DIGITAL ECONOMY

The Digital Context in Peru

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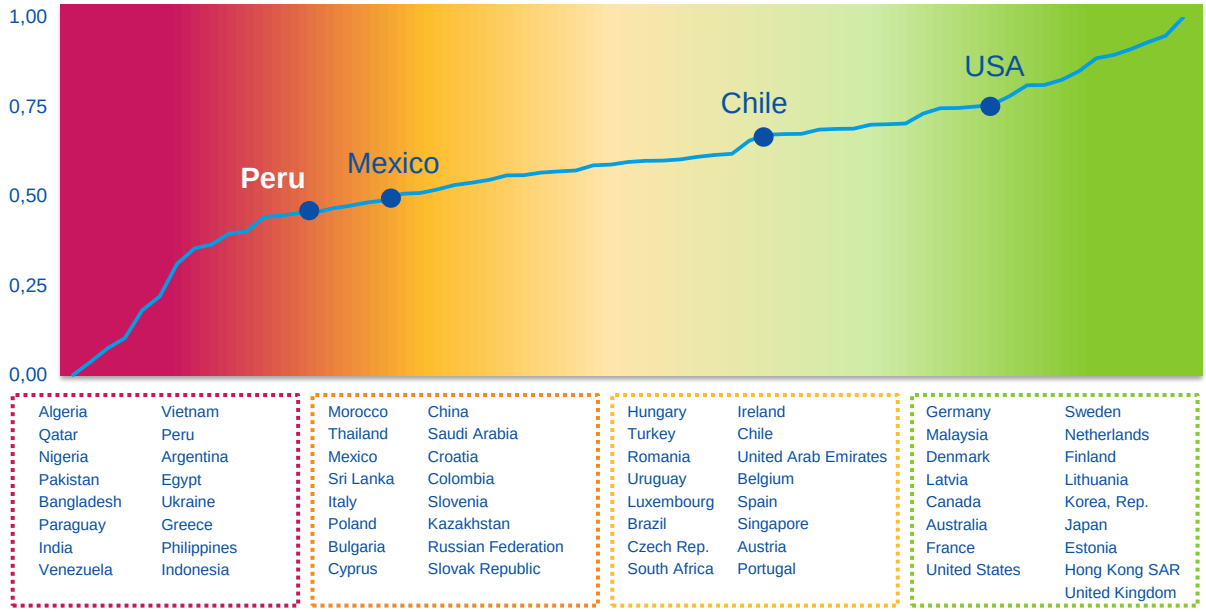
1. The digital scenario

In terms of digital context, Peru is still lags behind other countries in the region, such as Mexico and Colombia, as shown in the 2015 BBVA Research Structural Digitisation Index (see Figure 1). Looking at the different aspects of this index, Peru's digital content is making progress in terms of the online services that the Government offers to Internet users, albeit still somewhat behind their peers.

As far as the dimensions of the infrastructure and its use on a business level, Peru is at the midway point compared to other countries in the region. Finally we should point out that the development of greater affordability and an improved regulatory context for Information and Communications Technologies (ICT), as well as their use on an individual level, are the main challenges facing Peru in this area.

Figure 1
2015 Structural Digitisation Index



Source: BBVA Research and ITU

2. Demand side

Internet access in the country's homes rose to just above 20 per cent in 2014, somewhat below the world average (43 per cent). Domestic access to a computer is slightly higher than Internet access, although the trend as far as both are concerned is one of growth. As can be seen in Figure 2.1, the gap between Internet access and use has shrunk to a difference of around 10 per cent in 2014. These figures show that both computer and Internet access is increasing. Nevertheless, there are still many families in Peru who do not have this access in their homes, although they still make use of both. As far as access to a mobile phone is concerned, there has been a significant growth in their availability in comparison to that of computers, with mobiles found in 85 per cent of all homes.

Figure 2.2 shows the growing trend toward a daily use of the Internet and the decline in a once-weekly use. In 2007, the difference between the two types of use was 30 per cent, with weekly use more common than daily use. However, from 2013 onward, daily use began to predominate. As we can see, this trend has continued. By 2014, 50 per cent of people used the Internet every day compared to 43 per cent who used it every week.

