

DIGITAL ECONOMY

# The Digital Context in Uruguay

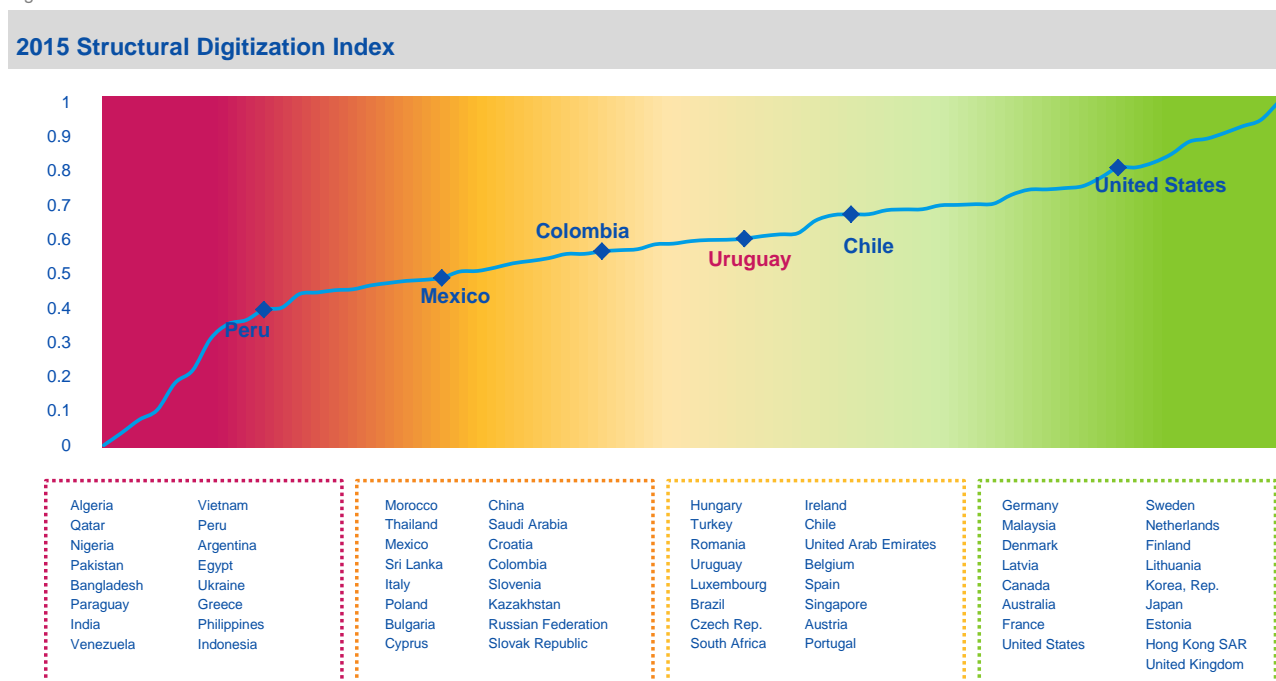
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## 1. The digital scenario

Uruguay is in a leading position in terms of digital content compared to other countries in the region, as shown in the 2015 Structural Digitization Index developed by BBVA Research (see Figure 1). In this regard, Uruguay's digital scenario is close to that of developed countries like Luxembourg, Ireland and Belgium, among others. Looking at the different dimensions of the index, Uruguay especially stands out in terms of content, where it exceeds even the United Kingdom (a country with a better overall score on the Structural Digitization Index).

With regard to the other dimensions, Uruguay is located within the average of the countries studied, and on average is usually above the Latin American countries as a whole. However, there are still challenges ahead, especially in terms of use at business level and implementation of better infrastructure.

