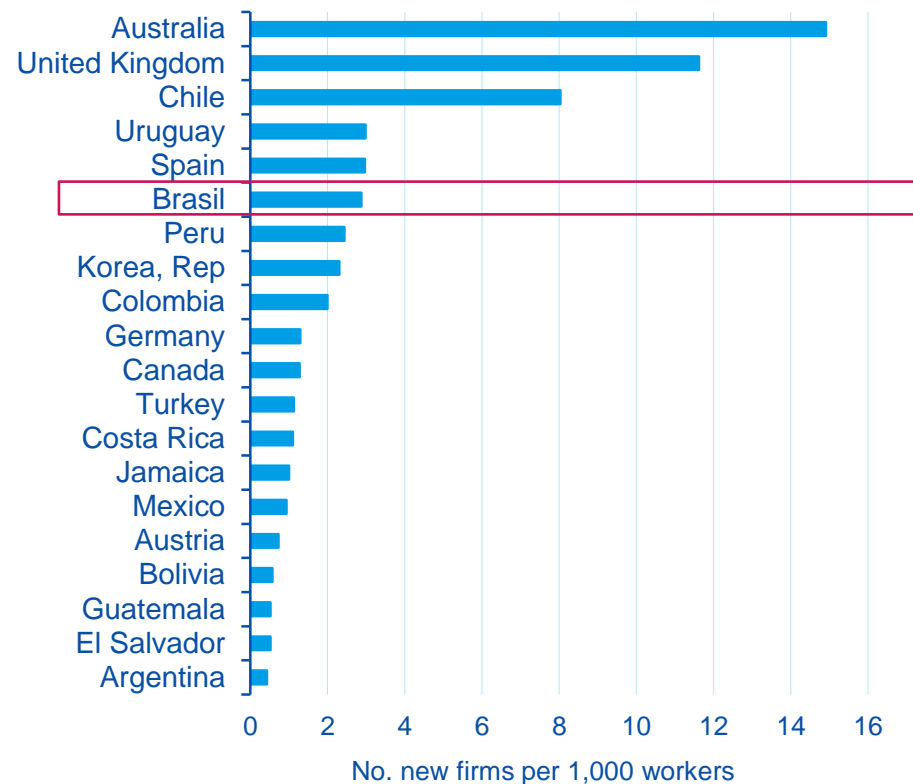
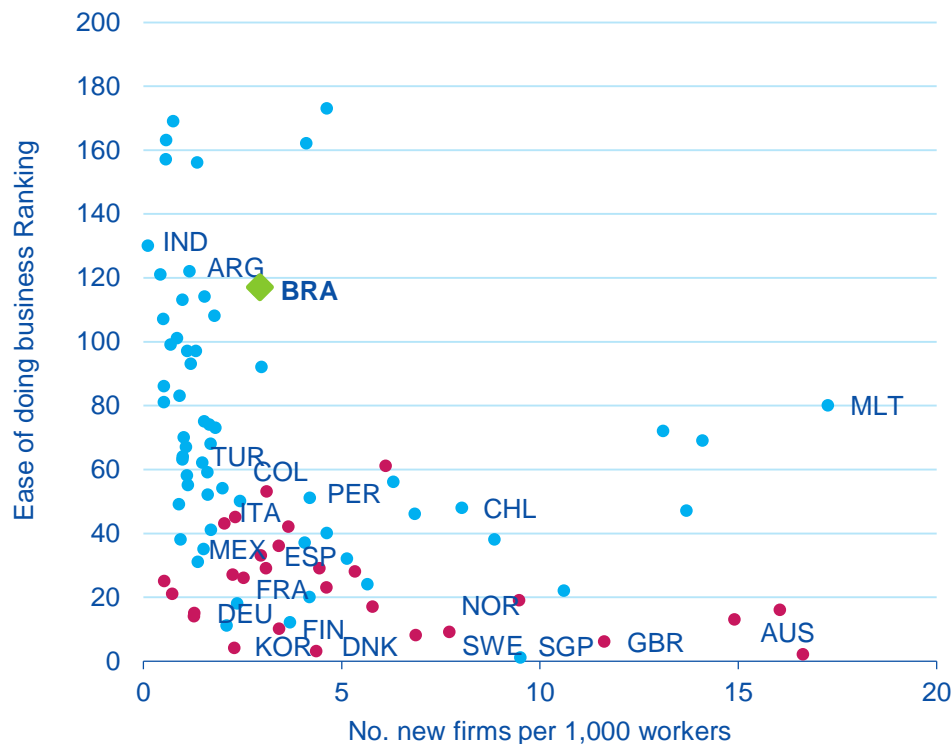
Source : BBVA Research & World Economic Forum

