

THE INTERNATIONALISATION OF PLATFORM COMPANIES: DOES THE DIGITAL GET RID OF GEOGRAPHY?

Digitally-empowered platform companies, such as Google, Facebook, Amazon or Alibaba are now the leading companies in terms of market capitalisation. Recognising the fast international spread of these companies, this article shows that geography still matters because there are differences in national (or regional) regulations, languages, and cultures, even for platforms, and in many cases, these cannot be fully carried out online, involving the delivery of products or services offline. An additional reason is related to the establishment of local ecosystems, especially in multisided platforms.

La internacionalización de las plataformas digitales: ¿puede lo digital olvidarse de la geografía?

Las plataformas digitales, como Google, Facebook, Amazon o Alibaba, han conquistado el mundo y son empresas líderes globales, en términos de su capitalización. Sin negar su acelerada difusión internacional, este artículo pretende demostrar que las cuestiones geográficas siguen importando porque siguen persistiendo numerosas diferencias entre normativas, idiomas y culturas nacionales (o regionales), incluso para las plataformas, y porque muchas transacciones no pueden completarse totalmente en línea. A ello se suma la generación de ecosistemas locales, especialmente en lo relativo a las plataformas multilaterales.

Keywords: platform companies, internationalisation, national differences, digital businesses types, ecosystems.

Palabras clave: plataformas digitales, internacionalización, diferencias nacionales, tipos de negocios digitales, ecosistemas.

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* ADVANCE/CSG, ISEG – Lisbon School of Economics and Management. University of Lisboa, Portugal.

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1. Introduction

We live in a world of platform companies. If we take a second to review how we use our time, we will find that not a single day passes in which we do not make use of the services of such companies. In most cases, we benefit from the services of several platform companies during a single day. In the morning, shortly after waking up, we open Facebook to know what our friends have posted and are talking about. Then, we draw on Waze to find the best way to commute from house to work. Upon starting work, we connect with Google to search for further information to address the business issue we have at hand. We use the Uber app to get a car to take us to a meeting away from our office. We come back, short of time, and contact Glovo to have a fast lunch. In the afternoon, we design a new survey using SurveyMonkey, and order a new book through Amazon. Arriving home in the late afternoon, we recur to OpenTable to book a place for dinner with our partner at a nearby restaurant. Meanwhile, to plan where to stay next weekend we open the Booking app. These are just a few examples of the multiple platform companies which, for better or worse, pervade our life.

The importance of platform companies may be perceived from a different perspective: these companies are now the giants of the world business landscape. All the top six of the Statista ranking of the 2018 largest companies in the world by market value follow platform business models: Apple, Amazon, Alphabet (Google), Microsoft, Facebook, and Alibaba (Statista, 2019). The comparison with the 2008 ranking is striking. Only Microsoft appears in both rankings. The other companies in the 2008 top six were ExxonMobil, General Electric, Citygroup, BP and Shell (Statista, 2016). This finding indicates the scale of the move away from physical goods, and specifically oil, towards the digital. Platform business models have boomed!

What is a platform company? Different definitions have been suggested in the relevant literature. For the purposes of the present paper, we draw on

Evans and Schmalensee (2016), Parker, Van Alstyne and Choudary (2016) and Evans and Gawer (2016) to define platform companies as digitally empowered businesses aimed at providing a virtual space for different kinds of customer to get together. It is, however, important to note that businesses providing a context for different players to meet are not new. Shopping malls, dating bars and credit cards are examples of traditional businesses using the platform approach (Evans and Schmalensee, 2016). What is really new in platform companies, as they are defined above, is that the interaction between the players is now digitally empowered.

There is a generally accepted idea that platform companies internationalise very fast, as “bits do not go through customs as they cross borders” (Dunning and Wymbs, 2001, p. 283). The argument is that since access to the internet is internationally widespread, the internationalisation of platform companies is immediate. The issue seems to be just a matter of providing the digital context for customers in different places to get together, irrespective of geography, as suggested by the example of Eskimi, a Lithuanian start-up that became the leading social network site in Nigeria (Autio and Zander, 2016). These authors contend that digitalisation leads to a lean internationalisation which attenuates location specificity. While recognising that there is some validity in this argument, our contention in this paper is significantly different. We argue that, though in some cases and for some customer niches, internationalisation of platform companies is fast, in many cases geography still holds. In other words, internationalisation cannot be taken for granted, being faced with several hurdles that constrain the international replication of the business model.

