

**BBVA**

RESEARCH

September  
**2016**



**Digital Context:**  
**Colombia**

# Outline

- **Overview**

- 1 Digital scenario**

- 2 Demand side**

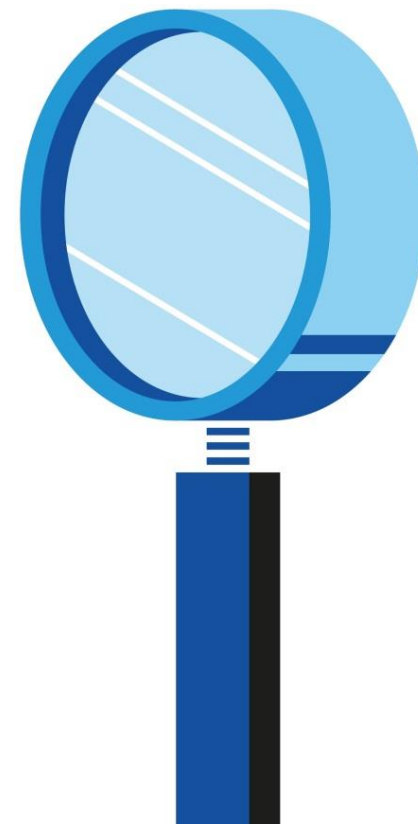
- 3 Supply side**

- 4 Regulation side**



# Overview

- ✓ Colombia occupies an **important position** in terms of **digital content** among Latin American countries
- ✓ **Internet use** is **higher** than **computer use** because of the widespread use of mobile devices
- ✓ The proportion of people using the Internet **daily** has **increased considerably** since 2014
- ✓ **Home** is the **main place** of Internet use, and home use is growing continuously
- ✓ **Cost** is considered the **main constraint on Internet access**, although this perception is weaker among young people
- ✓ The **use of Internet for educational** purposes is **higher** than in other countries of the region
- ✓ **Bogota** is the **only region** in Colombia where **more than 10%** of internet users **use e-banking** and **e-commerce**
- ✓ The number of **mobile-broadband** subscriptions **increased by a multiple of 13** between 2009 and 2013

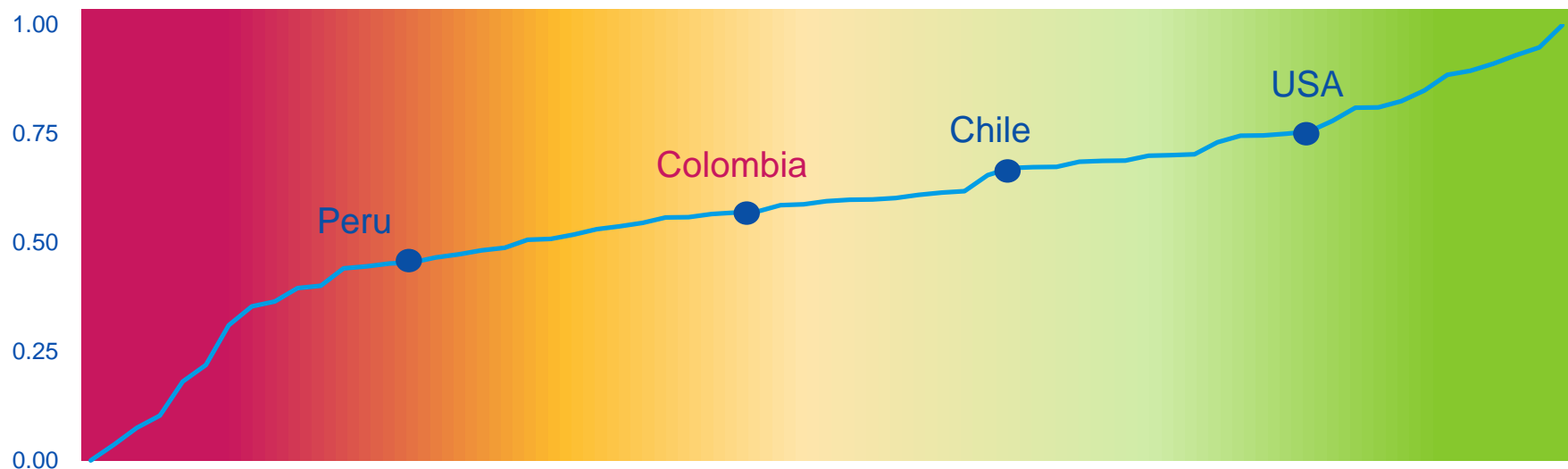




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Digital scenario:  
**Digitisation Index**

# 1.1. Structural digitisation index in 2015

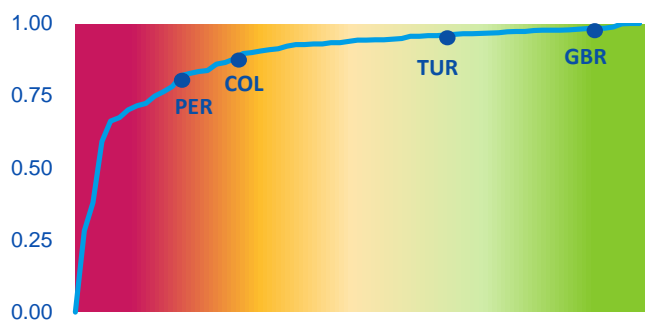


Algeria	Vietnam	Morocco	China	Hungary	Ireland	Germany	Sweden
Qatar	Peru	Thailand	Saudi Arabia	Turkey	Chile	Malaysia	Netherlands
Nigeria	Argentina	Mexico	Croatia	Romania	United Arab Emirates	Denmark	Finland
Pakistan	Egypt	Sri Lanka	Colombia	Uruguay	Belgium	Latvia	Lithuania
Bangladesh	Ukraine	Italy	Slovenia	Luxembourg	Spain	Canada	Korea, Rep.
Paraguay	Greece	Poland	Kazakhstan	Brazil	Singapore	Australia	Japan
India	Philippines	Bulgaria	Russian Federation	Czech Rep.	Austria	France	Estonia
Venezuela	Indonesia	Cyprus	Slovak Republic	South Africa	Portugal	United States	Hong Kong SAR
							United Kingdom

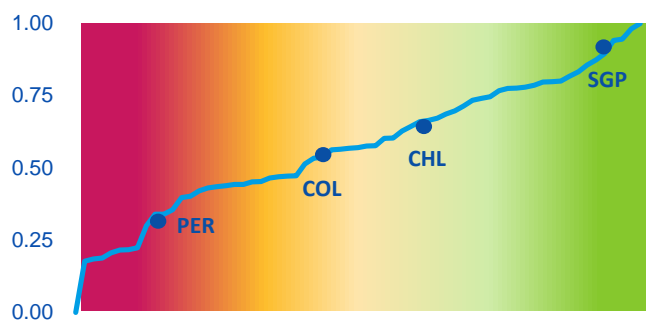
The index comprises the measure of infrastructure level indicators, adoption and use of technologies, costs and regulatory conditions