Source: BBVA Research & World Economic Forum

● High income OECD countries

● Rest (Brazil is highlighted in green)

# 4.2. Ease of doing business & entrepreneurship



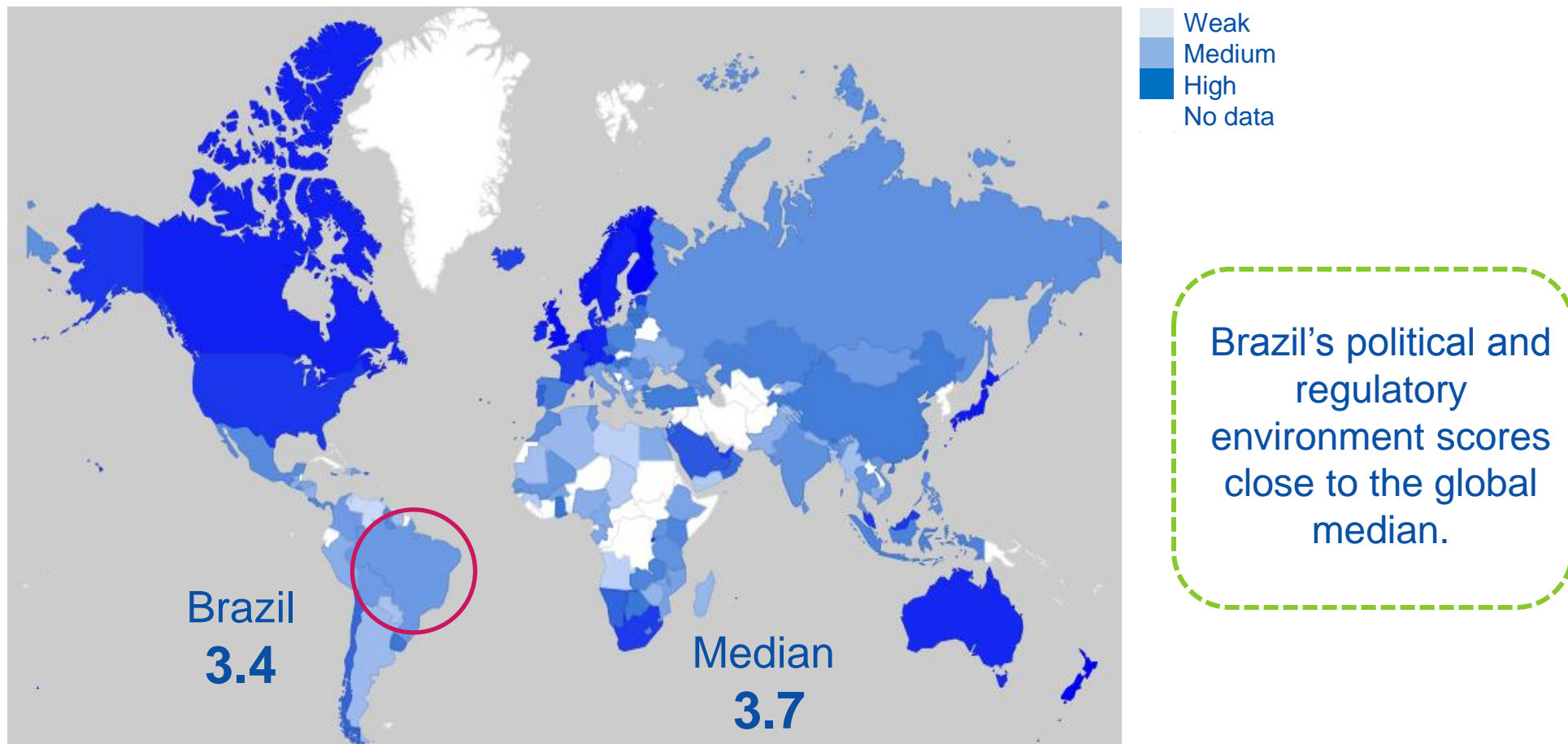
Source: BBVA Research & World Economic Forum

