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The Business of European Platforms

How Digital Intermediaries in E-Commerce, Food Delivery, Health and Care, and Social Networking Manage Value and Compete

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1. Introduction

Digital platforms are powerful intermediaries that play an important role in shaping today's economies and societies. In the eyes of both the public and regulators, the platform economy is defined by dominant companies like Google, Amazon, Facebook, Apple, and Microsoft (GAFAM) – globally operating tech giants that each operate multiple platforms. These large platform companies are known for building and exploiting large indirect network effects (the more users, the higher the value of the platform for other users). They offer users convenient and now ubiquitous products that have become the infrastructures for the digital economy (such as app stores, search engines, messengers and social networks). Almost all the global platforms were created and are still headquartered in the United States and, more recently, China.

However, there is a world beyond GAFAM and platforms from the United States and China (Evans & Gawer, 2016; Lehdonvirta, Park, Krell, & Friederici, 2020). Europe is home to leading social networking platforms in certain niches such as dating (e.g. ElitePartner and Parship) or professional networking (e.g. Viadeo and XING). Likewise, Europe hosts food delivery platforms operating around the globe (e.g. Delivery Hero, Glovo, Wolt, Deliveroo) and e-commerce platforms with millions of customers (e.g. Allegro, Zalando, Coolblue, Cdiscount, El Corte Inglés). Meanwhile, understanding of the business of European platforms remains limited. In particular, little is known about the business models and competitive strategies of European platforms. Do European platforms pursue the same business models as GAFAM, just on a smaller scale? Do European platforms mimic how GAFAM compete?

This report is a first attempt to shed light on these questions. Focusing on e-commerce, food delivery, health and care, and social networking, we show that Europe is in fact a plural powerhouse when it comes to creating, delivering and capturing value in these industries. While they do not reach the status of meta platforms that span various industries and integrate numerous platform products, many European platforms have successfully competed with GAFAM, and more often have created new industries beyond GAFAM's purview. By providing insights and examples of the business models and competitive strategies of European platforms, our results provide a resource for platform entrepreneurs, policy-makers, industry associations and trade unions, informing their efforts to promote or respond to platform businesses in their respective industries.

Given the dearth of evidence on this topic, this report offers a descriptive overview, proceeding in five steps. First, we introduce the essentials of platform business, which entails a platform's business model and its competitive strategies. Second, we outline the methodological approach underlying this report. Third, we elaborate on the business of European platforms in four industries: e-commerce, food delivery, health and care, and social networking. Fourth, we describe the business of European platforms across industries. In the final step, we discuss the broader implications of this report for European policy and platform entrepreneurship at large.

2. A Primer on the Business of Platforms

Platforms intermediate between two or more user sides based on a technological infrastructure (Gawer, 2014). They may connect individual consumers on one side to individuals on the other (C2C, e.g. classified pages or in the sharing economy), they may connect individuals on one side to businesses on the other (B2C, e.g. e-commerce and gig economy), or they can mediate businesses and other businesses (B2B, e.g. in the industrial internet of things). By directly connecting different user sides, a platform reduces search or transaction costs for both sides (Cusumano, Gawer, & Yoffie, 2019). Platforms rely on indirect network effects – the more active one user side is on a platform (e.g. sellers on eBay), the higher the utility for the

other user side (e.g. buyers on eBay). Likewise, the more users there are willing to buy, the more attractive a platform becomes for sellers (Gawer, 2021). These features have made platforms powerful players in many industries. As Kenney and Zysman (2016, p. 62) note: “if the industrial revolution was organised around the factory, today’s changes are organised around (...) platforms.”

2.1. Types of Platforms

Platforms come in different forms. For the purpose of this report, we distinguish between three types of platforms (Cennamo, 2021; Evans & Gawer, 2016). The first type are **innovation platforms** (also referred to as industry platforms) that enable the co-creation of technological innovation in ecosystems (Reischauer, Güttel, & Schüßler, 2021). The operating system iOS (developed by Apple) is a common example of a popular B2C innovation platform. An example of a B2B platform in the manufacturing industry in Europe is MindSphere (developed by Siemens).

Second, there are **transaction platforms**, also referred to as marketplaces or matchmaker platforms. These platforms provide a technological infrastructure in which affiliated users buy and sell goods (as in the case of Amazon), contract a service (as in the case of Uber) or rent an asset (as in the case of Airbnb), and thereby significantly ease economic transactions (Rochet & Tirole, 2003). While some platforms (such as Amazon Mechanical Turk) enable transactions that happen wholly in the digital sphere, other platforms (such as Uber and Airbnb) digitally facilitate a physical transaction (Reischauer & Mair, 2018a; Wood et al., 2019). Large marketplaces such as Amazon focus on enabling the trade of a wide range of goods, such as food, clothes, or electronics. Labour platforms make up another major category; these allow one platform side to contract labour-intensive services, such as care work, creative work, or transportation (Graham et al, 2017). Marketplaces make scope decisions as to whether they deliver facilitative aspects of a transaction (logistics, payments, security, warranties etc.) by themselves or instead rely on partners or infrastructures (Gawer, 2021). For some platforms, third parties are not just engaged as service providers but also as a third platform side. Food delivery platforms connect couriers, restaurants and end users ordering food.

