

DIGITAL ECONOMY

Digital Context in Colombia

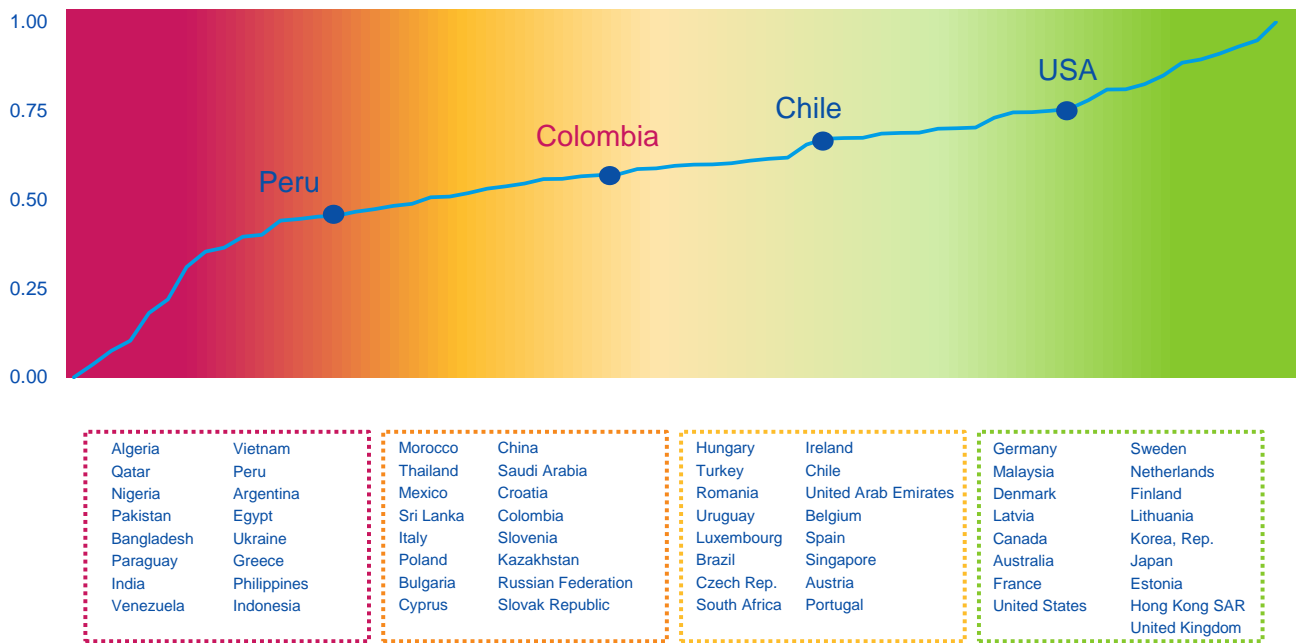
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1. Digital scene

In the digital context, Colombia ranks above the average for the Latin America region according to the 2015 Structural Digitization Index established by BBVA Research (See Figure 1). In view of the different aspects of this index, Colombia is notable particularly in terms of content, with numerous online services offered by the Government to Internet users. Accordingly, in this aspect of the index, Colombia ranks above the UK, the country that scores highest on the digitization index overall.

In relation to other aspects, Colombia sits in the middle, albeit generally higher than the Latin-American average. However, the country still faces challenges in this regard, especially in terms of affordability and use, aspects where Colombia lags behind the Latin-American average.

Figure 1
Structural Digitization Index, 2015



Source: BBVA Research & ITU

2. Demand side

Internet access in Colombian households is over 50 per cent in 2015 (Figure 2.1). This year, computer access and Internet access coincide, which shows a clear reduction in the rift between both figures, because in 2007, computer possession at home was twice as high as home Internet access. On the other hand, it is worth noting that almost all Colombians have access to a mobile phone, with an access percentage over 90 per cent from 2010 onwards. In terms of Internet use (in the last month), the figure is around 55 per cent in 2015, exceeding the level of access.

Figure 2.2 reflects how daily Internet use has increased considerably between 2012 and 2015, as has also occurred in other countries in the region. Nevertheless, this increase is more pronounced in Colombia from 2014 onwards. In terms of computer use, we can also see an increase in daily use, albeit with a more gradual curve. In turn, irregular Internet and computer use (for example, every week as in the figure) is continuously falling, more notably since 2014.