Source: Doing Business (World Bank Group)

● High income OECD countries

● Rest (Brazil is highlighted in green)

## 4.3. Political and regulatory environment (1-7 best)



Source: BBVA Research & World Economic Forum, 2015

Note: In order to measure the political and regulatory environment, indicators such as ICT-related laws, piracy rates, efficiency of legal system and protection of intellectual property are taken into account.



# 5 Appendices

# Composition of the Digitisation Index

## Infrastructure

- ✓ Fixed (wired)-broadband speed, in Mbit/s.
- ✓ International Internet bandwidth. It is measured in bits per second per Internet user.
- ✓ Percentage of total population covered by a mobile network signal.
- ✓ International Internet bandwidth in megabits per second (Mbit/s).

## Cost

- ✓ Monthly subscription charge for fixed (wired) broadband Internet service (PPP \$). Fixed (wired) broadband is considered to mean any dedicated connection to the Internet at downstream speeds equal to, or greater than, 256 kilobits per second, using DSL.

## Users' adoption

- ✓ Active mobile-broadband subscriptions.
- ✓ Fixed (wired)-broadband subscriptions.
- ✓ Mobile telephone subscriptions
- ✓ Percentage of households with Internet access at home.
- ✓ Proportion of individuals that used the Internet in the last 12 months.
- ✓ How widely used are virtual social networks in the country?

## Regulation

- ✓ How developed are your country's laws relating to the use of ICT (e.g., electronic commerce, digital signatures, consumer protection)?

[1 = not developed at all; 7 = extremely well-developed]

## Firms' adoption

- ✓ To what extent do businesses use ICT for transactions with other businesses in the country?
- ✓ To what extent do businesses use the Internet for selling their goods and services to consumers in the country?
- ✓ To what extent do businesses adopt new technology in the country?

## Content

- ✓ The Government Online Service Index assesses the quality of government's delivery of online services on a 0-to-1 (best) scale. There are four stages of service delivery: Emerging, Enhanced, Transactional and Connected. In each country, the performance of the government in each of the four stages is measured as the number of services provided as a percentage of the maximum services in the corresponding stage.

[1 = not at all; 7 = to a great extent]

## Source of data from the Demand Side: CETIC

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The Centre of Studies on Information and Communication Technologies (CETIC) was created in 2005 with the mission of monitoring the adoption of information and communications technology (ICT), in particular access to and use of computers, the Internet and mobile devices.

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CETIC is dedicated to monitoring the adoption of the Internet and information and communication technology. Among its objectives are the development of indicators and conducting research into access to and use of ICT in Brazil. The research process is structured in a multi-participatory manner with a group of more than 200 experts from the academic world.