Paraphrasing the question raised by Stallkamp and Schotter (2019), platforms are not without borders. They may face liabilities of foreignness (LoF), or the risks of developing businesses in a different national jurisdiction, and especially liabilities of outsidership (LoO), that is, the weak integration in networks or

ecosystems (Johanson and Vahlne, 2009). This means that local or regional networks may need to be established to launch the business outside the home country (or countries)¹. In some cases such networks do not exist beforehand, and they have to be built *ab ovo*. Both Evans and Schmalensee (2016) and Brouthers, Geisser and Rothlauf (2016) have shown that platform companies need to establish shared contexts in which the business model may thrive.

Platform companies may enjoy “lean internationalisation” (Autio and Zander, 2016), but Stallkamp and Schotter (2019) argue that the ease of internationalisation depends on the characteristics of network externalities (within-country *versus* inter-country) in the industry concerned. However, irrespective of being faced with a LoF or a LoO, there is evidence that the internationalisation of digital businesses is not instantaneous. This happens for three main reasons that will be examined in this paper. The first concerns the fact that regulations, languages and cultures vary significantly from place to place. The second is related to the characteristics of the items being transacted, especially whether they involve tangible or intangible goods. The third has to do with the locational dimension of building up and nurturing platform ecosystems. This paper is focussed on the development of these three themes. They will be elaborated in the next sections. The article closes with a brief concluding section regarding the challenges of platform business internationalisation.

2. Beyond customs: different regulations, languages and cultures

As mentioned above, Dunning and Wymbs (2001) argued that “bits do not go through customs”. However, though one may order a book with a click, the books delivered by Amazon.us go through customs.

¹ In recent years, an increasing number of firms have been created with not just one but with several home bases (Simões, Da Rocha, Mello and Carneiro, 2015; Da Rocha, Simões, Mello and Carneiro, 2017; Simões and Martins, 2018).

In fact, countries have different regulations that constrain the development of platform businesses. The dispute between the Chinese government and Google regarding the censorship on Google’s search engine is probably the most poignant example. In 2010, Google decided to move its search services from mainland China to Hong Kong stating that “we have decided we are no longer willing to continue censoring our results on Google.cn, and so over the next few weeks we will be discussing with the Chinese government the basis on which we could operate an unfiltered search engine within the law, if at all” (Sheehan, 2018). In 2018, Intercept, an investigative website, disclosed the fact that Google was working on a secret prototype of a new, censored Chinese search engine, called Project Dragonfly (Sheehan, 2018; Wikipedia, 2019). This information led to fierce internal debate, and the position of the company privacy compliance team led Google to close Project Dragonfly in December 2018 (Wikipedia, 2019).

Other cases of disputes between platform companies and national or regional authorities have been reported time and again by the media. The position taken by the Barcelona municipality with regard to Airbnb provides a good example of the tensions between the growth of apartment sharing sites and living conditions in tourist destination cities. Barcelona doubled its team of holiday-let inspectors to increase its control over Airbnb operations. Janet Sanz, the former councillor responsible for Ecology, Urbanism and Mobility at the Cambra de Barcelona, interviewed by The Guardian (2017), argued that, “Our attitude is zero tolerance. We will do everything we can to guarantee the right to housing in the city [...] What these people have to understand is that Barcelona exists for its people. The priority is it’s a place to live.” Uber’s problems in Denmark and China are also interesting. Due to changed local transportation regulations, Uber has faced serious restrictions in Denmark since 2017. In September 2018 the Danish Supreme Court ratified fines given to four Uber drivers for operating illegally. According to Reuters, they were charged with failing

to have permits and for violating a law introduced to fight Uber which imposed extra rules on taxis operating in Denmark (Reuters, 2018). The withdrawal of Uber from China as a result of the incapacity to outcompete its local, politically-backed rival Didi Chuxing confirms that even “star” platform companies do not win everywhere (Yang and Sherry, 2018).