Figure 2.1
Access to computer and Internet (%)

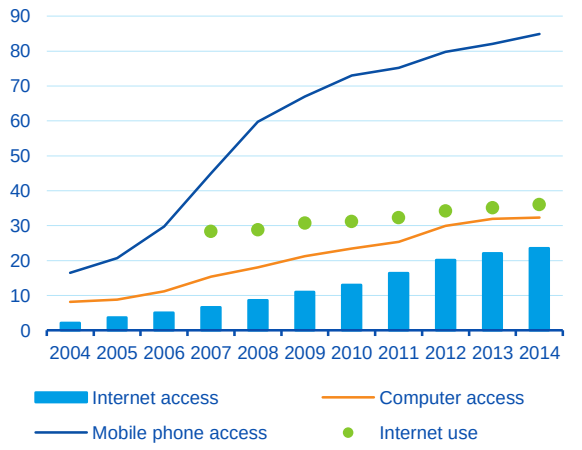
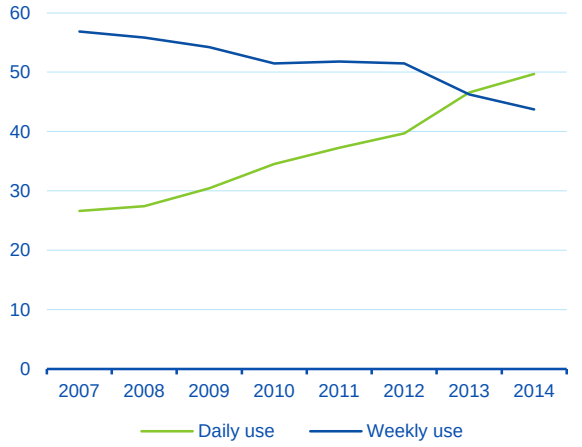


Figure 2.2
Frequency of Internet use (%)



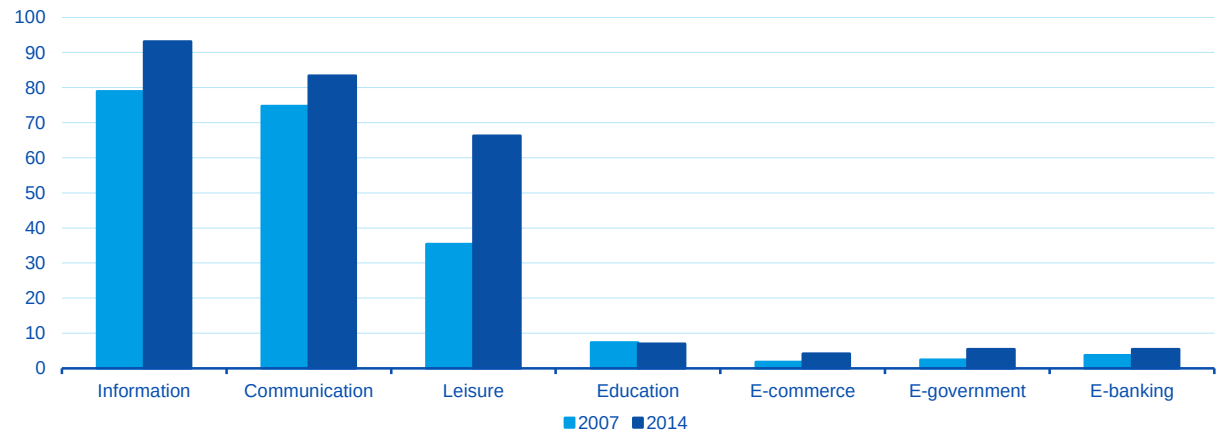
Note: "Access to Internet/computer/mobile phone" refers to the availability of these devices in the home. "Use" refers to use of the Internet, both at home and outside.
Source: BBVA Research and INEI (ENAHO)

Internet use has increased from 28 per cent in 2007 to 36 per cent in 2014. With regard to the main places where people use the Internet, it should be pointed out that public cabins are no longer the most popular Internet, with their use dropping significantly from 76 per cent in 2007 to less than half that in 2014. In 2014, the home became the most common place where individuals used the Internet, with 39 per cent, followed by public cabins, with 35 per cent. Less important, and decreasing significantly with respect to 2007, we find the Internet use at work and in educational centres.

Having looked at the places where people use the Internet, the next part of the study considers the most common online activities. The most popular activities among Peruvians are those related to information, communication and leisure, with all three becoming more important in 2014 than they were in 2007. Less important, as can be seen in Figure 3, are educational activities, where the level of use has remained practically unchanged at around 7 per cent in both the years that were studied.