Figure 2.1
ICT access and Internet use (%)

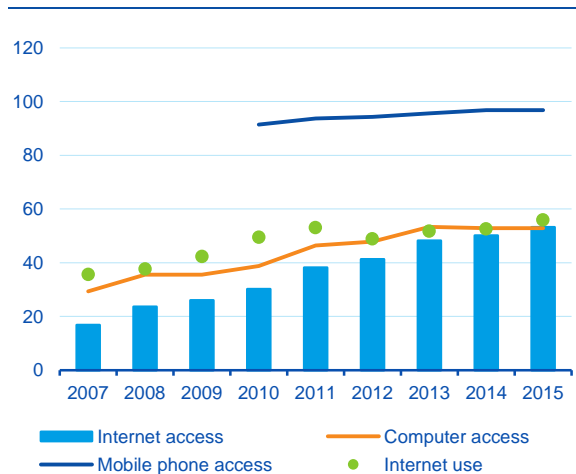
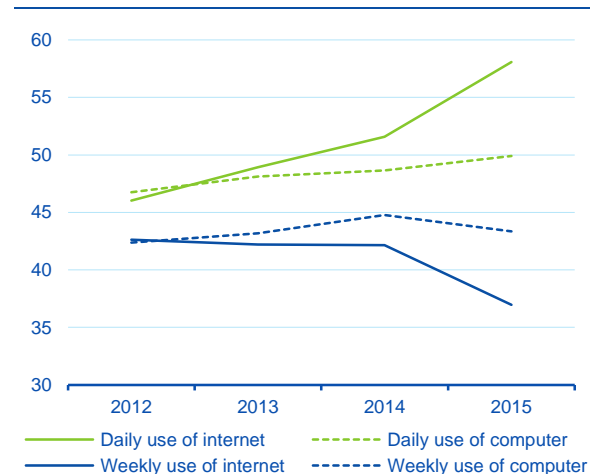


Figure 2.2
Frequency of Internet and computer use



Note: Between 2007 and 2011, the percentage of Internet users in the last twelve months is shown, with usage in the past month shown from 2012 onwards.
Source: BBVA Research, GEIH and ECV database

As a result of the rapid growth of Internet access, the percentage of households with access has fallen considerably between 2012 and 2015, falling from around 60 per cent of households (2007) to 47 per cent in 2015. The reasons why households do not have Internet access vary and are reflected in Figure 3.

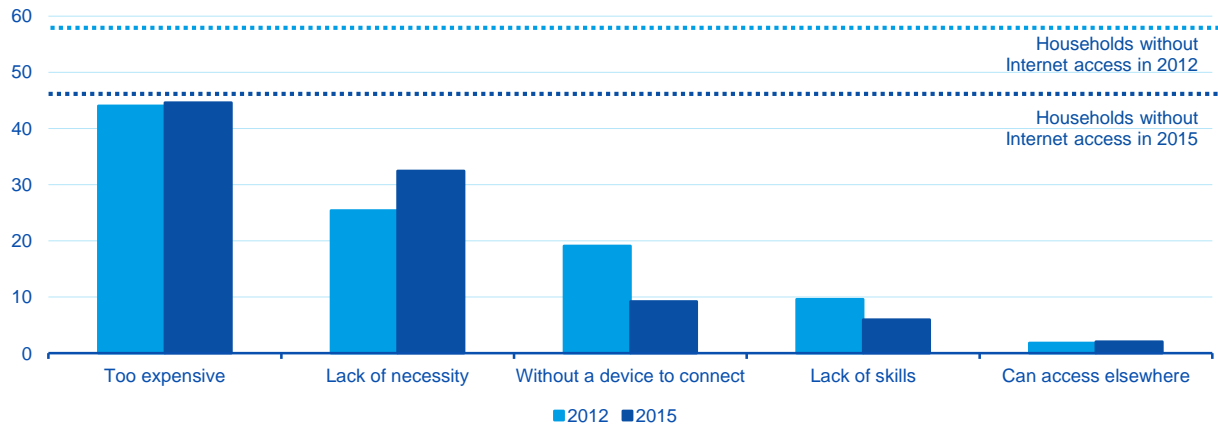
Colombian households consider that the main obstacle to Internet access is economic. Around 46 per cent of households without say they don't have access because it is too expensive. Moreover, this barrier has become slightly more significant between 2012 and 2015. In second place is the lack of need (self-imposed or voluntary barrier), this being cited as the reason for not having access by more than 30 per cent of households without Internet access. Nevertheless, this barrier tends to be an important one and increases in line with how Internet access expands within a society, since the remaining obstacles gradually resolve themselves over time.