## Source of data from the Supply Side: World Telecommunication/ICT Indicators database (ITU, 2015)

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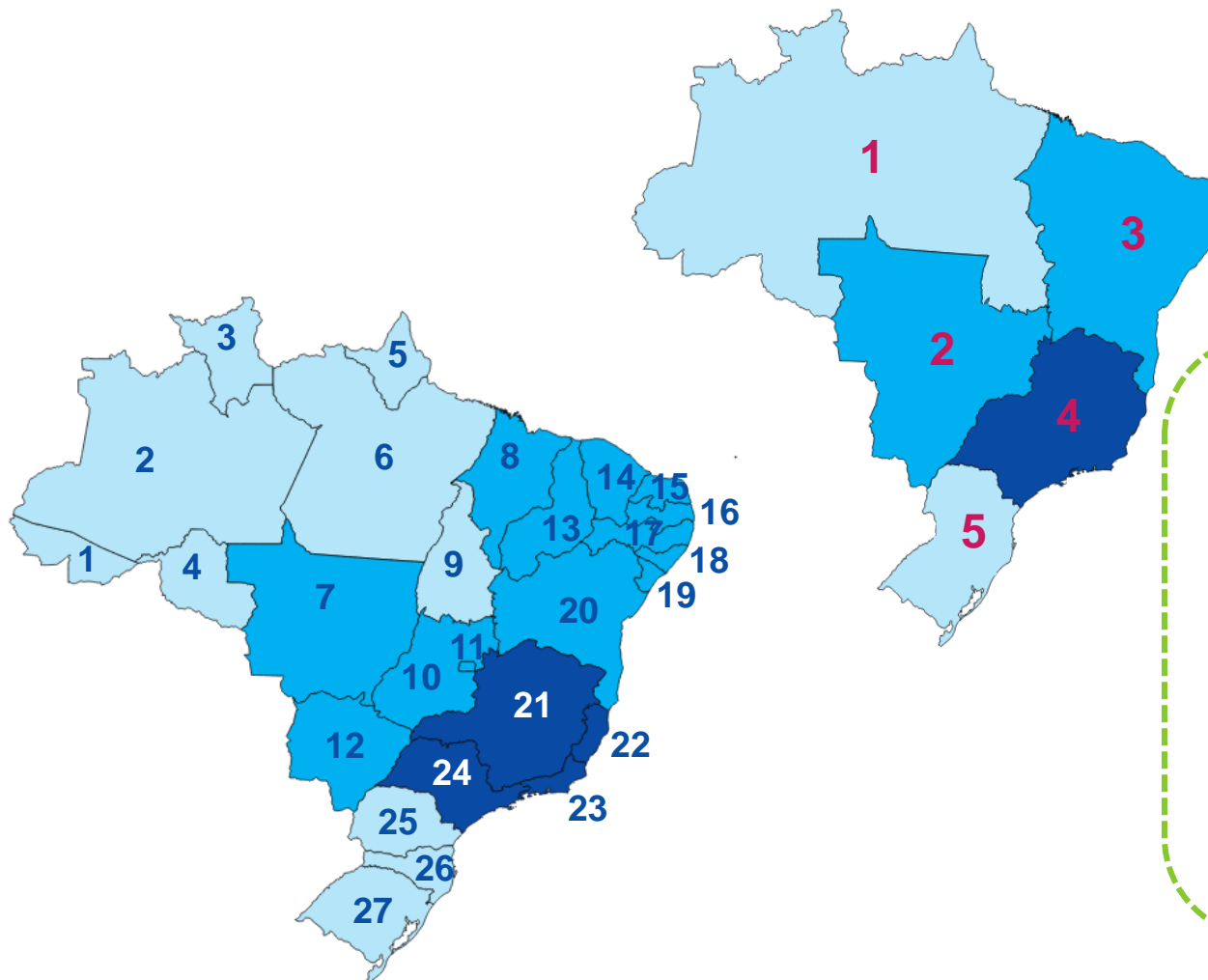
The World Telecommunication/ICT Indicators database contains time series data for the years 1960, 1965, 1970 and annually from 1975 to 2014. These data are available for over 200 economies, however the availability of data for the different indicators and years can vary.

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The data are collected from an annual questionnaire sent to official economy contacts, usually the regulatory authority or the ministry in charge of telecommunication and ICT. Additional data are obtained from reports provided by telecommunication ministries, regulators and operators and from ITU staff reports.



# Brazil: Regions and States



- Regions**
1. North
  2. Centre-West
  3. Northeast
  4. Southeast
  5. South

- States**
- |                        |                         |
|------------------------|-------------------------|
| 1. Acre                | 15. Rio Grande do Norte |
| 2. Amazonas            | 16. Paraíba             |
| 3. Roraima             | 17. Pernambuco          |
| 4. Rondônia            | 18. Alagoas             |
| 5. Amapá               | 19. Sergipe             |
| 6. Pará                | 20. Bahia               |
| 7. Mato Grosso         | 21. Minas Gerais        |
| 8. Maranhão            | 22. Espírito Santo      |
| 9. Tocantins           | 23. Rio de Janeiro      |
| 10. Goiás              | 24. São Paulo           |
| 11. Distrito Federal   | 25. Paraná              |
| 12. Mato Grosso do Sul | 26. Santa Catarina      |
| 13. Piauí              | 27. Rio Grande do Sul   |
| 14. Ceará              |                         |

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