# 1.2. Structural digitisation index in 2015: by dimension

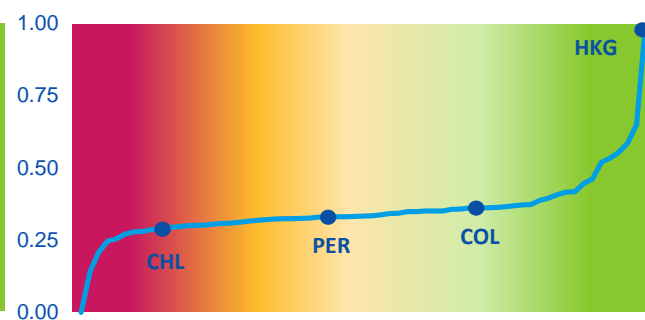
**Affordability**



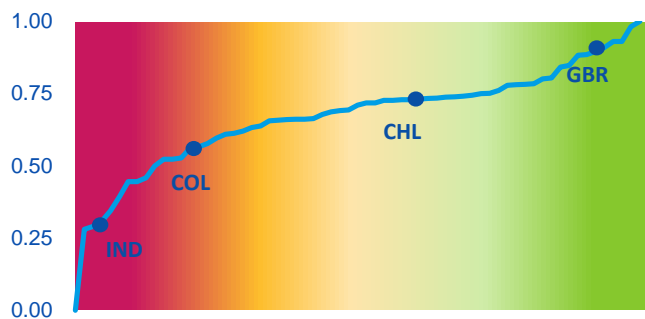
**ICT Regulation**



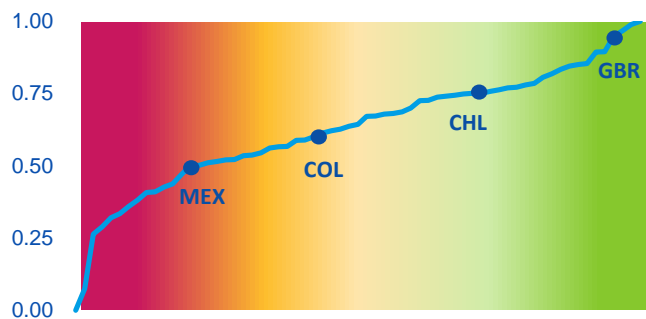
**Infrastructure**



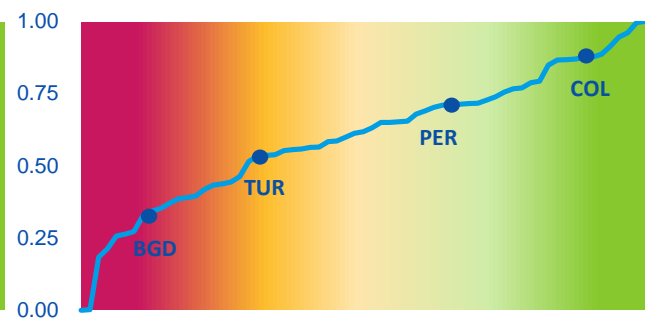
**Individual usage**



**Enterprises usage**



**Content**

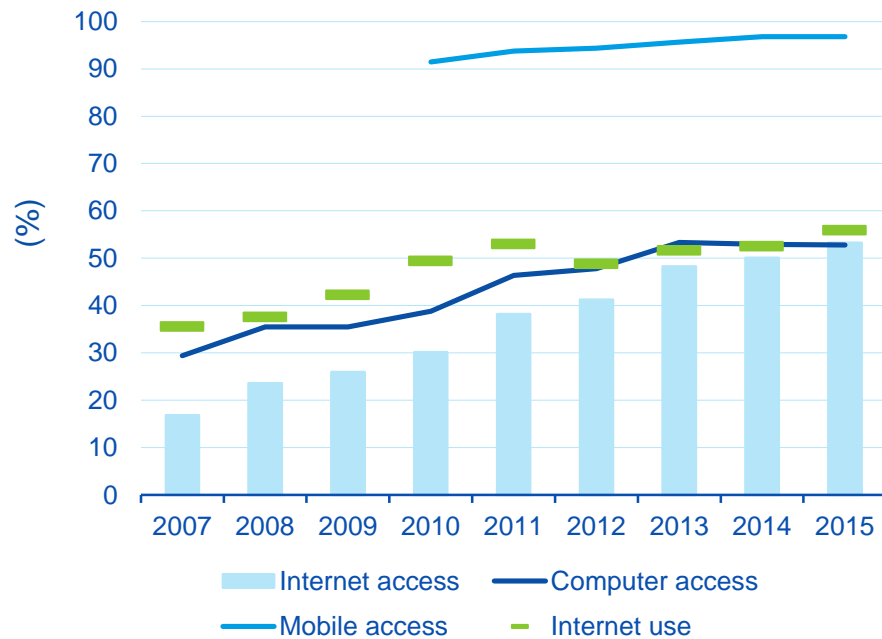




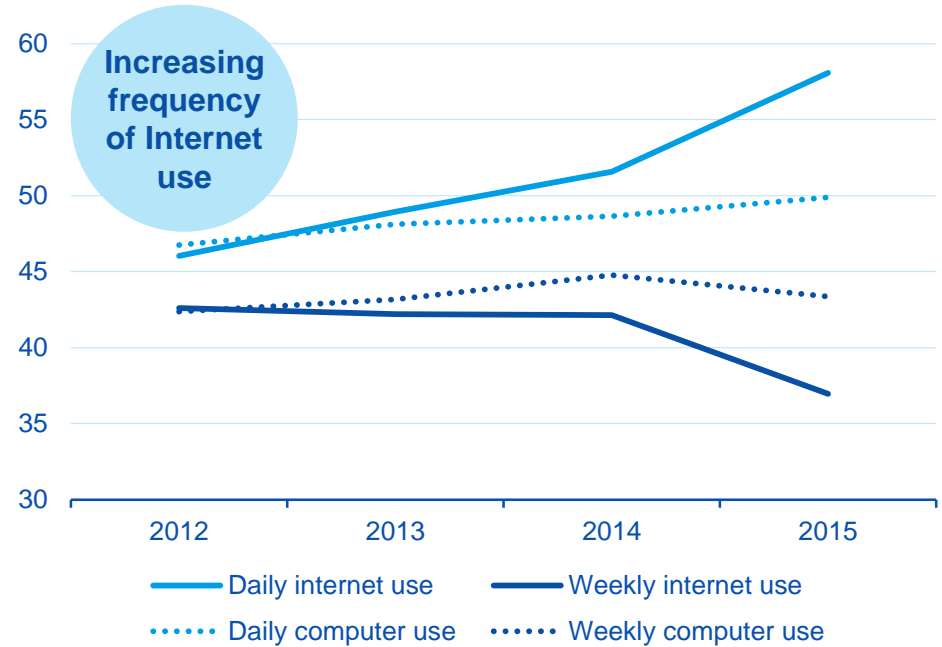
# 2 Demand side

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

ICT access and Internet use



Frequency of use (%)



Note 1: Use of Internet 2007-2011: in last 12 months/ Use 2012 ongoing : in last month

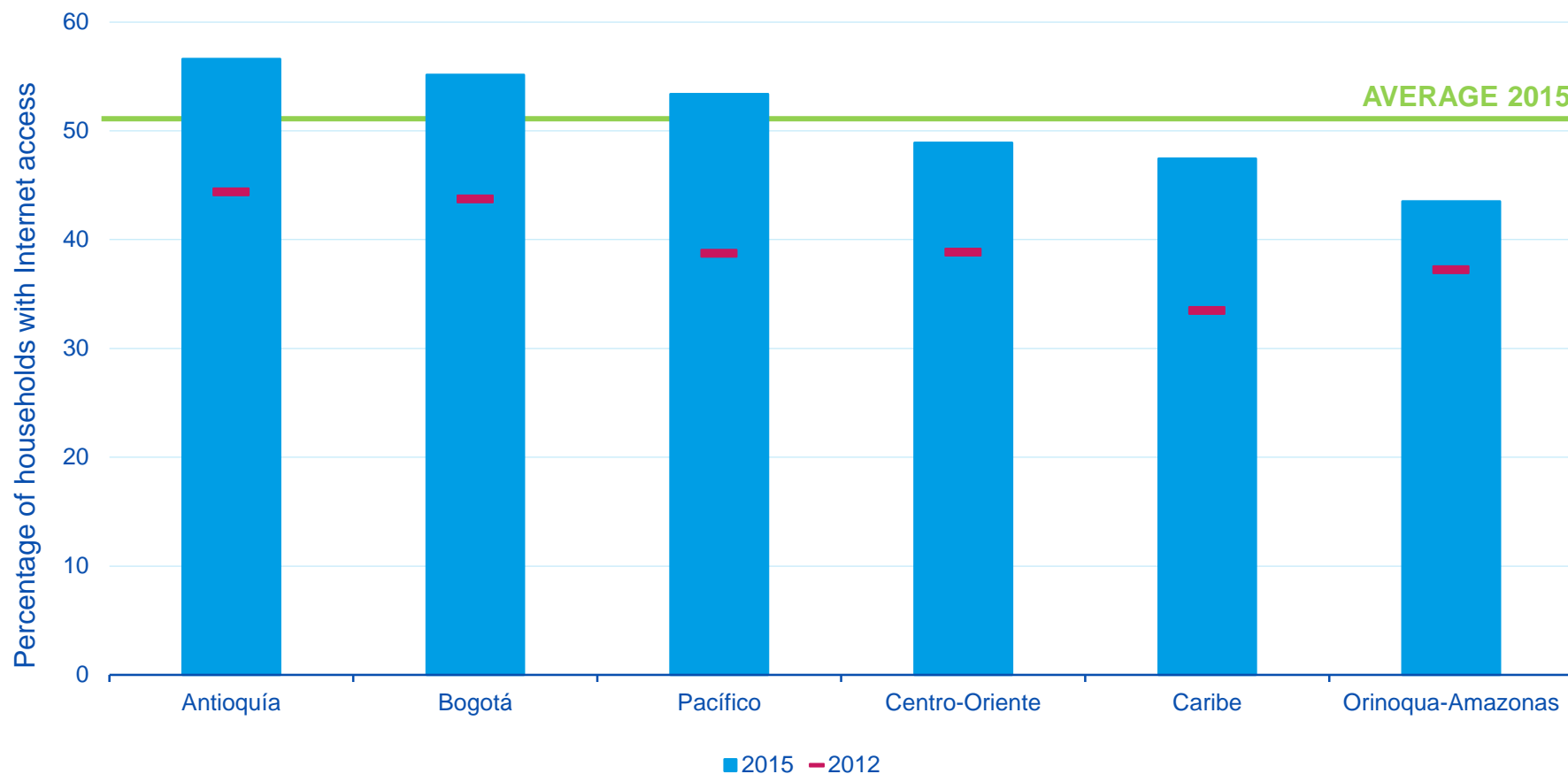
Note 2: Percentages of access are related to the total households and the percentages of usage are related to the total population with Internet access