Figure 1



Source: BBVA Research and ITU

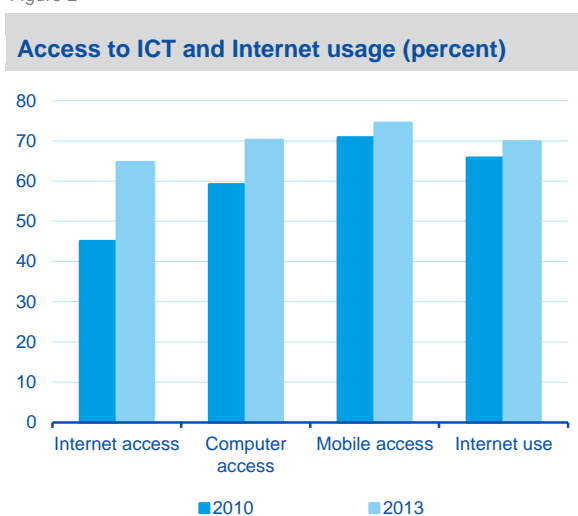
## 2. From the demand side

Sixty-four percent of households in Uruguay had access to Internet in 2013, while in 2010 this figure was 45 percent, an increase of almost 30 percent in the period 2010-2013. In addition, about 70 percent of Uruguayans used the Internet in 2013. Internet use was above the availability of its access in homes in both 2010 and 2013, although the gap between access at home and use by the individual has been greatly reduced (see Figure 2). This results in an increased use of the Internet at home (in percentage terms), with the home becoming the most important space for its use, as occurs in other countries in the region.

Regarding the availability of computers and mobile phones at home, having the former is not as common as the latter, both in 2011 and in 2013 (see Figure 2). However, this difference was reduced in 2013, going from more than 10 percentage points in 2010 (59 percent of households with a computer and 70 percent with a mobile phone) to less than 5 percentage points in 2013 (71 percent of households with a computer and 74 percent with a mobile phone).

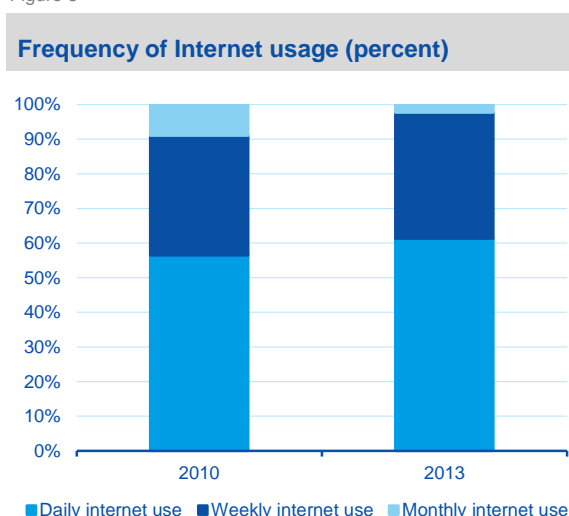
Figure 3 shows the frequency with which individuals used the Internet in 2010 and 2013, distinguishing between daily, weekly and monthly usage. Of note is the increase in daily use of the Internet, with an increase of 8 percent in the period mentioned above. However, its weekly use has remained virtually unchanged over time with a market share close to 35 percent, while its monthly usage has experienced a very significant decline. By regions, Montevideo Alto has the highest proportion of households with Internet access (90 percent), followed by Montevideo Medio-Alto and Montevideo Medio, with percentages of 85 percent and 78 percent respectively. By contrast, the North and the South Coast region (Norte and Litoral Sur) are the regions with the least access to the Internet (around 50 percent in both cases). Also noteworthy are developments in Montevideo Bajo, which doubled its percentage of households with Internet access between 2010 and 2013 (from 30 to 60 percent).

Figure 2



Source: BBVA Research from the EUTIC survey elaborated by INE Uruguay

Figure 3



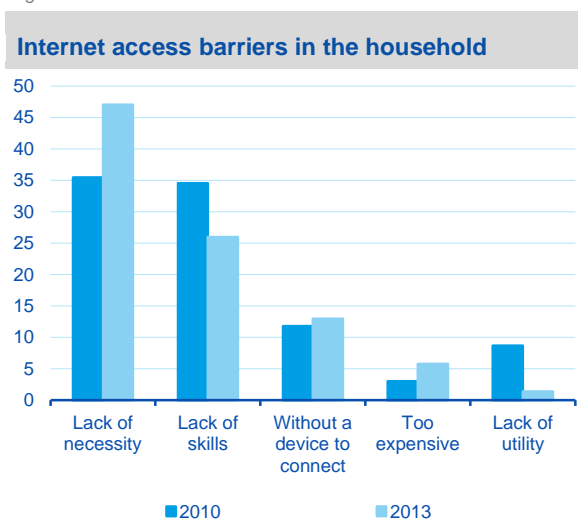
Source: BBVA Research from the EUTIC survey elaborated by INE Uruguay

In short, Internet use is close to 65 percent in Uruguay, where about 60 percent of it is daily, with a clear tendency to further increase.