These cases show that for different reasons, sometimes related to the reaction from incumbents, platform companies that have launched activities in specific countries or municipalities have not been able to overcome the challenges faced, being forced to shrink their activities or even driven to outright withdrawal. In other cases, legal restrictions have prevented them from operating in suitable conditions. A good example concerns the activities of Fintech platforms, which require clearance by national financial authorities. Although regulations are likely to be increasingly encoded in the virtual supply chain (Roche, 2018), the influence of national jurisdictions is inescapable. Treleaven (2015, p. 4) argued that “the requirement for flexible regulation of new global alternative finance entrants, such as PayPal, Apple, Facebook, Amazon, etc.” is related to the “balancing [of] Fintech innovation with regulation”. On the one hand, Fintechs often explore the legislative loopholes in some of the super-regulated financial environments but, on the other, have to adhere to the existing legal framework for carrying out financial activities (Blumberg, 2018). A case in point is the recent initiative led by Facebook and involving a set of partners (including inter alia Spotify, Uber, Ebay, PayPal and Farfetch), to launch Libra, a new currency intended to streamline digital money transfer (The Economist, 2019). This raises several questions, including: *i*) how will national central banks (and the European Central Bank) react to this initiative?; and *ii*) how will users’ trust be achieved without the backing of national monetary authorities? However, for the purposes of our internationalisation argument, the main point regarding Fintechs is that regulations vary from country to country, even in the European Union.

Different legal traditions, different perceptions of the challenges, and different power balances, all lead to a mosaic of regulations to which platform companies have to adhere.

Such diversity is compounded by the need to communicate in different languages. Although platforms tend to focus chiefly on more cosmopolitan environments (Simões, 2018), in which openness to new approaches and the use of the English language are widespread, business growth often requires the use of local languages to attract other population segments. Language has already been identified as a central issue for carrying out international business operations. As Piekkari, Welch and Welch (2014) put it, in spite of the increasing role of English as a *lingua franca*, there is a “multilingual reality in global business expansion”. The above authors suggest that company internationalisation paths often proceed on the basis of language similarities. A good example is the internationalisation pattern of Portuguese and Spanish firms, for which language similarity has played a key role in shaping the evolution of market entry decisions.

It might be argued that language issues can be overcome by translating apps into local languages. This is true to a large extent: apps may be available in different languages, according to specific users’ needs. It does not mean, however, that language differences become irrelevant. The use of multiple languages means that internationalisation involves additional costs and leads to hazards which may be impossible to control. Appropriate translation is an important ingredient in enabling a better user experience; poor translations may seriously undermine the platform’s image in the area concerned. Additionally, to deliver their apps in various languages, platform companies incur increased expenditure. Contrary to what is often assumed, this is not a one-off event, but rather an ongoing process. Apps need to be continuously adapted as the platform aims to improve user experience or to increase the range of services provided.

Besides languages there are also cultural differences that may need to be tackled. The procedure used to match demand and supply as well as the level of service take-up may be contingent on cultural idiosyncrasies. User experience assessment may differ from culture to culture; although platform algorithms may embed learning features enabling adjustments to different experiences, initial perceptions may have a significant effect on platform take-up. According to some observers, the case of Uber in Denmark may be understood as an example of cultural differences (Seferou, 2018). Parpe, a Brazilian car-sharing company, was caught by surprise by the ingrained view among Portuguese men that both cars and women are not to be shared (Branco, Martins and Conceição, 2018). In fact, culture is an essential ingredient in shaping perceptions, and therefore in framing the assessment of user experience, and in fostering (or not) the establishment of an emotional link with the platform.

A further issue is related to the quality and sophistication of local digital infrastructure. This may be especially important when platform companies intend to internationalise towards developing countries. Parente, Geleilate and Rong (2018) point out that the weaknesses of local technological infrastructure and the lack of complementary asset providers are relevant barriers to platform companies' internationalisation. This is confirmed by the research on the internationalisation of a Finnish online gaming platform carried out by Ojala, Evers and Rialp (2018). In this case, the development of the business could only be carried out through partnering with operators providing Internet Protocol Television (IPTV) services. In contrast, in other instances the platform's lower operating requirements and technological sophistication may make it more suited to attracting a significant user base in less developed countries, as was the case with Eskimi in Nigeria (Autio and Zander, 2016).

