

DIGITAL ECONOMY

Digital Context in Mexico

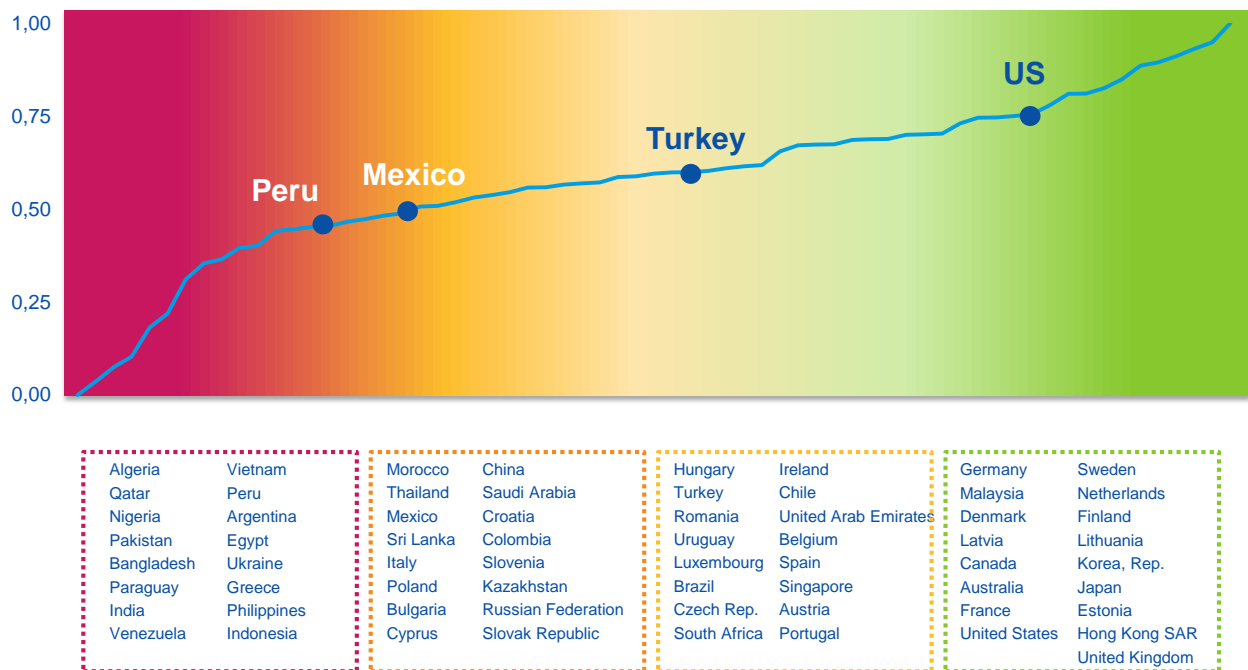
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1. Digital scenario

In the digital context Mexico still has room for improvement, although it is in a better position than other countries in the region such as Peru or Argentina, according to the 2015 Structural Digitisation Index constructed by BBVA Research (see Figure 1). In view of the different dimensions of this index, Mexico occupies an advantageous position, especially in terms of infrastructure and content, with numerous online services offered by the government to Internet users.

Mexico is at an intermediate point relative to other countries if we focus on the accessibility and regulation aspects of information and communication technologies (ICT). Lastly, there is considerable room for improvement in aspects relating to individual and business use.

Figure 1
Structural Digitisation Index, 2015



Source: BBVA Research and ITU

2. Demand side

The level of access to the Internet in Mexican households is close to 40%, placing the country close to the world average in this regard (43%). As for computer access at home, this is slightly lower than access to the Internet. As can be seen in Figure 2.1., this was not the case in 2005, when the percentage of households with access to a computer was almost double that of households with Internet access. In other words in 2005 it was fairly common to have a computer at home without having access to the Internet. However, the growth of Internet access at home between 2005 and 2015 was so marked in comparison with access to computer that this access is now higher than access to a computer. Not only do all home computers usually have an Internet connection, but there are also other devices such as mobile phones and tablets, from which to access the Internet.