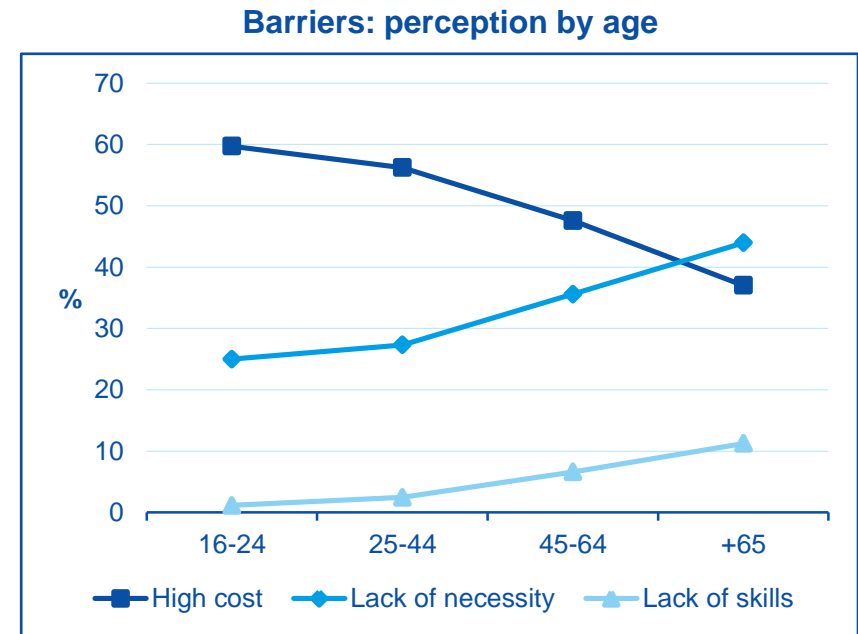
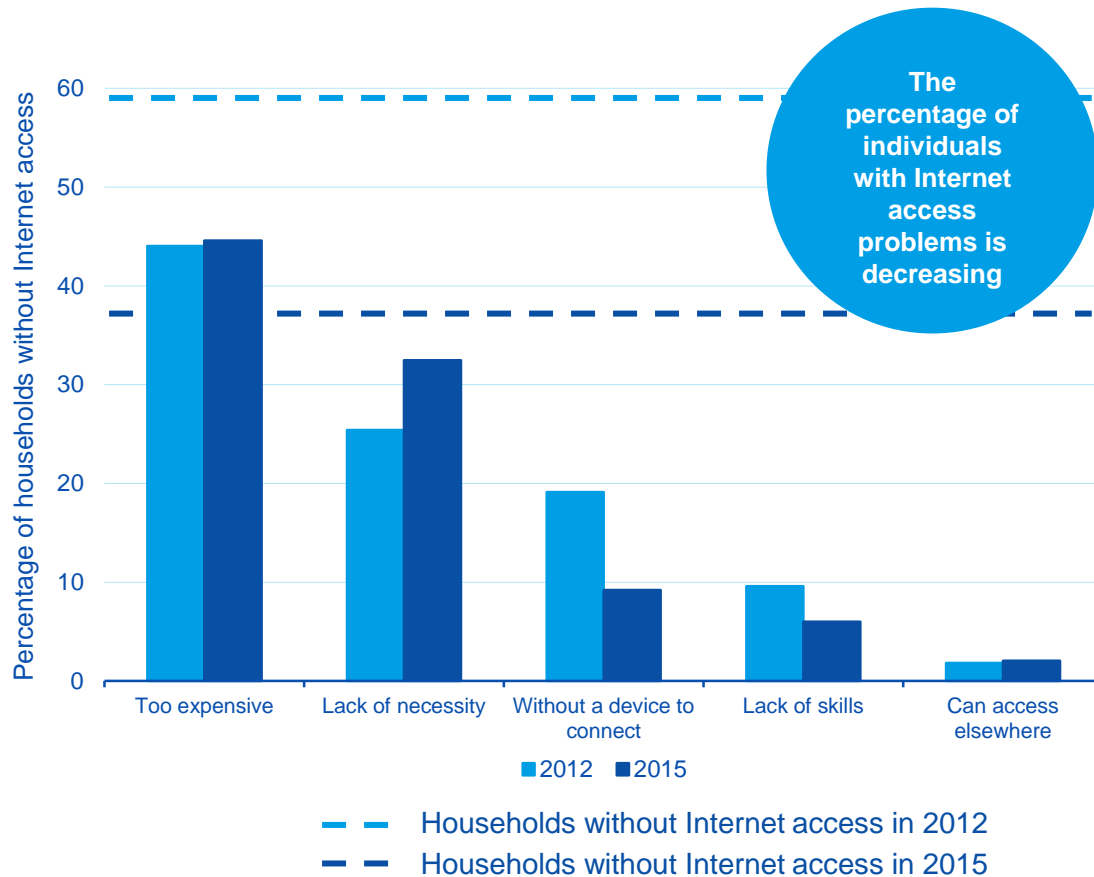
Significant growth in the availability of mobile compared with the computer