Therefore, international replication of platform businesses is faced with the difficulties stemming from diversity. Assuming that going digital will erase differences,

thus making internationalisation seamless, is misguided, and may lead to surprising failures. It is possible to generate online reputations (Autio and Zander, 2016). However, such reputations are not a "passport" that is valid everywhere. Even digital businesses need to adapt to particular local conditions and the regulations of national jurisdictions. Adaptive capacity may be essential for the platform company to survive, being able to withstand the competition from local competitors. Adaptation is particularly relevant for multisided platforms, in which contributions from several types of player need to be combined. Furthermore, "localisation" needs may be influenced by the very object of the platform's activities. This is an important issue, which impinges upon the nature of the externalities being developed (Stallkamp and Schotter, 2019; Simões and Miranda, 2019). This theme will be explored next.

3. Characteristics of transacted items

Conditions and requirements for platform companies to spread internationally are also contingent upon the characteristics of the object of transaction, as shown by Simões and Miranda (2019)². The type of services rendered shapes the ease and speed of internationalisation. Though LoF may be limited in some instances, LoO still hold (Johanson and Vahlne, 2009), exhibiting different features according to the requirements entailed by the combination of contributions from different actors in order to make the service available in adequate conditions. In the following pages, three different types of platform business will be analysed: *i*) fully digital businesses; *ii*) marketplaces; and *iii*) offline locally delivered services.

Facebook, YouTube and WhatsApp provide examples of fully digital businesses. In this case, the interchange between the partners involved is exclusively carried out by digital means, through a website or

² This section draws to a significant extent from the research by Simões and Miranda (2019).

an app. Provided that partners share the same language and no restrictions are raised to the process and contents of information flows, internationalisation may be fast. The main challenge seems to be solving the underlying issue generally faced by platform businesses: overcoming the “chicken-or-egg” problem (Rochet and Tirole, 2003; Evans and Schmalensee, 2016; Parker *et al.*, 2016). As mentioned above, there is a need to reach a critical supply side mass in order to entice customers to join the platform, whereas a minimum size of the customer base is needed to induce relevant suppliers to join. Establishing a balance between demand and supply sides is essential to generate positive indirect network effects (Evans and Schmalensee, 2016)³. This may be achieved through word-of-mouth and/or the recourse to social networks, including the role of diasporas. For instance, the diffusion of WhatsApp in Portugal was to a large extent leveraged by the Brazilian immigrant community, which was already acquainted with that platform. In this vein, Brouters *et al.* (2016) illustrate how social networks contribute towards the international diffusion of platform businesses. The pace of internationalisation may be enhanced to the extent to which a single user may play distinct roles, being both a source and a recipient of messages, videos or calls. This is more likely to generate online traffic. However, in most cases the “chicken-or-egg” problem has to be solved locally, through the development of local ecosystems (Evans and Schmalensee, 2016), as will be shown later.

The research by Chen, Shaheer, Yi and Li (2019) on the international diffusion of health and fitness apps available at Apple's App Store provides additional evidence on the internationalisation process of digital businesses. It shows that superior user-defined quality

influences the pace of international diffusion. This confirms that the same condition holds for traditional and digital businesses alike. That is, being on the market or on the web is not enough —meeting customers' needs is essential for international growth; it lends support to the development of online reputations. But the main research findings concern the role of international networks and the influence of specific countries, labelled “country clout” (Chen *et al.*, 2019). It was found that the global installed base only “exerts a trivial effect on the likelihood of penetration in new target countries” (Chen *et al.*, 2019, p. 184). This suggests that, even for fully digital businesses, national borders still hold, and network effects cannot be taken for granted. However, the above relationship is moderated by the “country clout”: when recently penetrated countries have a high clout, the role of borders fades out. This has a very important implication, suggesting that, contrary to some media presentations about the development of digital businesses, the world is not completely flat. Therefore, if a fully digital platform company wants to expand internationally faster, it should start with countries with a high clout such as the United States.

The findings by Chen *et al.* (2019) are very relevant for our analysis for two reasons. First, they show that international spread is not just a matter of global network effects: national barriers still hold for digital businesses. Second, they highlight that the previous country internationalisation pattern influences the strength of such barriers. These are less tough when high-clout countries have already been penetrated. Therefore, word-of-mouth, social demonstration and social exchange by end-users play a key role in shaping the internationalisation patterns of digital businesses.