Figure 2.2 shows more clearly that other devices compete with the computer for accessing the Internet. This figure shows the percentage of individuals who use a computer and the Internet on a daily basis. At the beginning of the century, the use of Internet and computer at home was less than 10%, but that from 2004 on there was rapid growth, with the use of the computer always being slightly greater than that of the Internet. From 2012, daily use of the Internet started to increase at a faster pace than that of the computer. This led to the current situation, in which daily use of the Internet is more than 12 percentage points higher than daily use of the computer, this gap reflecting the introduction and gradual proliferation of other devices such as smartphones.

Figure 2.1
Access to Internet and computer

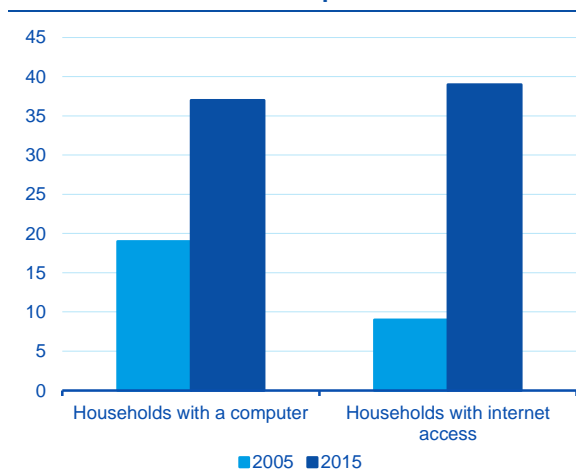
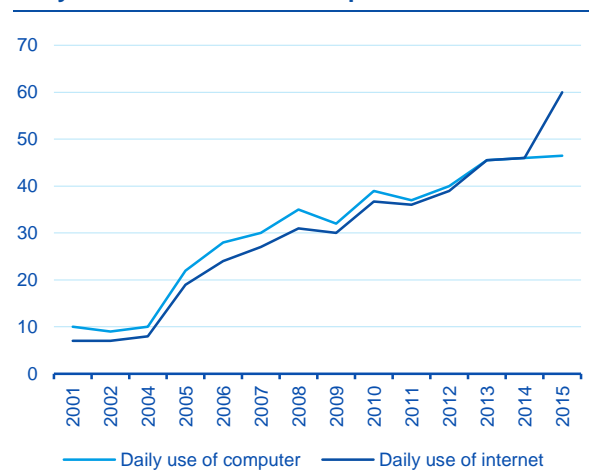


Figure 2.2
Daily use of Internet and computer



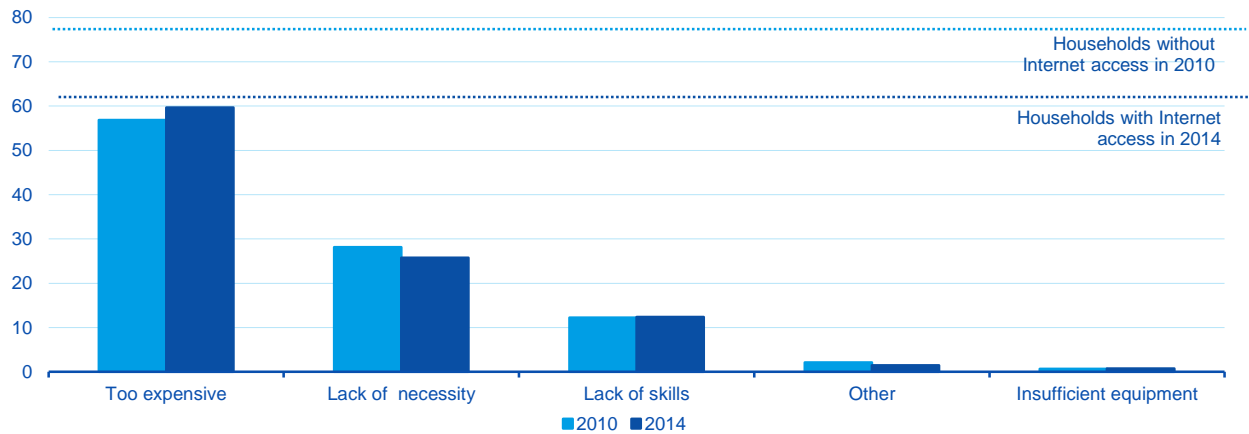
Source: BBVA Research and the MODUTIH database

Despite the rapid growth in Internet access, around 60% of Mexican households have not such access, and this is due to several problems, the magnitude of which remained practically unchanged between 2010 and 2014, as shown in Figure 3.