Despite the growth in households with Internet access, around 35 percent of households in Uruguay do not have access to it due to various problems, perceived as access barriers by households. The magnitude of these barriers varies over time, changing as new households join the ICT environment. In this context, we note that the perception of some kind of barrier came only from one of the individuals living in each household surveyed, who is considered to represent the household as a whole.

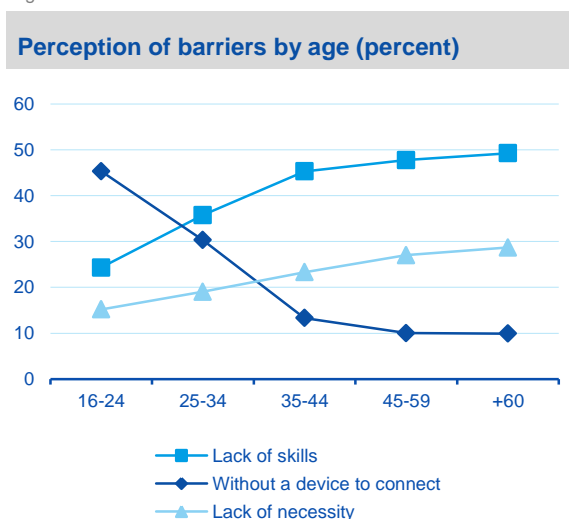
As shown in Figure 4, the main barrier to Internet access is due to lack of skill, which has increased significantly between 2010 and 2013, while the lack of need has declined more notably. Thus, nearly 50 percent of households without Internet access in 2013 perceived the main barrier to be a lack of skills (no member of the household had sufficient skills to use the Internet). The lack of need (which is a voluntary barrier) and the absence of enabled Internet access devices are another two major problems. Twenty-six percent of households without Internet access in 2013 stated they did not have it because they did not need it, and 33 percent did not have the devices needed to gain Internet access. The reduction in the perception that cost is the main barrier to access is significant, (in 2013, this represented less than one-sixth of what it was in 2011). It was perceived as a barrier by only 1 percent of households in 2013.

Figure 4



Source: BBVA Research from the EUTIC survey elaborated by INE Uruguay

Figure 5



Source: BBVA Research from the EUTIC survey elaborated by INE Uruguay

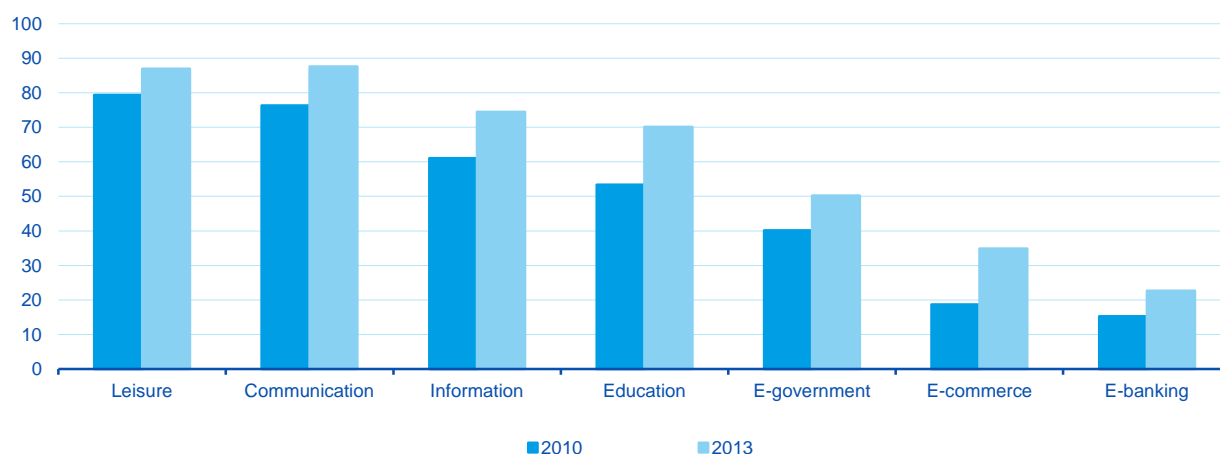
In Figure 5, the three main barriers to Internet access in homes in Uruguay (ability, need and no device) are displayed according to different age groups, (which correspond to the age of the individual respondent in each household). We observed that the lack of skill and the lack of need are problems that increase with age, which is to be expected as the adult population is not as skilled or attached as young people to current digital trends. In fact, in the case of lack of skill, it is evident that the problem is almost doubled among those over 60 years compared to individuals aged between 16 and 24 years. However, the absence of a device as the primary barrier represents 45 percent among younger people. This barrier becomes more important the

younger the age of the respondents, since among individuals above 60 years of age the percentage is only 10 percent.