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

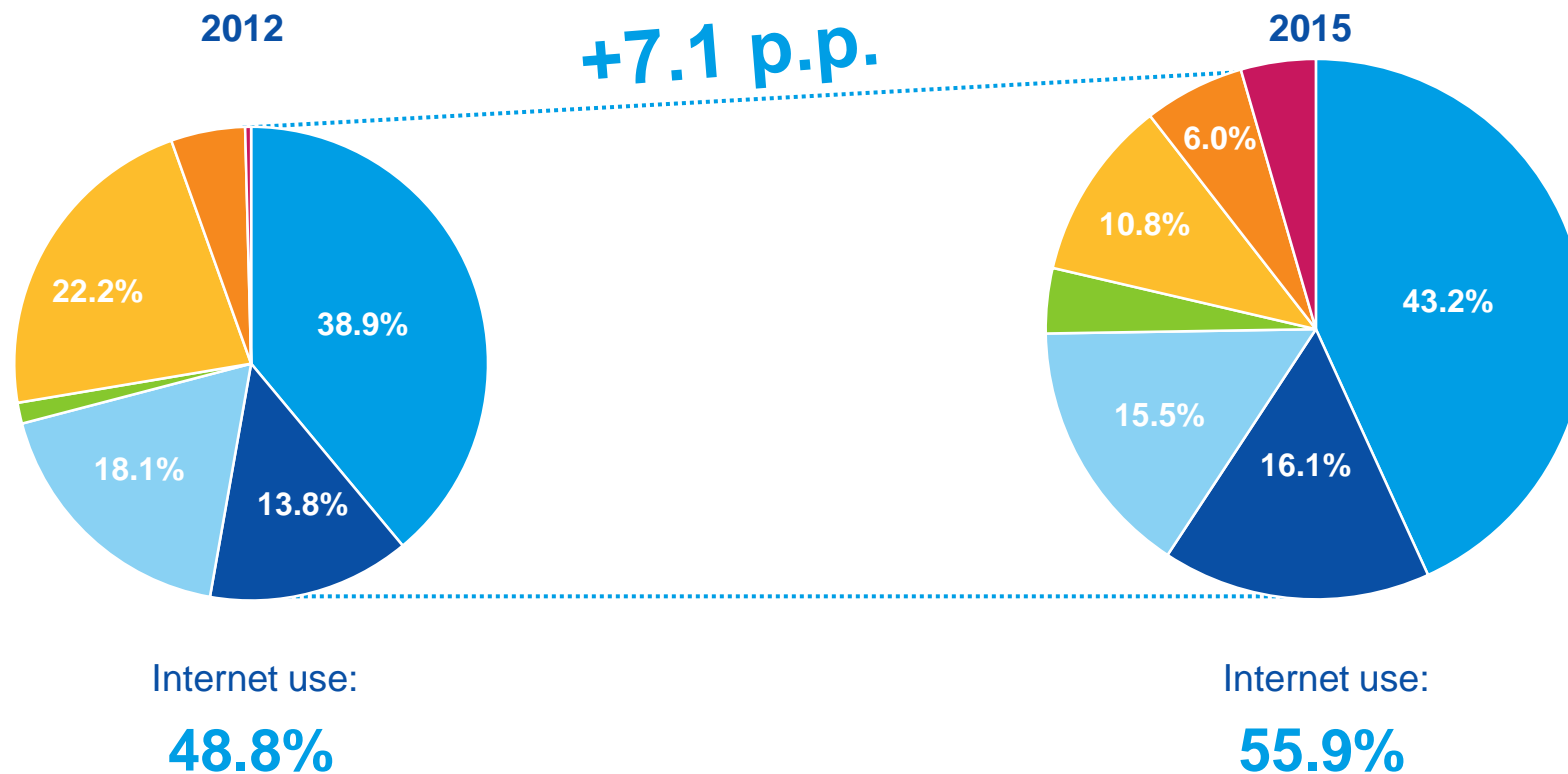


## 2.3. Barriers to home Internet access



The high cost is the main barrier to Internet access for households

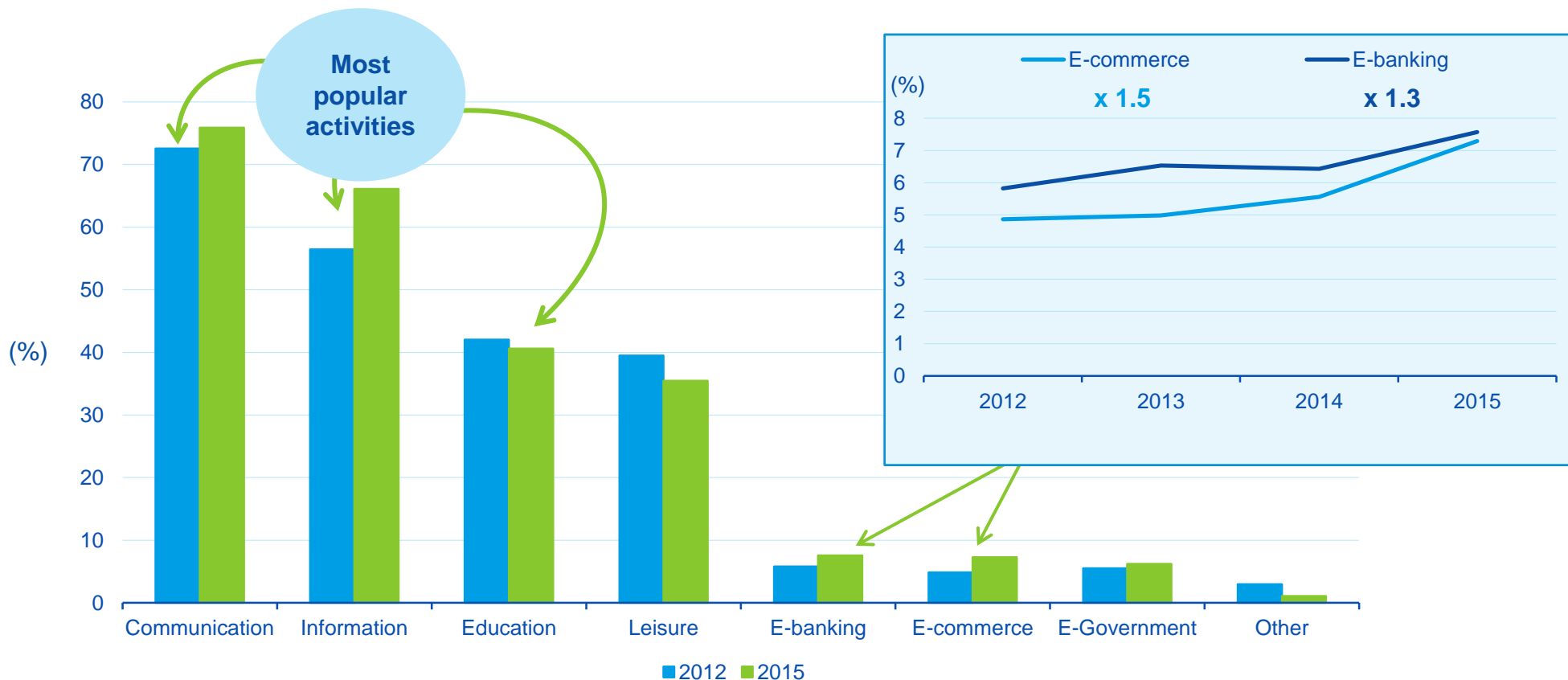
## 2.4. Places for Internet use (last month)



■ Home
 ■ Work
 ■ Education centre
 ■ Community telecentre
 ■ Private centres
 ■ Family/friends
 ■ Others

People mostly access the Internet at home, followed by the place of work

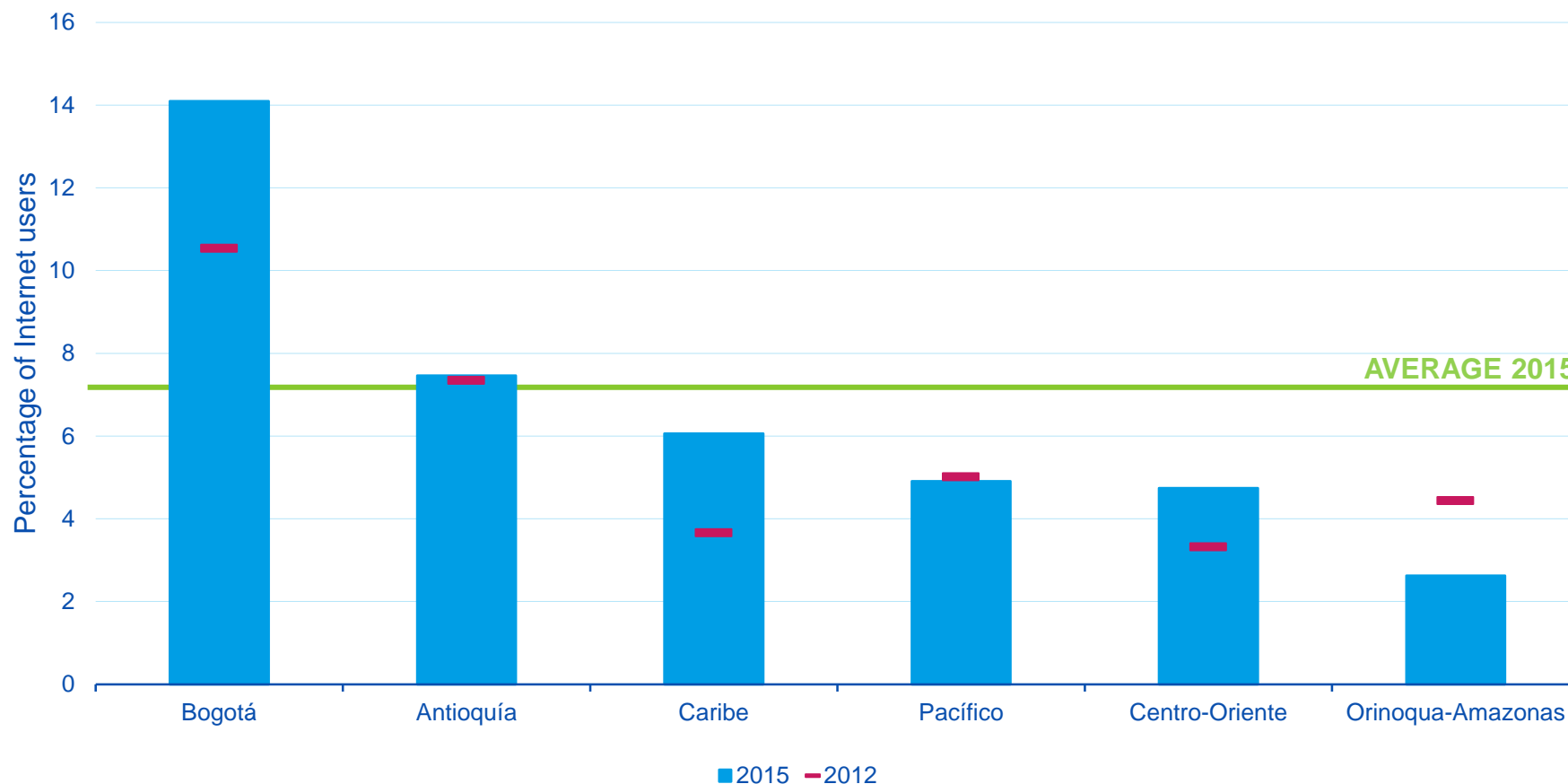
## 2.5. Internet activities: usage in last 12 months



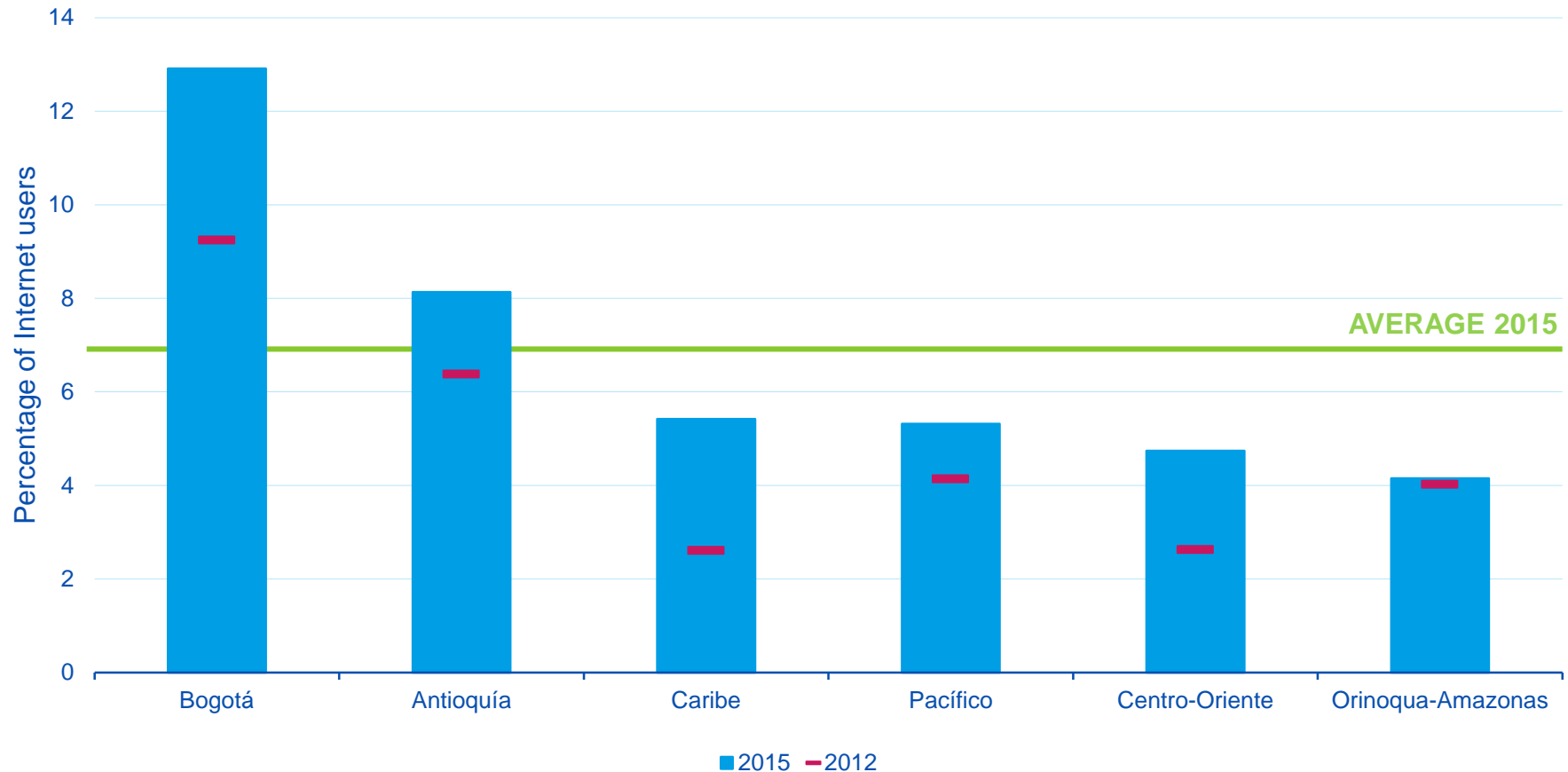
\*Note: Options are not exclusive. Individuals can selected more than one activity simultaneously