The main barrier to Internet access as perceived by Mexican households is the lack of financial resources. From the total number of households with no Internet access, 60% perceive cost as the main barrier. In second place comes lack of interest or lack of necessity, cited by 25% of households with no Internet access (self-imposed or voluntary barrier). In general, this barrier is becoming more significant relative to the others, since as time goes by obstacles such as high costs, skills, etc. are being resolved. In third place comes lack of skills, which is a problem for 12% of families without Internet access, while not having a device to access the Internet is a barrier that is hardly seen at all anymore.

Knowing what obstacles to Internet access are perceived by Mexicans is essential for taking decisions on ICT, since they are very good indicators of potential problems.

Figure 3
Internet access barriers in the household



Source: BBVA Research and MODUTIH database

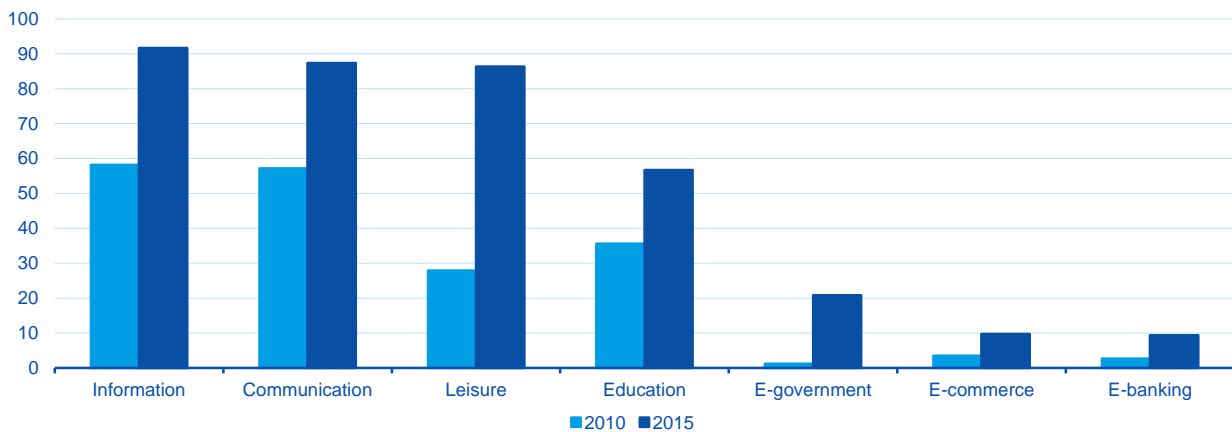
We focus on those individuals that do make use of it, studying the main places where they do so and the activities they perform on the Internet.

As regards places for accessing the Internet, more than 50% of individuals accessing the Internet do so from home, with home increasingly becoming the main place of use, up from just 44% in 2010. The second most common places from which to use the Internet are public/private access services, although they have declined in importance relative to 2010 in favour of schools, which are gaining weight as main places of access.

Figure 4 shows the activities most frequently performed on the Internet. Those related to communication, information and leisure stand out, these being carried out by more than 80% of Internet users. They are followed by education, used by around 55%. Then come activities related to administrative processes with the government, online banking and e-commerce. Internet users hardly used it for any of these three activities before 2010.

Online banking and e-commerce are growing strongly in Mexico, increasing 19- and 21-fold respectively between 2002 and 2015. Nonetheless they still have a long way to go, since their use is below that seen in other reference countries in the region.

Figure 4
Activities on the Internet: uses in the last three months



Fuente: BBVA Research & Base de Datos MODUTIH

If we focus on the ICT situation with information broken down by states, we see that Nuevo León, Mexico City, Sonora and Northern and Southern Baja California are the states in which Internet access has spread most, with levels of over 50% in all cases and close to 65% in that of Mexico City. On the other hand, the remaining states show Internet access of less than 50%, and even less than 20% in the case of Chiapas and Oaxaca in 2015.