A different situation applies to marketplaces like Amazon, Alibaba or Farfetch, the luxury clothing trading platform. In such cases, the transaction between the players —*i.e.* between supply and demand— cannot be fully consummated online, since it involves the exchange of tangible goods (including, for instance, books, grocery items, machinery or garments). In such

³ Direct network effects correspond to the externalities stemming from having more members of the same side in a platform. Indirect network effects correspond to the externalities deriving from having more members of both sides, for instance customers and sellers, in the platform. Both can be positive or negative. See Rochet and Tirole (2003), Evans and Schmalensee (2016) and Parker *et al.* (2016).

cases, the platform company needs to follow a two-step procedure. The first step is to develop an appropriate balance between sellers and customers, solving the “chicken-or-egg” problem. How can the platform ensure that a balanced set of customers and suppliers is achieved for different target countries? For instance, in the case of Farfetch, the requirement is to have a good balance between luxury boutiques worldwide and high-income fashion-aware customers. The second concerns the need to establish an appropriate and fast procedure for the goods sold by a supplier in a given country to be delivered to the purchaser in another jurisdiction. By providing a digital connection between demand and supply, the platform company is required to design and implement a fast and seamless logistics procedure. In many cases, when the supplier and the customer are not within the same regional trade block, such as the European Union, goods may need to go through customs, contrary to the assumption of Dunning and Wymbs (2001). Additional requirements to ensure a fast delivery may be needed, including the setting up of warehousing facilities, the use of local intermediaries or even the setting up of logistics subsidiaries in key selected countries. Another option is the contracting of international transportation/delivery services; for instance, Farfetch draws on the services of DHL to speed up the process of delivering the items sold by the clothing boutiques to their customers (Stein, 2018).

Therefore, the conditions for such marketplaces to thrive internationally are more stringent than in the case of fully digital businesses. The requirements to balance supply and demand are tougher, since agents from one side cannot play simultaneously on the other side, as occurs with Facebook or YouTube. Additionally, and more importantly, the business is not intangible. It demands the international delivery of tangible goods. When the customer can buy “at the distance of a click”, there is an expectation to have a fast delivery. The establishment of relationships with logistics “complementors” (Nalebuff and Brandenburger, 1996), either

national or international, is mandatory. This means that a delivery network has to be put in place at least for the target countries; an alternative, similar to Farfetch’s approach, is to rely on a well-known international logistics operator such as DHL, Kuehne + Nagel or UPS. Irrespective of the decision taken, it becomes clear that the internationalisation of digital marketplaces is neither instantaneous nor easy. Again, social networks are needed to forge business acquaintances and to build the trust required by international business transactions. Additionally, complementary businesses have to be mobilised to reduce the constraints inherent to the international movement of goods.

Complexity further increases when local capillarity is required and the transaction involves an offline locally delivered service, as occurs with Uber or Glovo. In this case, the interaction with the customer starts on a digital platform, often drawing on an app. However, the service itself has to be provided offline through face-to-face interaction, since it involves the use of physical enablers, a motor car in the case of Uber, or the delivery of a physical product for Glovo or UberEats. Time and perceived quality are key elements for customers to adhere to the platform. This is a kind of business in which network effects, especially indirect network effects, are especially relevant (Rochet and Tirole, 2003; Hagiu and Wright, 2015; Evans and Schmalensee, 2016; Helfat and Raubitschek, 2018). There is a need to attract a minimum number of members from both sides for network effects to be relevant. Furthermore, there is often the need to have complementors, that is, further agents providing complementary elements to enable the service to be delivered.

Consider UberEats, for instance. For this platform to work properly, various players are required to interact online and offline: the customer, the agent of delivery, and the restaurant. This case is distinct from the situation of Facebook, in which the interaction is exclusively carried out online. Two main differences are worth highlighting. The first is the need for increased involvement by the platform in creating and developing

its ecosystem. It is not just a matter of skilfully analysing offline social networks to invite people to meet their previous real-world acquaintances in Facebook. Here, the platform company has to actively participate in the process of getting the various players on board: not just in eliciting customers and restaurants to adhere but also in building a squad of self-employed deliverers. The second is the most important for our purpose in this article: the increased relevance of location. The provision of the service takes place within a limited geographic territory. If this was not the case, the customer would get the meals awfully cold. Therefore, since the catering business is a fragmented industry (in spite of the development of fast food chains), distinct ecosystems are required in different locations. This leads some platforms, UberEats for instance, to launch their activities in specific districts, with a younger and more cosmopolitan population, not in a city as a whole. The conclusion is clear: geography is a very important factor in this type of platform business.