As far as newer activities are concerned, such as online banking and e-commerce, these grew in importance between 2007 and 2014. Both are becoming more common, with an increase of 46 per cent in the case of banking and 29 per cent for e-commerce. Online banking is more popular that e-commerce, with use levels of 5.5 per cent for the former compared to 4.2 per cent for the latter in 2014. Bureaucratic formalities have a similar level of use to online banking.

Figure 3
Most-common Internet activities (%)



Source: BBVA Research and INEI (ENAHO)

If we look at online banking and e-commerce region by region, it is worth noting that both activities increased between 2007 and 2014 across the country. Metropolitan Lima stands out from the other regions in terms of its use of both online banking and e-commerce, although the percentage is still below 10 per cent. After Metropolitan Lima, is the Costa Sur region which registered the greatest percentage increase in Internet banking and shopping, as can be seen in Figure 4. In contrast, the areas of Sierra Centro and Costa Centro show the lowest levels of these aspects.

These results would seem to be related to Internet access and use. The central region (Costa Centro and Sierra Centro) lags furthest behind in both Internet access and use, in contrast to Metropolitan Lima and Costa Sur, which have high figures in this regard, both for last month and for 2014.

As well as these inequalities between regions, there are also differences according to the characteristics of the population. The predominant characteristic among Internet users is being between 16 and 24 years of age, as 70 per cent of Peruvians in this age range are Internet users. Similarly, more than 80 per cent of people with a university education use the Internet. As far as online banking and e-commerce services are concerned, once again, the educational level is an important characteristic, especially in the case of the former. Here, the age effect means that less than 4 per cent of people aged between 16 and 24 use online banking and shopping.

Figure 4.1
Online banking, region by region (%)

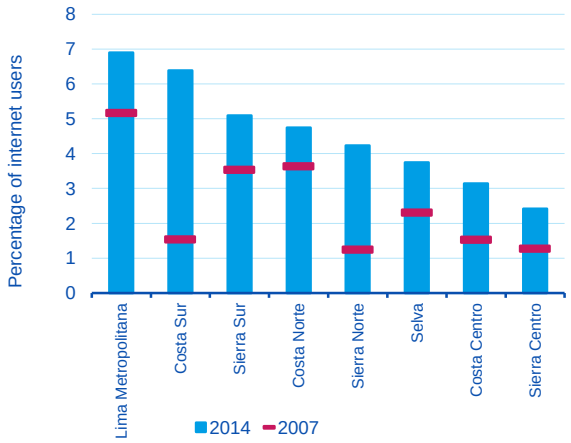
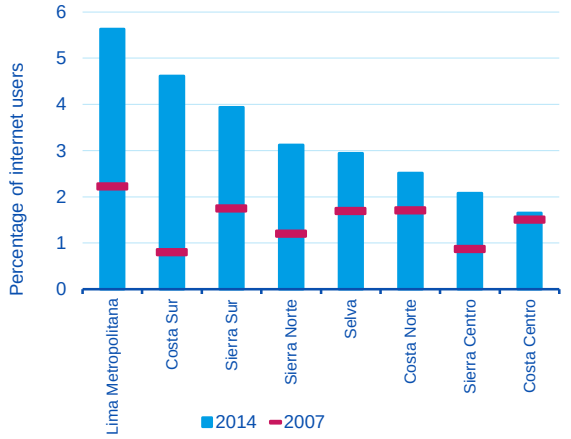


Figure 4.2
E-commerce, region by region (%)



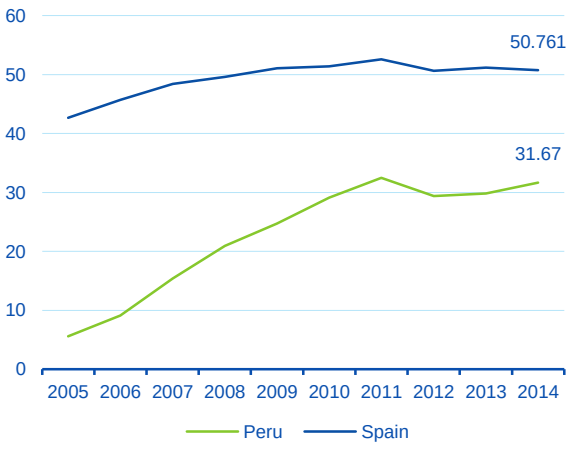
Source: BBVA Research and INEI (ENAHO)