Having analysed the problems of Internet access, the analysis focuses on the individuals who use it, this group has experienced a slight increase, from 66 to 70 percent in the period 2010-2013. The pattern of access, understood to be the places from which individuals access the Internet, changed drastically between 2010 and 2013. Home predominates over all other options, being the main place of access to the Internet for over 85 percent of users in 2013. As for the other options, after the home in order of importance come unclassified places, which include the use of the Internet through mobile devices (others) with 53 percent, and the workplace, with 31 percent. Compared to 2010, the home is the space that has experienced the largest increase, from 63 to 88 percent. In addition, the workplace has replaced education centre as the second most common place for Internet access. The percentage of users who claim to access the Internet from work rose from 23 to 31 percent, while the proportion of those gaining access from their education centre has remained virtually unchanged (29 percent in 2010 and 30 percent in 2013).

Figure 6

#### Activities on the Internet: uses in the last three months



\* Note: Non-exclusive options, all activities can be selected by an individual simultaneously  
Source: BBVA Research from the EUTIC survey elaborated by INE Uruguay

Regarding users' activities on the Internet (in the last three months), communication, leisure, searching for information and education stand out, with percentages of over 60 percent in all cases (see Figure 6). Note that the use of the Internet for communication has surpassed leisure as the main activity for which Uruguayans used the Internet in 2013. Next came online activities that were less frequent because of the knowledge and skills users need in order to use them, such as online procedures with public authorities ("e-government"), electronic commerce ("e-commerce") and electronic banking ("e-banking").

In 2013, these activities boasted a level of use of over 20 percent, which means that at least 20 out of 100 Internet users in the last 3 months have carried out some sort of administrative process with the State (50 percent), electronic commerce (35 percent) or any transaction through electronic banking (23 percent). Since 2010, the proportion of users who make purchases online has multiplied by almost two and those who have used electronic banking by about 50 percent.

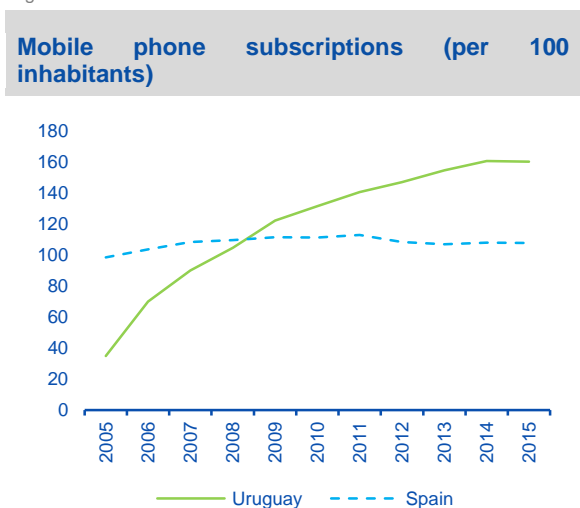
Regarding the use of electronic banking by regions, there are considerable differences between them. The regions of Montevideo Alto and Medio-Alto stand out above the rest with 47 percent and 44 percent respectively in 2013. By contrast, the Norte and Montevideo Bajo regions are regions, which use electronic banking to a lesser extent (7 percent and 10 percent, respectively, in 2013). With regard to electronic commerce, something similar is happening, and the regions Norte (15 percent) and Litoral Norte (18 percent) occupy the last places in the classification, compared to Montevideo Alto (57 percent) and Medio-Alto (54 percent). Noteworthy is the significant increase in the proportion of Internet users carrying out e-commerce between 2010 and 2013, especially in regions such as Litoral Sur and Costa Este, which has increased by a little more than double (to 32 percent and 30 percent in 2013, respectively).

Differences are noted regarding the socio-economic characteristics of Internet users. Young people, students and individuals with higher education were those that used the Internet most both in 2010 and in 2013. However, not exactly the same thing is happening in e-commerce and e-banking: workers possessing higher education are those who most likely to use Internet to perform these types of activities, and young users (between the ages of 16 and 24) are those who, in smaller percentages, are performing these types of activities.