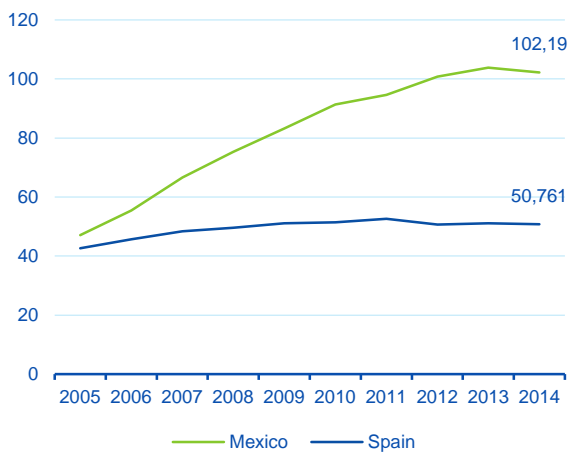
Apart from this, there are differences depending on the socio-demographic characteristics of the population. In this regard, the predominant characteristic in the majority of Internet users and users of online banking and e-commerce is a high level of education. Almost 70% of individuals with a university education are Internet users, compared with just 40% of those with only primary education.

3. Supply side

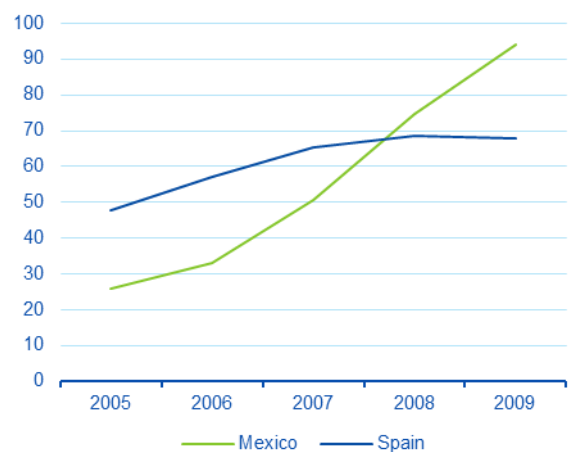
In this section, we refer basically to subscriptions and prices (information provided by ICT industries). Mobile telephony is gaining in importance, with significant growth in the number of subscriptions between 2005 and 2014. This has also meant a significant increase in traffic in terms of mobile phone call minutes, which has multiplied six-fold between 2005 and 2013, in contrast with the traffic in developed countries such as Spain, which has remained practically constant (see Figure 5).

Figure 5

Mobile phone subscriptions (millions)



Domestic mobile phone call traffic (billions of minutes)



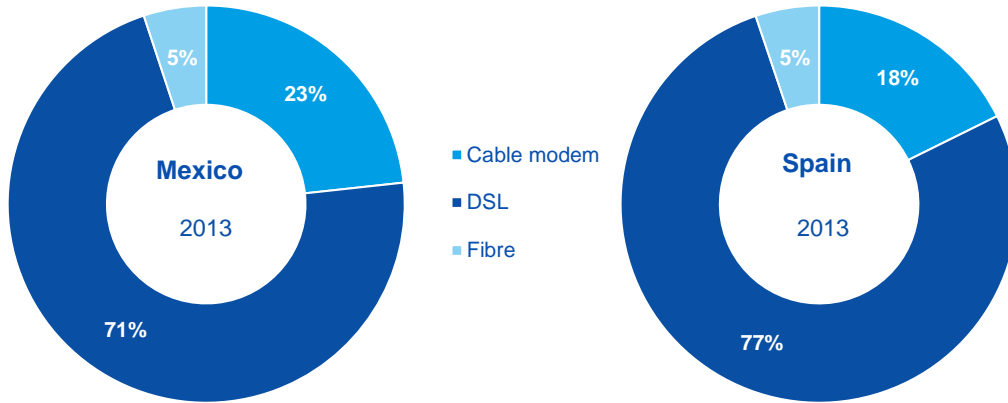
Source: BBVA Research and ITU

Moreover, the cost of a one-minute call (US\$0.12 in 2014) is slightly cheaper in Mexico than in Spain, and with no difference between off-net and on-net, which was not the case in Spain until 2012 when prices were unified at US\$0.15.