4. Location and building up of platform ecosystems

Offline locally delivered services are not the only platform type requiring the building up of local ecosystems. To a greater or lesser extent, the need to create and nurture distinct local ecosystems is faced by all platform companies, although the characteristics of the platform itself (double *versus* multisided) as well as of the transacted items influence the complexity of the process at work.

Before proceeding further, it is important to provide a definition of ecosystem. Drawing from Evans and Schmalensee (2016) and Simões (2018), an ecosystem may be defined as the set of individuals, businesses (including complementors and competitors), governmental and non-governmental organisations, regulations and other institutions that, by their multiple interactions, affect the value that a platform can

generate and capture⁴. While one may talk about a single worldwide ecosystem, such as that of Facebook, a more granular analysis shows that most worldwide ecosystems are, in fact, the combination and interplay of multiple local ecosystems that may be structured at national or sub-national level, as pointed out above in the case of UberEats.

Brouthers *et al.* (2016) illustrate how the creation of local ecosystems is essential for the business model to be replicated internationally. Such a replication requires the platform company to assess local conditions to identify the key building blocks for the ecosystem to be implemented. There is a need to scan the opportunities and risks of launching the business, even before proceeding to the building up of the ecosystem (Helfat and Raubitschek, 2018). Examples of issues to be dealt with include the following: the perceived relevance of the service provided (for instance, if local universities provide accommodation for their students in their campuses, the apartment rental services of the Uniplaces platform may attract little demand); the existence of already installed competitors providing a similar service (remember Uber *versus* Didi Chuxing); the characteristics of national and local regulations and behaviours (as in the case of Barcelona with regard to Airbnb); the quality of the telecom infrastructure to support platform offerings (Ojala *et al.*, 2018); the interest of companies in advertising their services for the location concerned (since advertising is an important instrument for the platform to capture value); and the interest of local suppliers in becoming involved (an essential requirement for UberEats or Glovo to carry out their business).

If local or national conditions look attractive, then an ecosystem needs to be established; sometimes a limited location is selected as a testbed for an initial assessment of the odds for the platform to be successful, and to get traction. Another issue is how to

⁴ For a detailed analysis of value capture in platform businesses see Teece (2018) and Helfat and Raubitschek (2018).

design the ecosystem to better address the “chicken-or-egg” problem. Launch strategies are often based on the attraction of one platform side, in the expectation that the other side will join fast. For instance, Landing Jobs, an information technology (IT) job recruitment platform started by courting IT specialists looking for jobs, in the expectation that companies would follow suit to recruit competent people (Santos, 2018). In other cases, there is a need to simultaneously court customers and suppliers, as occurred with Uniplaces, the apartment rental platform mentioned above; further emphasis was, however, put on the demand side (students), introducing the concept of “verified property” to enhance trust (Santos, 2018). The balancing of both sides requires “market access” capabilities (Helfat and Winter, 2011; Helfat and Raubitschek, 2018), to better establish the determinants of customer and supplier decisions in different locations. Other social networks, such as Facebook or LinkedIn, may be used to generate awareness and elicit both sides to join; local opinion leaders are often engaged to foster awareness about the platform services as well as to highlight the benefits stemming from its use.

However, for many platforms the issue is not just attracting suppliers and customers. There is a need to have complementors, providing complementary assets for the service to be delivered in appropriate conditions and to enhance user experience. This is the case of UberEats, for which the issue is not just to have food customers and supply restaurants but also deliverers. A squad of people riding bicycles or motorcycles is responsible for the consummation of the service, by delivering the meal fast and in good condition. Complementors may be more sophisticated, as is the case of software developers. In many countries, to penetrate beyond the English-speaking crust, there is a need to attract developers who produce the offerings in the local language and often using local characters. Local facilitators also take part in the ecosystem. For example, some politicians, partisans of innovative developments, may stimulate the design of a legal

framework friendlier to the launching or development of a given type of platform, as occurred in some countries with regard to Uber. The development of local ecosystems is therefore a key ingredient of platform internationalisation. Such development is expected to lead to increased local insidership (overcoming LoO), reputation and legitimacy. It is important to recognise that, although many interactions are internalised through the platform app, a well-functioning ecosystem is key to enable a positive user experience as well as to ensure platform expansion.