3. Supply side

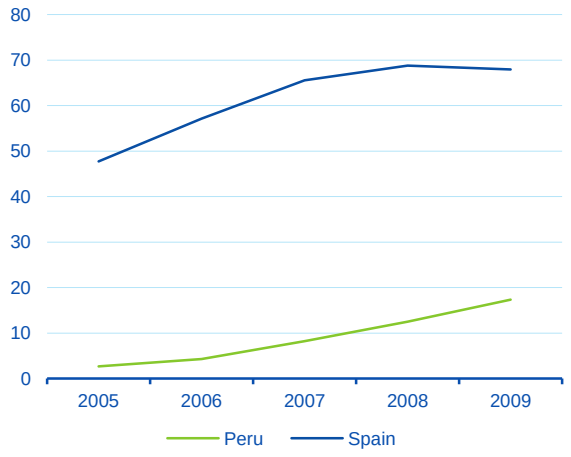
This section refers mainly to subscriptions and prices – information provided not by consumers but by the companies that offer ICT-related services. Mobile telephones are increasing in importance, undergoing significant growth in terms of the number of subscriptions between 2005 and 2014. This has also meant a notable increase in traffic in terms of mobile phone call minutes, which has multiplied six-fold between 2005 and 2009, in contrast to the situation in Spain, which has remained practically constant (see Figure 5).

It should also be pointed out that the cost of a call is more expensive in Peru than it is in Spain, USD 0.39 per minute in the former compared to USD 0.15 in the latter in 2014. Nevertheless, there have not been differences between off-net and on-net tariffs since 2011. As far as mobile coverage is concerned, both Spain and Peru have had a network that reaches practically the whole of the population in 2013.

Figure 5
Mobile phone subscribers (millions)



Domestic mobile phone call traffic (billions of minutes)



Source: BBVA Research and ITU

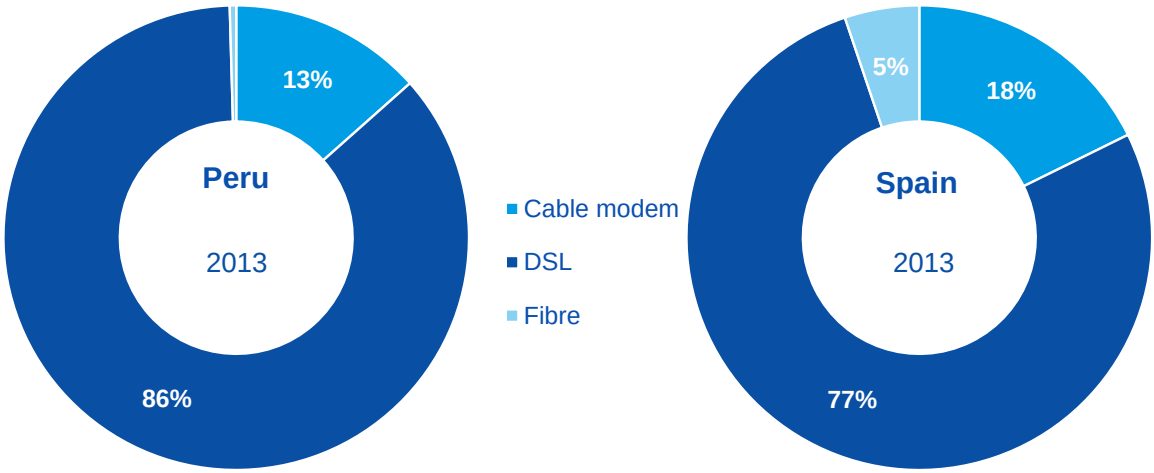
As far as broadband fixed subscribers in Peru are concerned, they quadrupled between 2005 and 2013 to more than 1.5 million. However, Peru is still far behind Spain, which has doubled over the studied period, with 12 million subscribers in 2013.

Figure 6 shows that fixed broadband technology in Peru is similar to that in Spain. Around 86 per cent of subscribers use DSL technology, nearly 10 per cent more than in Spain. 13 per cent of subscribers use cable-modem systems. Although in 2013, fibre optic technology was not widespread in Peru, it has become popular and is increasingly common.

As far as pricing is concerned, the monthly cost of a fixed broadband subscription in Peru in 2014 was USD 43; 7 dollars more expensive than in Spain. While the price gap between the two countries from 2008 to 2011 fell, it then began to increase again, reaching levels similar to those in 2005.