### 3. From the supply side

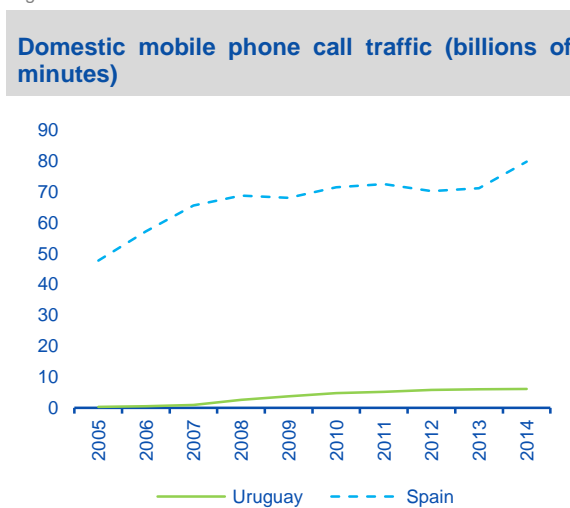
In drawing up this section, we used information provided by companies that provide services related to ICT, basically those that refer to subscriptions to certain services and their prices. We observe that the mobile phone is increasing in magnitude, with significant growth in the number of subscriptions between 2005 and 2015. This has led to a significant increase in traffic in minutes, which has multiplied by 15 between 2005 and 2015.

Figure 7



Source: BBVA Research and ITU

Figure 8



Source: BBVA Research and ITU

In contrast, the number of subscriptions in Spain has grown less sharply due mainly to the fact that it started from a much higher level in 2005 (see Figures 7 and 8). Regarding traffic in minutes, Spain is well above

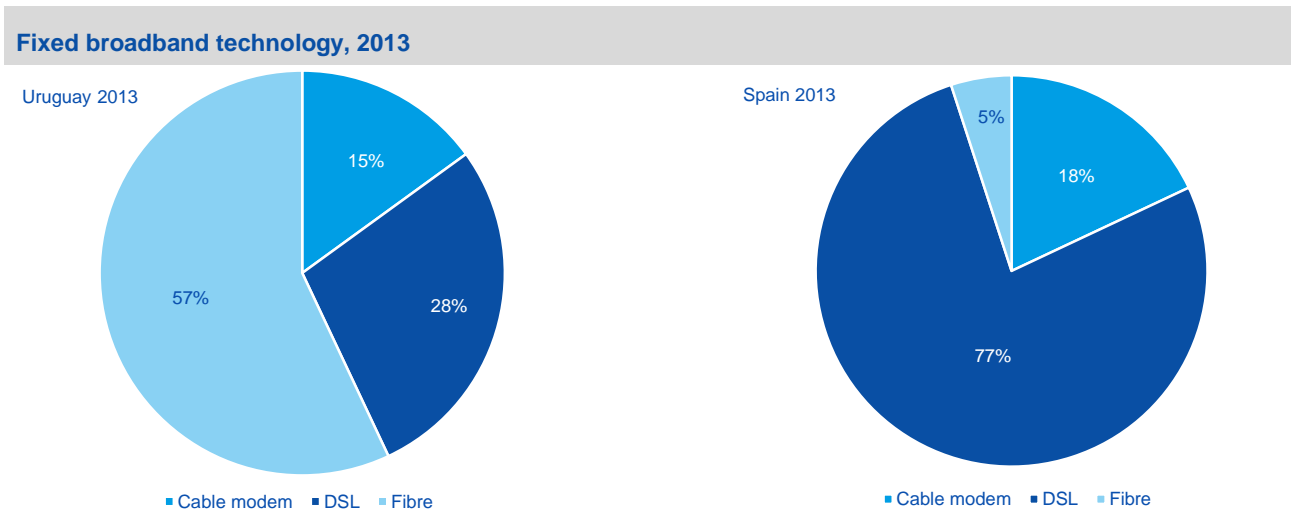
Uruguay. This means that in per capita terms, Uruguayans use the mobile phone to a lesser extent for ordinary communication.

We note that, the cost of a call (1 minute) in terms of purchasing power parity (PPA in its Spanish initials) was higher in Uruguay (USD 0.26) than in Spain (USD 0.11) in 2015. In addition, the on-net and off-net rates in Uruguay match during the study period, while in Spain, they only equal each other from 2012. Regarding fixed broadband subscriptions, it should be noted that these were multiplied by about 2.3 times in Uruguay between 2010 and 2015.