As regards fixed broadband subscriptions, the number of subscriptions increased sevenfold between 2005 and 2013, reaching a figure of over 12 million, more than that of Spain. Figure 6 shows that structure of fixed broadband technology in Mexico is similar to that of Spain. Around 70% of subscriptions correspond to DSL technology, whereas only 5% are for fibre technology, reflecting a still incipient degree of development of the infrastructure. As for prices, the cost of fixed broadband subscription is US\$8 more in Mexico than in Spain, reaching US\$44 a month, although the monthly subscription cost has evolved somewhat erratically, varying from over US\$50 in 2008 to practically US\$20 in 2013. Spain's behaviour is different, with the price always around US\$36, albeit with slight increases each year.

Connection speeds are equally volatile, Spain's constant speed of 1 Mbps contrasting with Mexico's changing speed which was 5 Mbps in 2014, having been the same as Spain's the year before.

Figure 6
Fixed broadband technology



Source: BBVA Research & ITU

Apart from the marked growth in fixed broadband subscriptions, Mexico basically stood out because of the exponential increase in mobile broadband subscriptions, which multiplied by 82 between 2009 and 2012, to reach nearly 25 million, equivalent to 20 mobile broadband subscriptions for every 100 inhabitants.

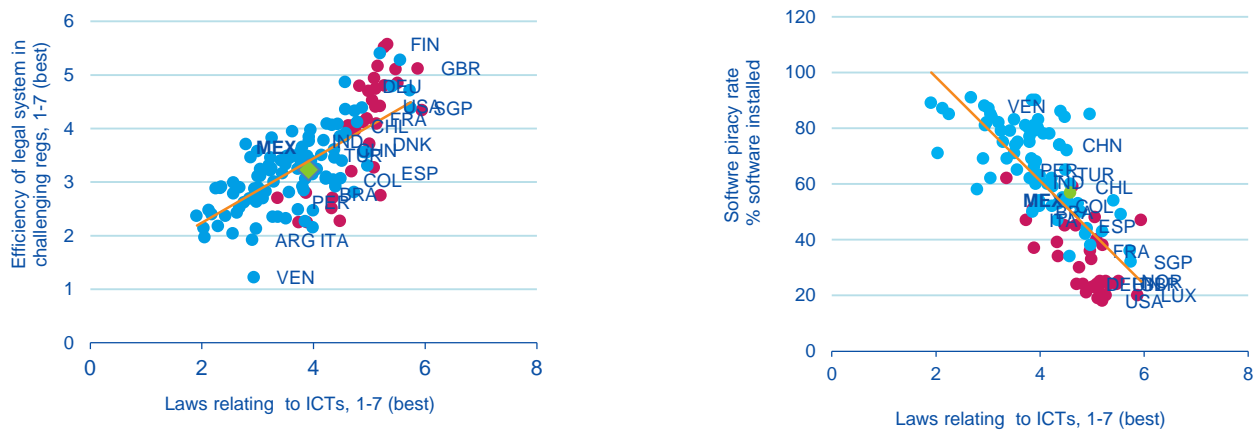
Lastly, investment in mobile communications and investment in the Internet are gaining in importance as a proportion of total annual investment in telecommunications, accounting for 47% and 23% respectively. In contrast investment in fixed telephony is losing importance, accounting for just 30% of investment in telecommunications in 2012 compared with 50% in 2005. Overall, investment in telecommunications doubled between 2005 and 2012, surpassing US\$11 billion.

4. Regulation

In terms of regulation, Mexico is at an intermediate point, scoring 4 out of 7 in terms of laws relating to ICTs and 3 out of 7 in terms of the efficiency of the legal system. Apart from this, we see a strong negative correlation between ICT-related laws and the level of software piracy in the countries studied. In this respect, Mexico is placed at an intermediate point around the average. The Nordic countries and the United Kingdom lead the way, with extensive ICT-related legislation linked to a highly efficient legal system and levels of piracy that are low in comparison with other countries (see Figure 7).

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 of the ease of doing business (closely related to the level of regulation in each country), the first places tend to coincide with the countries that create a greater number of companies, such as Australia and the United Kingdom, although there are exceptions such as South Korea and Finland, where the creation of companies is low despite their placing high in the ranking. We should mention that entrepreneurship in Mexico is low in comparison with other countries in the region such as Chile, Peru and Colombia.

Figure 7
ICT laws: The relationship between efficiency and piracy



Source: BBVA Research & World Economic Forum

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