In terms of connection speed, in 2013 Peru matched Spain for landline broadband speed - 1 Mb per second. From that year onward, the connection speed in both countries remained constant.

Figure 6
Fixed broadband technology



Source: BBVA Research and ITU

As far as wireless broadband and mobile phone subscriptions are concerned, we should highlight the fact that of the total number of wireless broadband subscribers, 98.7 per cent corresponded to mobile broadband. Although Peru has seen a notable increase in mobile subscribers, in 2013 there were 9.52 subscriptions for every 100 inhabitants, a figure that is still a long way off numbers in Spain (66.85 for every 100 inhabitants).

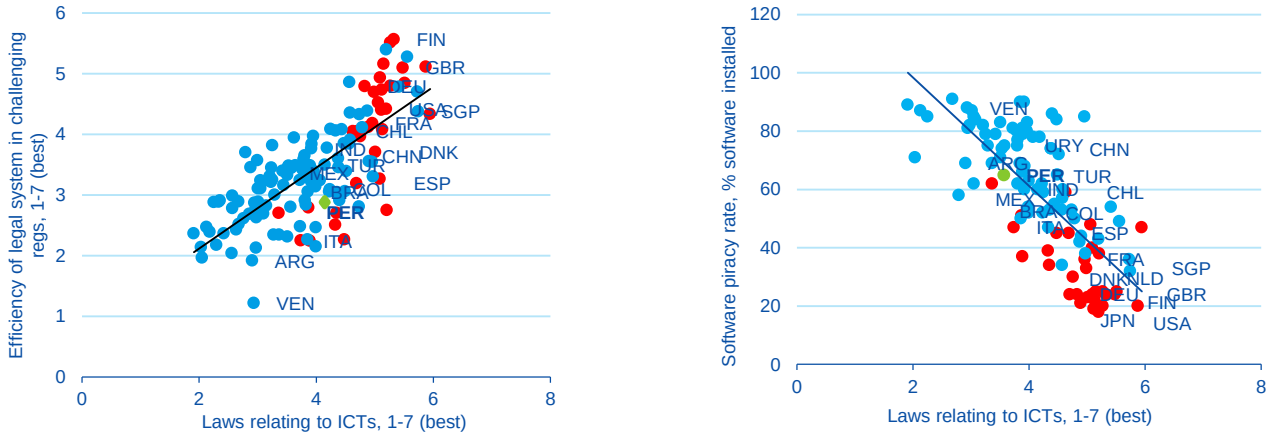
Finally, annual investment in Peru's telecommunications services increased significantly, growing seven-fold from 2008 to 2013. In general terms, this increase has meant investment of over USD two million in 2013. Further analysis of this figure shows that the sum invested in mobile communications increased from 43 per cent in 2008 to 65 per cent in 2013. This increase has overtaken both investments in Internet and in landline technology over the same period.

4. Regulation

In terms of regulation, the scatter plot shows that as the number of laws related to ICT areas increases, so does the efficiency of the legal system (see Figure 7). In this regard, Peru scores 3.6 out of 7 in terms of laws related to ICTs and 3.8 out of 7 in terms of the efficiency of the legal system. We can also see that as the number of ICT-related laws increases, the level of piracy decreases, with a strong negative correlation between the two. In 2015, Peru registered piracy levels of over 60 per cent, while countries like Colombia, Brazil and Mexico had lower levels, despite having a lower score in terms of legal system efficiency and the existence of laws related to ICTs. Scandinavian countries and the United Kingdom lead the way here, with extensive ICT-related legislation linked to a highly efficient legal system and levels of piracy that are low in comparison to other countries.

Legal regulation is also essential to entrepreneurship, measured here as the creation of new companies per 1,000 workers. If we combine this entrepreneurship indicator with a ranking that shows the ease of doing business (closely related to the level of regulation in each country), we can see the first places tend to coincide with the countries that create a greater number of companies, such as Australia and the United Kingdom. Nonetheless, there are exceptions such as South Korea and Finland, where the creation of companies is low but which register high positions in the ranking of ease of doing business. Entrepreneurship in Peru is at a mid-point compared to other countries in the region such as Chile and Colombia.

Figure 7
ICT laws: The relationship between efficiency and piracy



Source: BBVA Research and World Economic Forum

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