Unlike other countries in the region, education is one of the most popular activities among Internet users

## 2.6. Online banking: changes by region

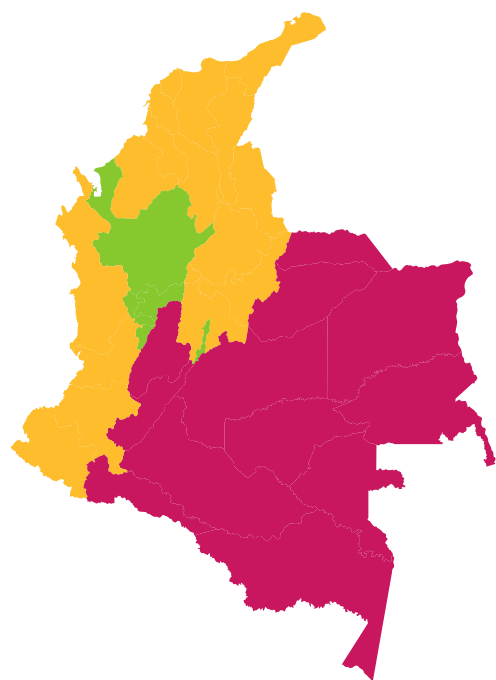


## 2.7. E-commerce: changes by region

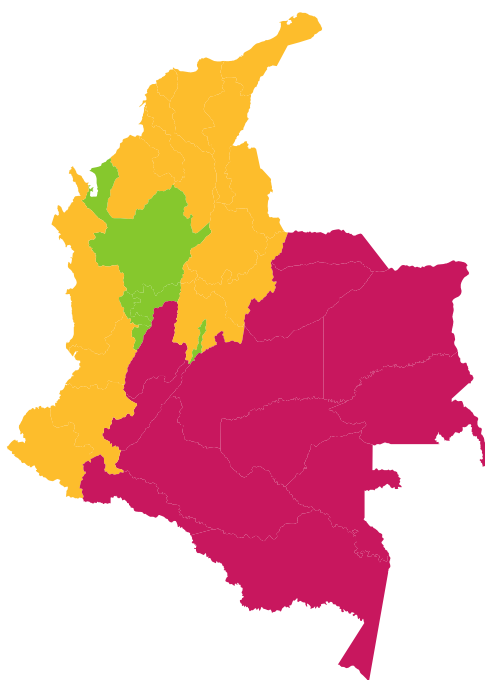


## 2.8. Geographical distribution in 2015: usage in the last month

Internet



Online banking

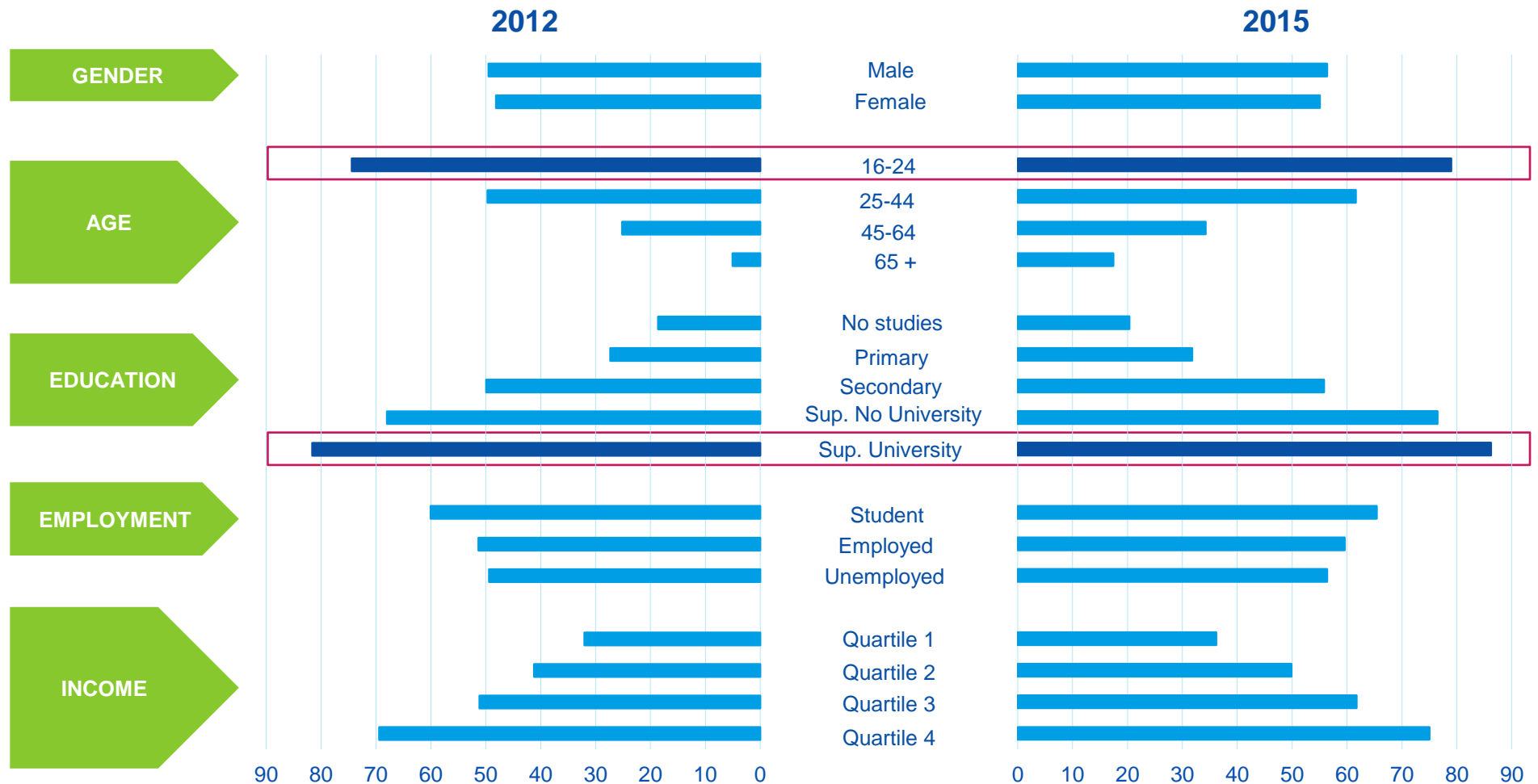


E-commerce



■ High 
 ■ Medium 
 ■ Low

# 2.9. Population characteristics: Internet use (%)

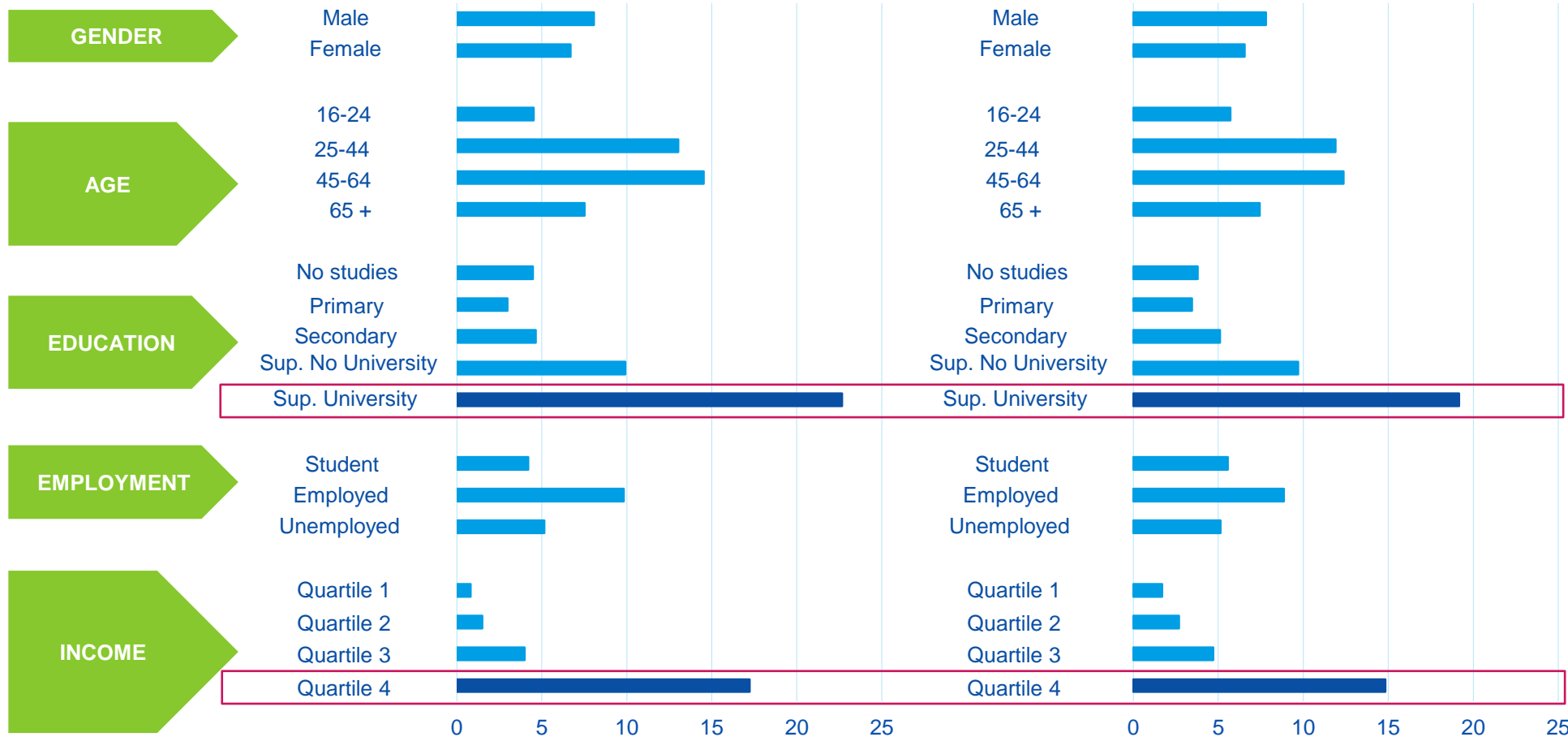




# 2.10. Population characteristics (% of Internet users, 2015)

Online banking

E-commerce

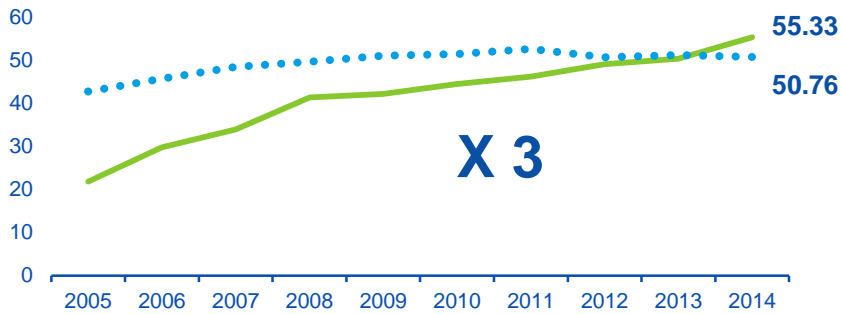




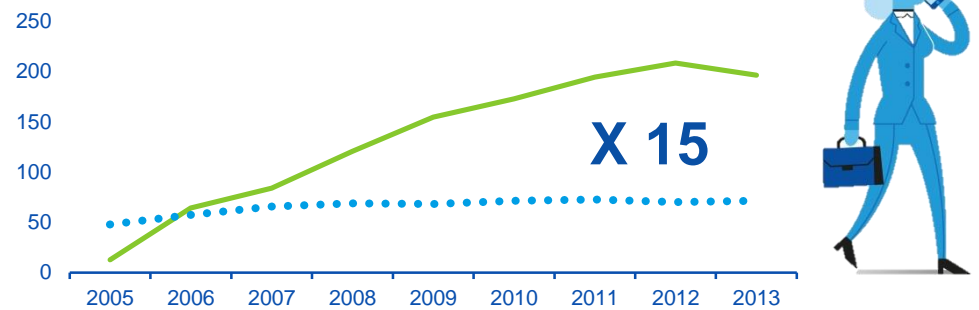