Another feature of platform localisation is related to innovativeness. The design of both the search engine and the business model are not one-off events. On the contrary, they need to be constantly improved and adapted, including to withstand the challenges faced and to improve the services provided. The use of big data and artificial intelligence make it possible to continuously learn from experience and to tailor the working of the platform to suit distinct conditions.

The internationalisation of technological development activities is another issue addressed by the most successful platforms. As the company internationalises, it makes sense to proceed to international diversification of technology development and innovation activities for two main reasons. One is to escape from the home country bias by learning internationally to foster diversity (Alcácer, Cantwell and Piscitello, 2016) and improve and adapt the platform’s search engine and business offerings. The second is to reduce costs, by locating specific software development in countries in which IT wages are lower. At the end of the day, this is a further element inducing local differentiation.

5. Summing up: the challenges of platform internationalisation

The previous sections provided evidence that platform internationalisation may not be as easy as some digital prophets have suggested. It was seen that this

happens for three main reasons. The first has to do with the differences in national (or regional) regulations, languages, and cultures. Although it is true that, as Autio and Zander (2016) have argued, some online reputations develop fast, the process cannot be taken for granted as Chen *et al.* (2019) have shown. If the offerings are not adapted to the local culture, market penetration becomes more difficult, and may even stall. The second factor is related to the very characteristics of the transactions performed via dedicated apps or the platform itself. In terms of transaction content, three types of platform were identified: *i*) fully digital businesses, such as Facebook, YouTube and WhatsApp, for which transactions are entirely undertaken online, within the platform; *ii*) marketplaces, dealing with physical products, which need to be handled and delivered to the customer (Amazon, Alibaba and Farfetch, for instance); and *iii*) offline locally-delivered services, which involve the rendering of services outside the web, as is the case of UberEats, Glovo, Booking.com and Uniplaces. While in all cases some kind of localisation may be needed, it tends to increase as one goes from *i*) to *iii*). The third reason is related to the establishment of local ecosystems, especially in multi-sided platforms. Such ecosystems are not restricted to customers and suppliers. They also include complementors (which may be local, regional or global), local service providers (such as taxi drivers for Uber or meal deliverers for UberEats), local opinion makers, and national and/or local authorities. The creation, nurturing and further development of such ecosystems corresponds to a continuous process, demanding an understanding not just of worldwide technological and business trends but also of local specificities and changes. This is not an easy process: the perception of the demands and barriers to building local ecosystems may lead the platform to withdraw from particular markets, as occurred with Uniplaces in some European cities.

The underlining of the requirements and challenges of platform internationalisation does not mean,

however, that platform businesses do not internationalise faster than traditional businesses. The asset-light nature of platforms, avoiding significant investments in fixed assets (Parente *et al.*, 2018; Autio and Zander, 2016), together with the development of online reputations and the very dynamics of cross-border social networks increases internationalisation speed. This is undisputable. But there is a need to stress that the international spread of platform companies is not instantaneous. According to Charles Dhanaraj⁵, Uber, one of the most widespread examples, took nine years to become operational in 111 countries. This is remarkable. But it also shows that, even when digitally leveraged, the process takes time. Furthermore, the process is not necessarily successful everywhere, as the vicissitudes of Uber in China and Denmark attest.

Platform business is growing fast. Digitally empowered, it has great potential to grow in the future. This does not mean, however, that Geography becomes irrelevant. This article has shown how the importance of location factors differs according to the types of business carried out by platforms, and how the setting up of local dynamic ecosystems is an essential ingredient for platform expansion.

Our purpose was to provide a more realistic view about the challenges of digital platform internationalisation. The field is relatively new, and clearly under-researched. Additional work is needed to get a deeper understanding about the various dimensions of the phenomenon. This is essential to contribute to enhance the ability of managers to conduct platform internationalisation in a responsible way. It will also provide insights for national and local policy makers to better design policies regarding the establishment and regulation of platforms as well as the attraction of back-office technology units for these companies.

⁵ Presentation by Charles Dhanaraj (H.F. "Gerry" Lenfest, Professor of Strategy, Fox School of Business, Temple University, USA) at the "Digitalization and Internationalization" Panel, at the Academy of International Business Annual Conference, Copenhagen, June 2019.

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