Figure 9 shows unbundling per type of technology considered to be fixed broadband used to connect to the Internet, both in Uruguay and in Spain for 2013. Uruguay has a higher technological stock than Spain, as it had a higher proportion of (fibre) cable subscriptions (28 percent compared to 5 percent in Spain) and a lower percentage of connections using DSL technology (15 percent compared to Spain's 77 percent).

The price of the fixed broadband service (monthly cost), this is lower in Uruguay (USD 18) than in Spain (USD 27). The cost of the service has been declining gradually and progressively in Uruguay, stabilising at around USD 18; in Spain, it remained relatively constant at around USD 36 until 2015, when it experienced a marked decrease to around USD 28.

Figure 9



Source: BBVA Research and ITU

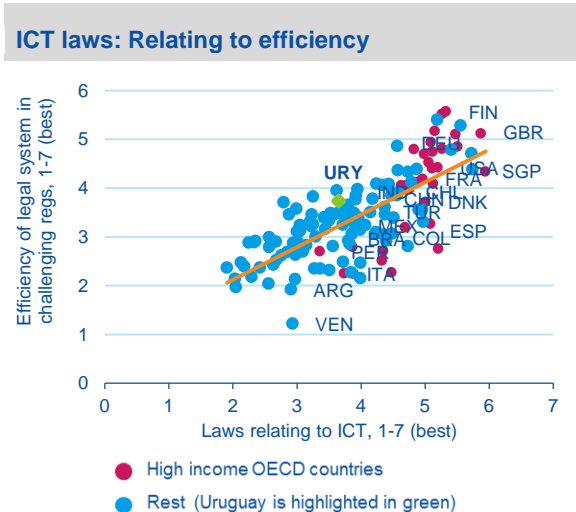
Both the proportion of subscriptions to wireless broadband and mobile broadband in Uruguay multiplied by about 3.3 times between 2010 and 2013, while in Spain the increase was slightly more modest in the same period, having multiplied by 2.8.

## 4. Regulation

The scatter plots (see Figures 10 and 11) show that as regulation related to ICT increases, the level of efficiency of the legal system increases. In this sense, Uruguay is above average with regard to Latin American countries, with a rating of about 4 out of 7 in relation to ICT-related laws and the efficiency of the legal system. Furthermore, we observe that as the laws related to ICT increase, the level of piracy decreases, there being a strong negative relationship between both aspects. In this sense, Uruguay stands out for its high level of software piracy in relation to the rest of Latin America. In addition, the Nordic countries and the United Kingdom top the list in this respect, with a great number of laws relating to ICT.

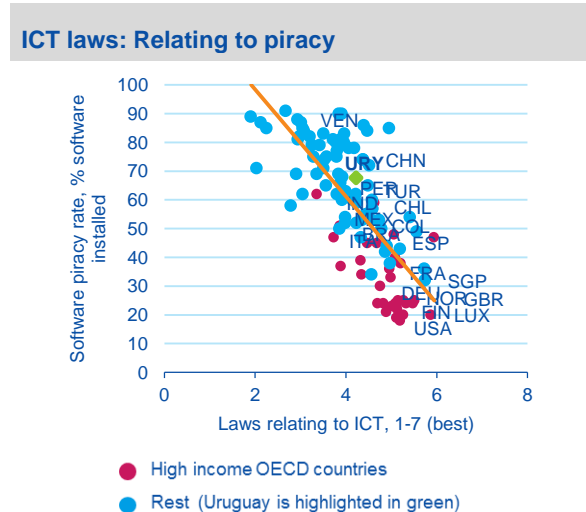
Regulation is also vital for entrepreneurship (expressed in terms of the creation of new companies per 1000 workers). On relating this entrepreneurship indicator to the value each country holds in the ease of doing business ranking, we observe that there is a somewhat positive relationship between both, especially in countries with greater ease of doing business (Australia and the United Kingdom). While there are exceptions, such as South Korea and Finland, where business creation is scarce even though they hold high positions in the ranking. As for Uruguay, we note that there is a notable level of entrepreneurship, with 3 new companies being set up per year per thousand workers, the same as in Spain, ranking second in Latin America.

Figure 10



Source: BBVA Research and World Economic Forum

Figure 11



Source: BBVA Research and World Economic Forum

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