The remaining obstacles to Internet access, such as the lack of a device for connection and the lack of skills, accounts for less than 10 per cent, and its significance diminished considerably between 2012 and 2015.

It is worth noting that if barriers to access are analysed according to age, the economic barrier decreases as individuals get older, while the lack of ability and the lack of interest grow in line with age. The understanding

of obstacles to Internet access perceived by inhabitants of a country and the profile of the population that perceives each obstacle is fundamental when it comes to taking political decisions on Information and Communication Technologies (ICT), as these are very reliable indicators of where the problem lies, thereby indicating the route towards possible solutions, in this case, directed fundamentally at the economic sphere.

Figure 3
Barriers to household Internet access



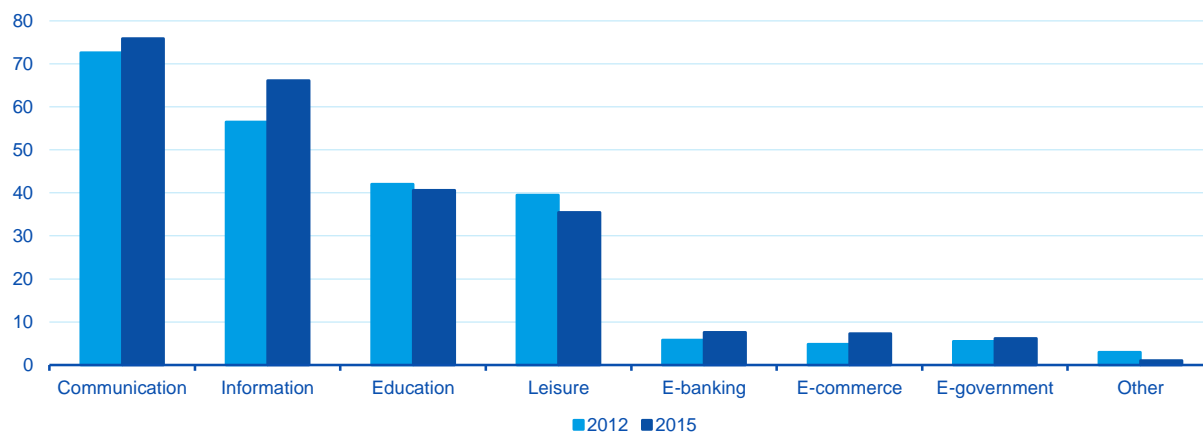
Source: BBVA Research, GEIH and ECV database

We focus on the individuals who do have access, studying the main places for use and the activities conducted using the Internet. In regard to the places for Internet access, in Colombia the majority of individuals browse from home, and this has increased in 2015, in relation to 2012, accounting for 43 per cent of individuals. The workplace has also become more important, increasing from 14 per cent 2012 to a little more than 16 per cent in 2015, similar to educational centres. It is worth noting that the cyber coffee-shop has declined considerably in terms of the percentage of users, given that in 2012 it was the main place of access for more than 22 per cent of users, while in 2015 only 11 per cent of individuals consider it as the main location for Internet access.

Figure 4 shows which activities people in Colombia use the Internet for, notably those related with communication and information. Online activities related with education are more common than those that are leisure-related, a fact not often reported in other countries, generally speaking, where leisure always outstrips educational activities. Between 2012 and 2015, there was a significant increase in the activities related with information and communications, as well as the more traditional activities.

In terms of the more modern activities, electronic banking and e-commerce have increased by 30 and 50 per cent, respectively, between 2012 and 2015, reaching user levels in e-commerce of 7.3 per cent and 7.6 per cent in the case of electronic banking. Official paperwork represents similar percentages to these two activities.

Figure 4
Internet activities: uses in the past month (%)



Source: BBVA Research, GEIH and ECV database

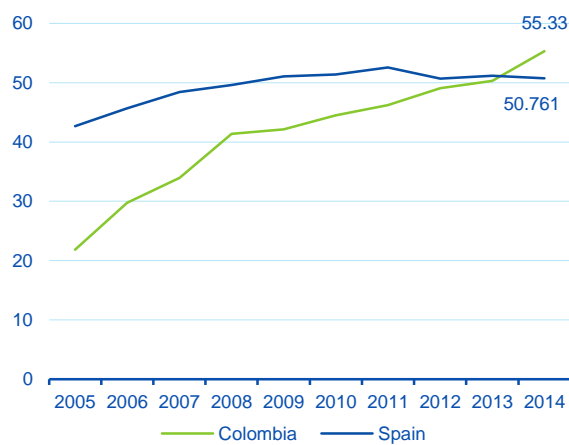
If we look at the ICT situation from a state perspective, Internet use, as well as electronic banking and e-commerce, is lower in the eastern part of the country, particularly Orinoquia-Amazonas and Centro-Oriente. On the other hand, Bogotá and Antioquía come out on top in this respect.