# 3 Supply side

# 3.1. Mobile situation

Mobile-cellular telephone subscriptions (millions)

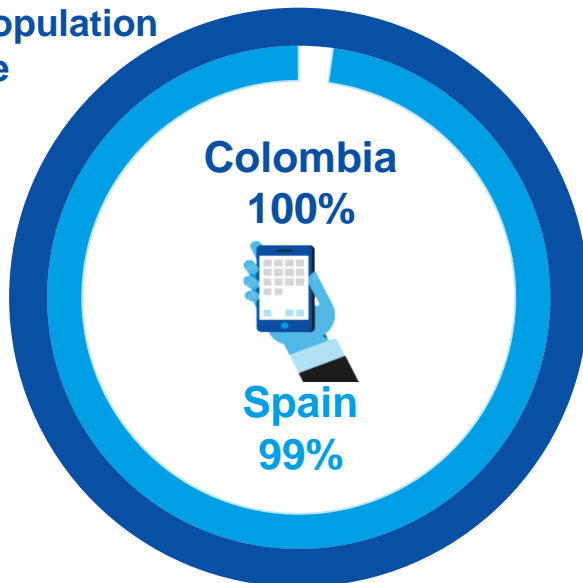


Domestic mobile-telephone traffic (billions of minutes)



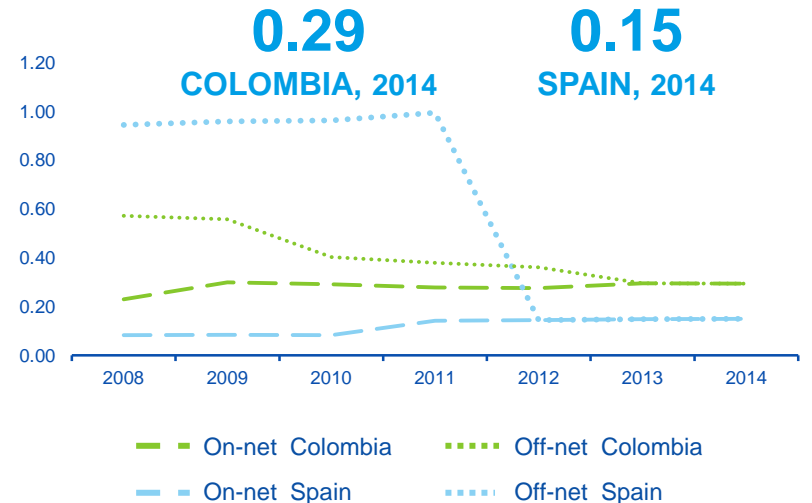
Mobile population Coverage

2013



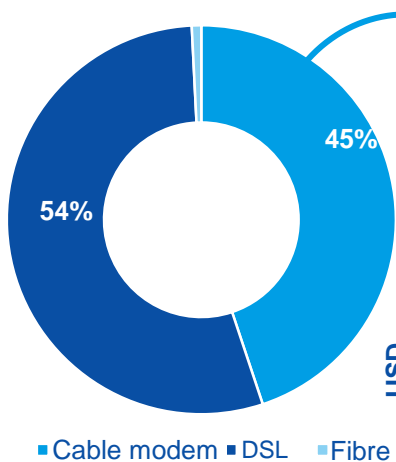
— Colombia    ..... Spain

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

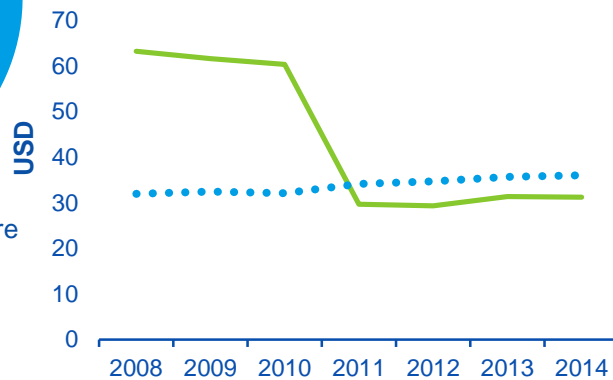


# 3.2. Fixed broadband

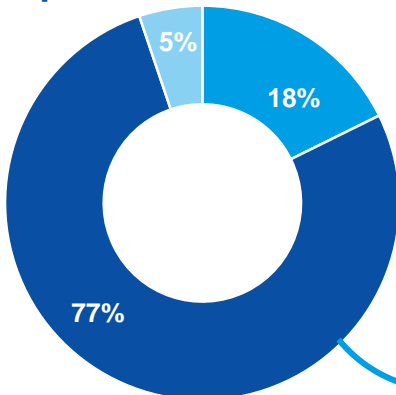
Colombia 2013



Fixed broadband monthly subscription charge  
US\$31 2014



Spain 2013

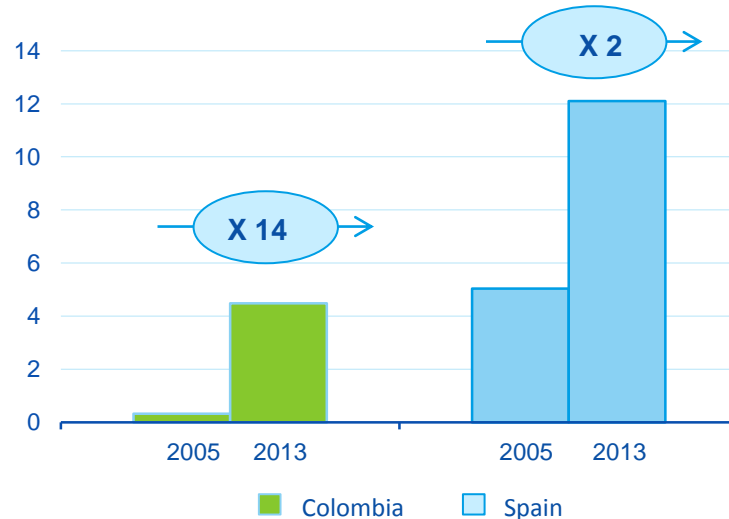


Fixed broadband monthly subscription charge  
US\$36 2014

Fixed broadband speed, (in Mbit/s)