Differences are also noted depending on the socio-economic characteristics of the population. As predominant attributes, the majority of Internet users is aged between 16 and 24 years and is well educated. Accordingly, more than 85 per cent of people with university education are Internet users compared with 30 per cent of individuals with primary education. In terms of electronic banking and e-commerce, university education is also relevant, followed by the level of income, particularly when it comes to using electronic banking.

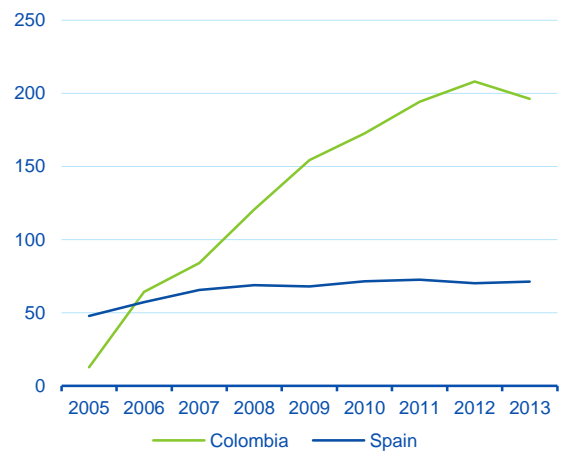
3. Supply side

This section refers essentially to subscriptions and prices, information which is provided by the companies offering ICT-related services. Mobile telephony is gaining ground and is experiencing marked growth in the number of subscriptions between 2005 and 2014. This has translated into a significant increase in the traffic of minutes in mobile calls, which has increased by 15 times between 2005 and 2013, in contrast with traffic in Spain, which has virtually remained the same (Figure 5).

Figure 5
Subscriptions to mobile telephony (millions)



National mobile call traffic (thousands of millions of minutes)



Source: BBVA Research & ITU

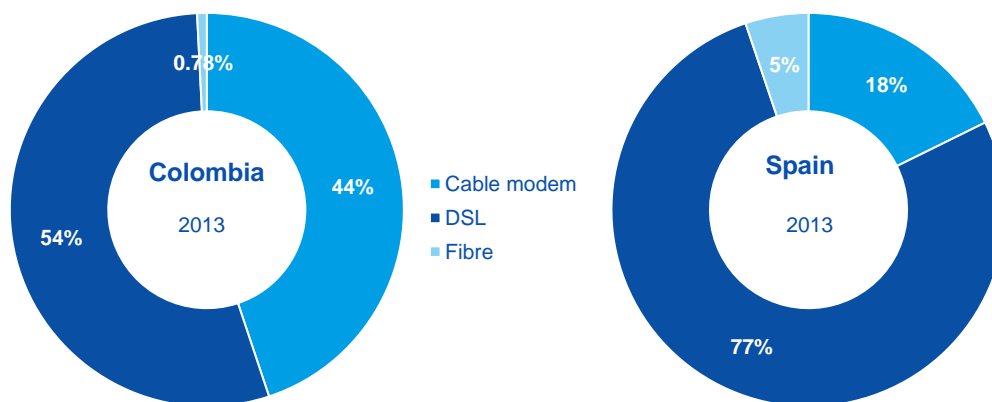
It should be noted that the cost of a call minute is higher in Colombia than in Spain, at 2.15 USD and 0.29 USD, respectively, in 2014.

In terms of fixed broadband, the number of subscriptions has multiplied by 17 between 2005 and 2013, with fixed landline subscriptions being virtually non-existent in 2005. Despite its significant growth, Colombia still lies below fixed broadband subscriptions in Spain, with around 4 million subscriptions in 2013, compared with 12 million in Spain. Figure 6 features the disaggregation of the fixed broadband subscriptions according to the type of technology used for connecting to the Internet in 2013. More than 50 per cent of fixed broadband subscriptions were DSL, with almost all of the rest being cable modem.