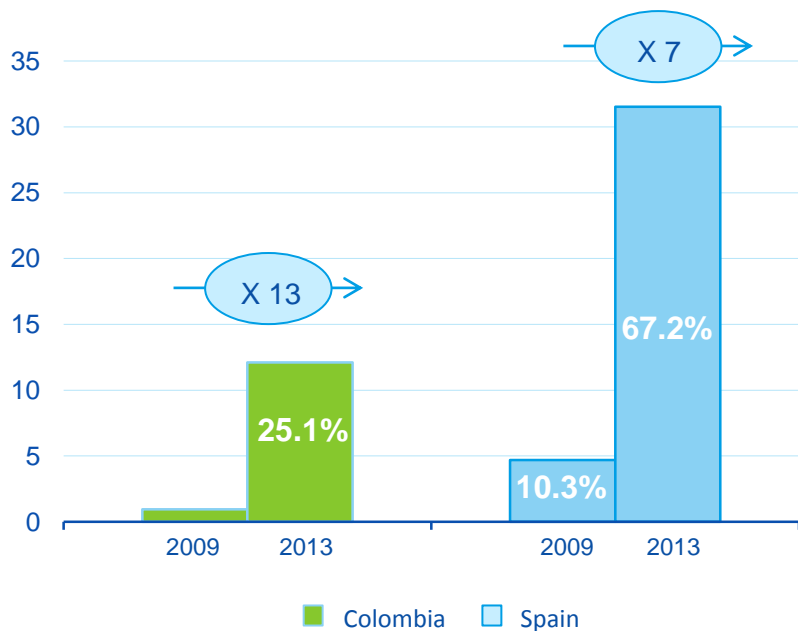


Fixed broadband subscriptions (millions)

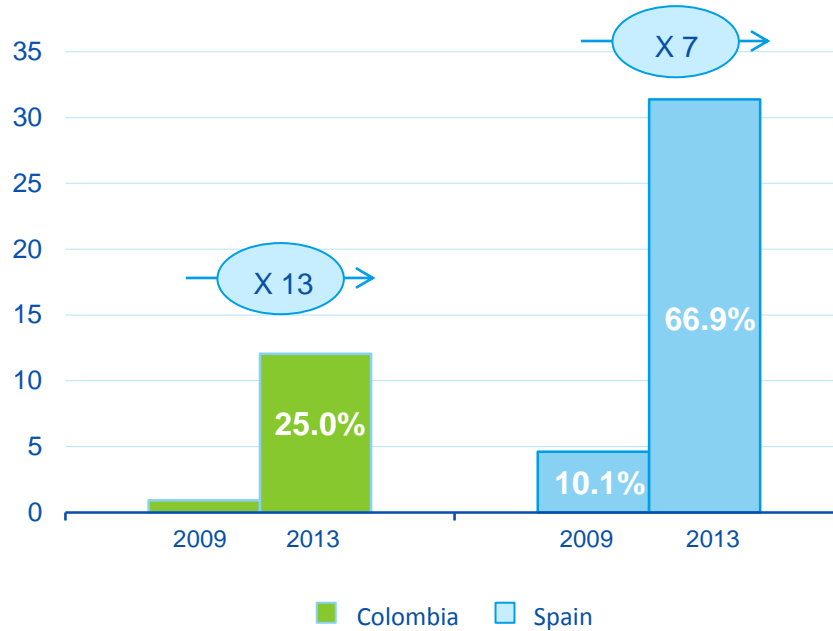


# 3.3. Wireless broadband

**Total wireless broadband subscriptions** (millions)



**Mobile-broadband subscriptions** (millions)



Note1: Numbers within the bars show the percentage of subscriptions per 100 inhabitants

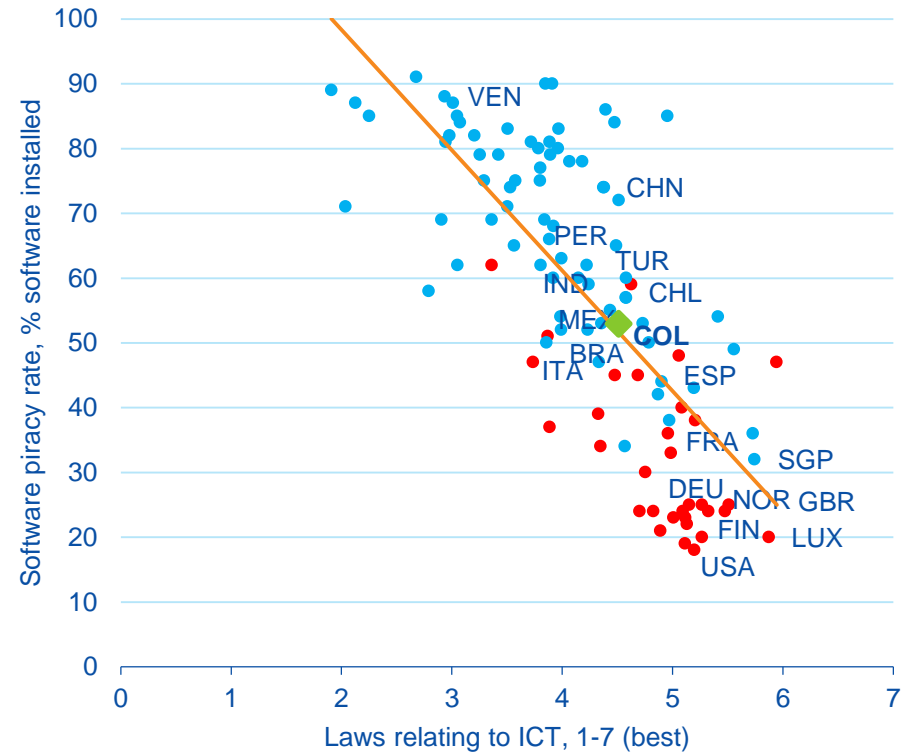
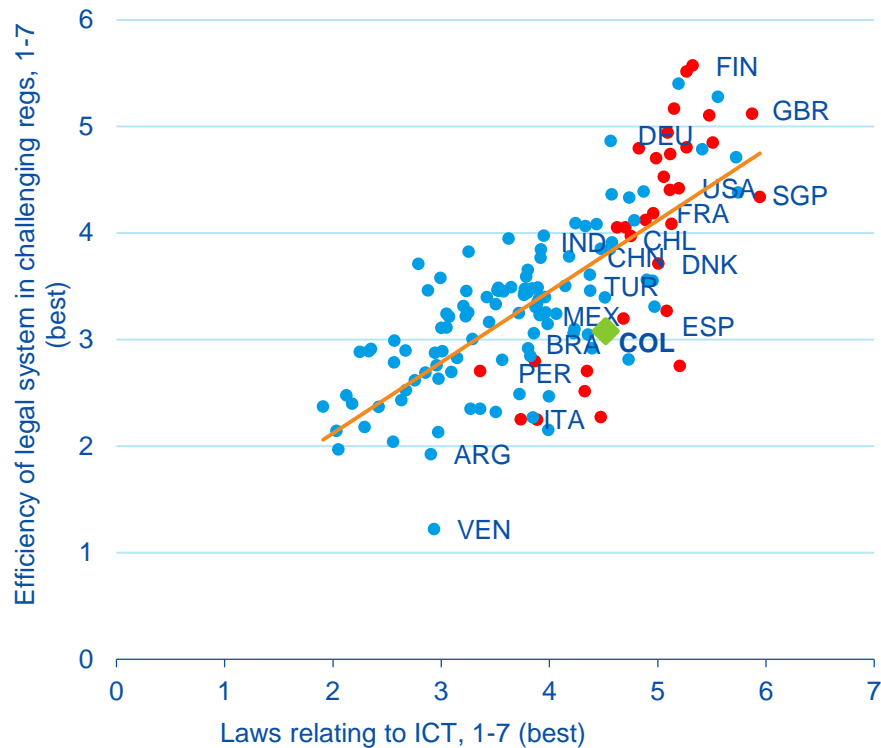
Note2: The wireless broadband indicator is comprised of subscriptions to broadband satellite, fixed wireless and mobile network

**99.6% of all wireless broadband subscriptions correspond to mobile-broadband**



# 4 Regulation side

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



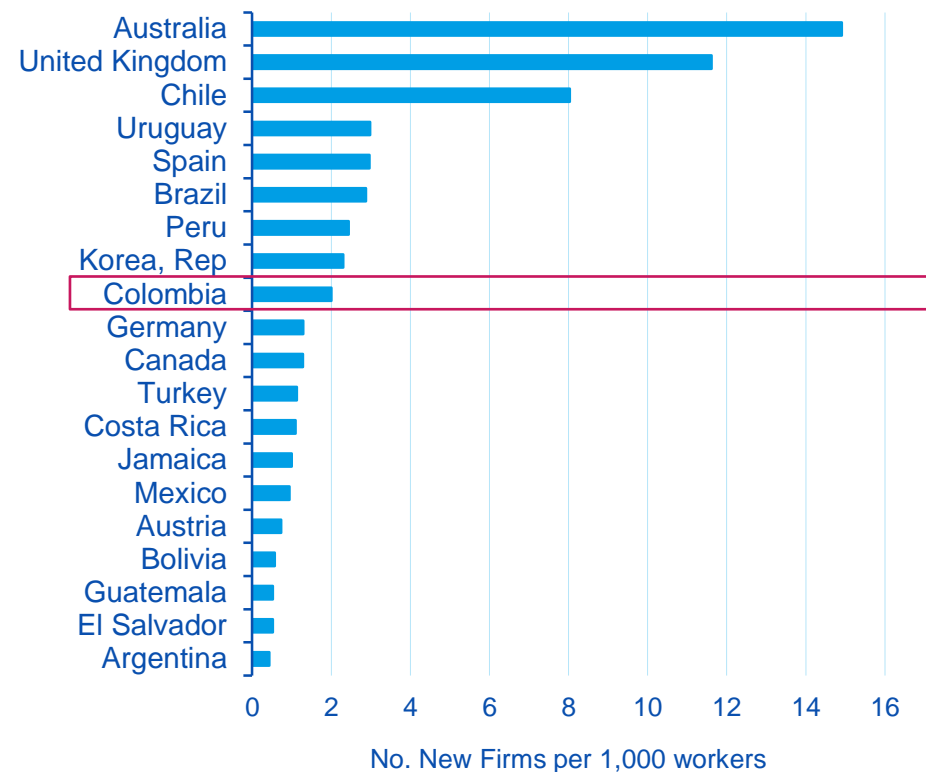
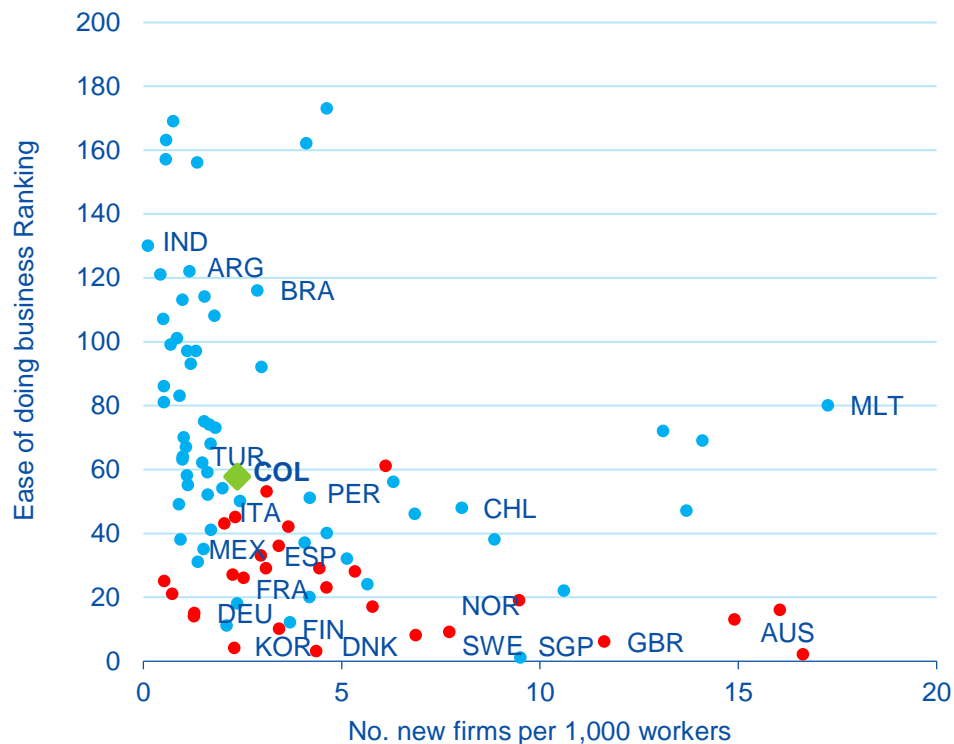
Source : BBVA Research & World Economic Forum

Source: BBVA Research & World Economic Forum

● High income OECD countries

● Rest (Colombia is highlighted in green)

# 4.2. Ease of doing business & entrepreneurship



Source: BBVA Research & World Economic Forum

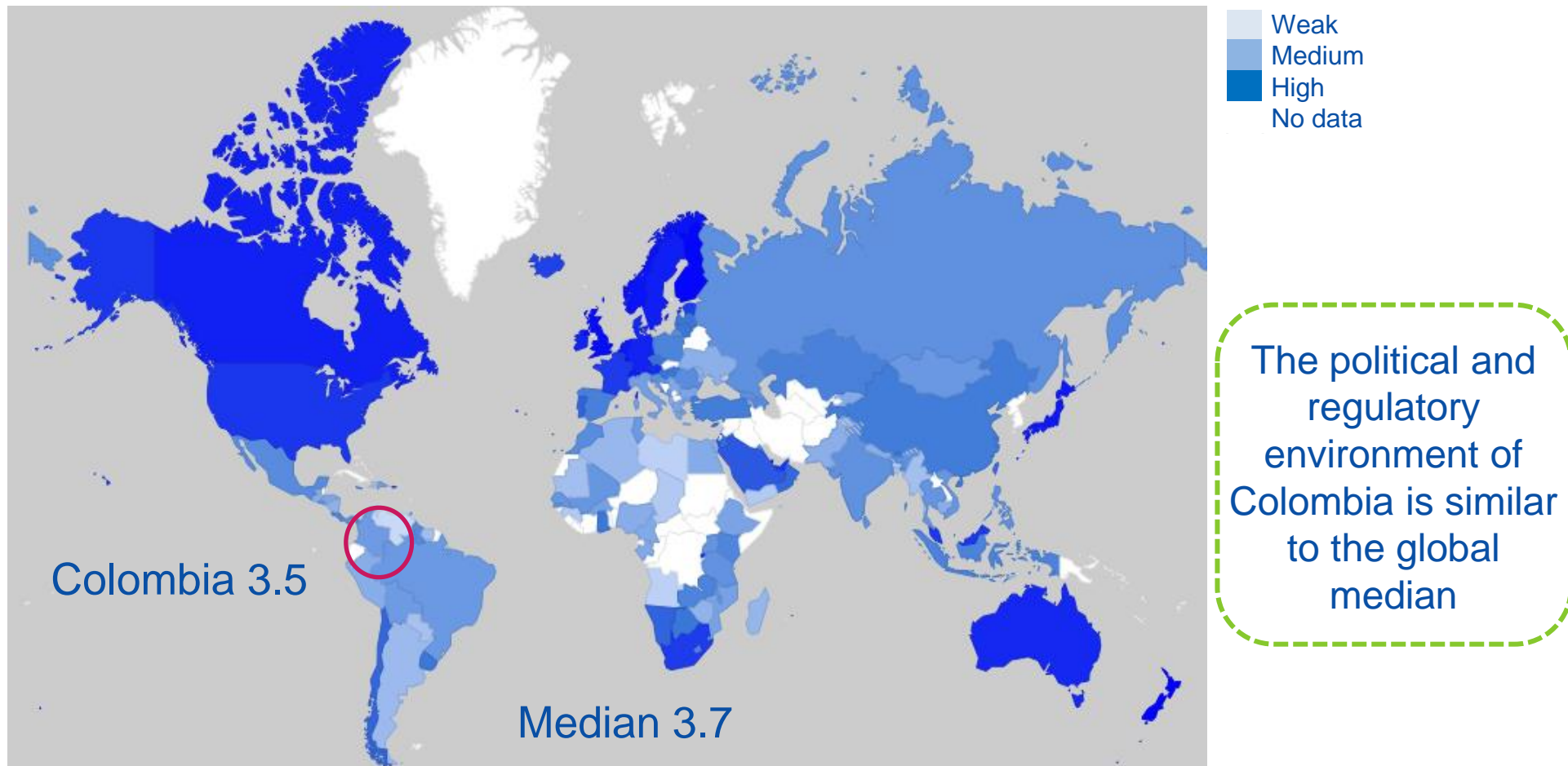
Source: Doing Business (World Bank Group)

● High income OECD countries

● Rest (Colombia is highlighted in green)



# 4.3. Political and regulatory environment



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 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: GEIH and ECV

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Survey conducted by the National Administrative Department of Statistics (DANE) of Colombia since 2007

It is a special information and communication technology module (MTIC in the Spanish abbreviation) included in the annual “Great Integrated Household Survey” (GEIH). From 2012 on, the information can be found in the Quality of Life Survey (ECV)

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The main objective is to measure the coverage, access and use of information and communications technology in households and by individuals

## 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

**Financial Inclusion**

**David Tuesta**  
*Lead Economist*

Víctor Adame  
Javier Alonso  
Alfonso Arellano  
Noelia Cámara  
Rosa M<sup>a</sup> Oliveros  
Lucía Pacheco  
M<sup>a</sup> Luisa Pérez

**Colombia**

**Juana Téllez**  
*Chief Economist*

Fabián Mauricio García  
Mauricio Hernández  
M<sup>a</sup> Claudia Llanes  
José Vicente Romero