The monthly cost of fixed broadband subscription has decreased considerably between 2008 and 2014, particularly from 2010 onwards, when the cost was higher than 60 USD, falling to 31 USD in 2014, a lower cost than in Spain (36 USD).

Fixed broadband navigation speed is around 1 Mbit/s in 2014, as in Spain, although drop-offs were noted in navigation speed in 2011 and 2012.

Figure 6
Fixed broadband technology



Source: BBVA Research & ITU

Aside from the notable growth in fixed broadband subscriptions, Colombia has basically stood out on account of the exponential increase in subscriptions for wireless broadband, increasing by 13 times between 2009 and 2013. This means that 25 per cent of Colombian users have subscribed to wireless broadband, out of which practically 100 per cent are subscribed to mobile broadband.

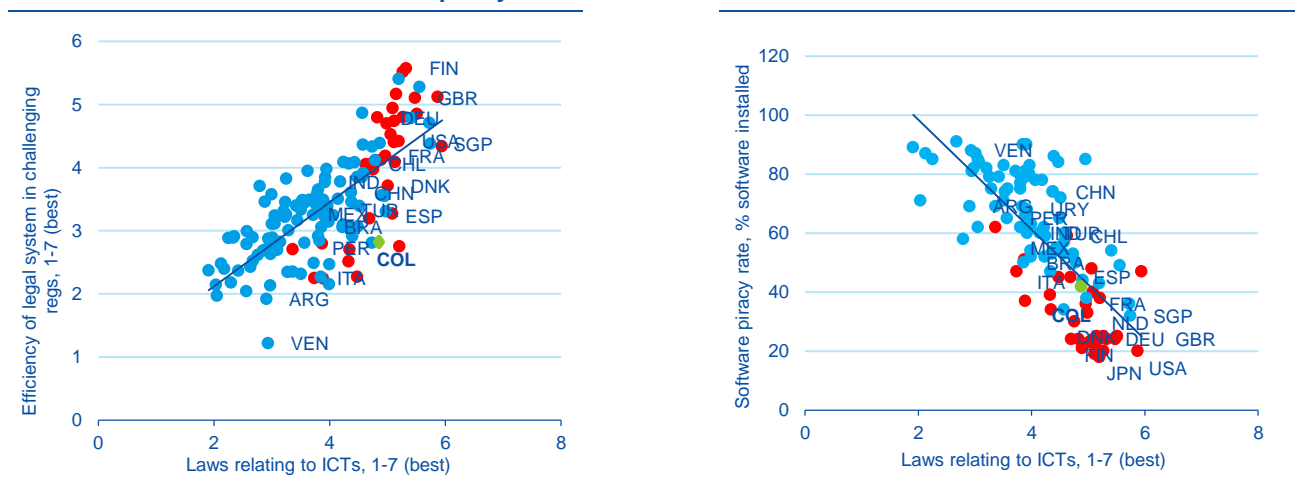
4. Regulatory

In terms of regulation, the spread graphics show how the effectiveness of the legal system increases with the growth in the number of ICT-related laws. Colombia scores 4.2 out of 7 in terms of the existence of ICT-related laws, a score similar to that of Chile, and even that of certain European countries like Germany. However, it seems that this fact has not yet translated into an effective legal system to deal with new regulations, given that Colombia scores 3.1 out of 7, close to Peru and Brazil, countries with a rating below 4 points in the sphere of ICT-related laws. At the same time, as ICT-related laws increase, the level of piracy decreases, and there is a strong negative relation between these two elements.

It seems that Colombia does influence the existence of ICT laws when it comes to reducing piracy levels, and in Figure 7 on the right it is practically level with the trend. Accordingly, Colombia posted a level of piracy of 52 per cent in 2015, while in other countries such as Chile there was a higher level of piracy, despite scoring better on the effectiveness of the legal system and on the existence of ICT-related laws. In this sense, Scandinavian countries and the UK are ahead, with numerous ICT-related laws linked with a higher degree of effectiveness in the legal system and a level of piracy considerably lower compared with other countries (Figure 7).

Regulation is also fundamental for entrepreneurship, which in this case is measured as the creation of new companies per 1,000 workers. If we cross-reference this indicator with a ranking of how easy it is to conduct business (closely related with regulation in each country), countries that create a greater number of companies, such as Australia and the UK, normally occupy the lead positions in the ranking. In this regard, Colombia is at the median point, with a level of entrepreneurship similar to that of Peru and Korea.

Figure 7
ICT laws: Link with effectiveness and piracy



Source: BBVA Research & World Economic Forum

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