A third type are **information platforms**. These platforms center on the creation, storage and/or diffusion of information. Typically, user sides are more indirectly connected and the data resulting from these various interactions is a key pillar of the platform’s business (Cennamo, 2021). Social networks are prevalent within this platform type; users connect with each other directly and are indirectly connected with advertisers and aggregators that trade and analyse their data. Google Search is the best-known information platform that is not a social network. LinkedIn is an example of an information platform specialising in personal data to be leveraged for recruiting and professional networking.

Transaction platforms dominate the European landscape, and several information platforms are also active. In contrast, innovation platforms like MindSphere are confined to B2B industries that have national specificities and are highly complex (Evans & Gawer, 2016; Lehdonvirta et al., 2020; Reischauer, 2018). To both cover the breadth of the European platform economy and identify differences with GAFAM, this report focuses on B2C and C2C transaction platforms and information platforms. We analyse two foundational aspects of the business of European platforms within these segments: business models and competitive strategies (Abraham, 2013; Cusumano et al., 2019; Kretschmer, Leiponen, Schilling, & Vasudeva, 2022). While the business model defines how the company is organised to best meet customers’ needs, competitive strategies describe how a platform develops a competitive advantage over other companies in the same industry (Abraham, 2013).

2.2. Business Models of Platforms

A business model describes how a platform manages value (Abraham, 2013; Täuscher & Laudien, 2018). Specifically, business models revolve around two mechanisms: how a platform creates value for users and how it captures value for itself (Teece, 2010, p. 172). The transaction platform Uber creates value by offering an easy-to-use app and quickly connecting users with drivers offering a ride for a fee. Uber captures value by withholding a share of the fee paid by end users from drivers. The transaction platform Amazon creates value for users by giving them access to a wide range of products, and by providing an infrastructure for the fast and secure shipment of goods offered by vendors (and its own goods). It captures value by charging vendors (suppliers) a commission for each sale.

Value creation is mainly about how a platform generates value for all user sides (Täuscher & Laudien, 2018). Transaction platforms often create value by efficiently facilitating transactions between two distinct platform sides (supply and demand). In contrast, information platforms, such as LinkedIn and Facebook, usually create value by connecting similar users to each other, making networking and community building the source of value creation.

Value capture of a platform business model occurs through the platform generating revenue streams. Several platforms charge commissions whereby they withhold a certain amount for each transaction from the amount paid by one platform side. Airbnb, Amazon and Uber are examples of transaction platforms that follow this approach. Some platforms also capture value through sales; they sell their own goods over the platform. Other platforms generate revenue through a subscription model, charging users to become members who can use the platform's full functionalities for a given period of time. LinkedIn is an example of an information platform that employs this model. Furthermore, other platforms – mostly information platforms – capture value by running advertisements or by aggregating and selling user data. Facebook and Google are popular examples of platforms that make money in this way (Täuscher & Laudien, 2018).

Research suggests that the configuration of value creation and value capture of platforms is likely to differ across industries and geographic locations (Friederici, Wahome, & Graham, 2020; Nicolas, Michel, & Mark, 2020; Reischauer & Mair, 2018b; Vaskelainen & Münzel, 2018). Transaction platforms in the same industry can have different business models in different countries. Furthermore, while industry and technological conditions typically set an overall framework within which business models are viable, individual companies implement specific models from broad templates and advance modifications (Casprini, Di Minin, & Paraboschi, 2019). We ask the following research questions (RQs):

RQ1a: What are the business models of European platforms?

RQ1b: How do business models differ within and across industries, and across countries?

2.3. Competitive Strategies of Platforms

A competitive strategy describes how a platform broadly positions itself vis-à-vis other companies and platforms in the same industry (Bertelè & Chiesa, 2001; Cennamo, 2021; Rietveld & Schilling, 2021). Competitive strategies create key differences between rivals, which enable them individually to survive and prosper (Abraham, 2013).

Platform competition is a particularly complex endeavor because platforms offer a technological product, but this product only becomes valuable to users through connections with other users on the same or the opposite platform side. We argue that a platform's offering (platform product) thus consists of the connections (indirect network effects) and the technology (architecture)

(1) The connections aspect of a platform's offering can often be decisive. The number of connections (the

size of the network) matters: platforms rely on indirect network effects – the more active one user side (e.g. sellers on eBay), the higher the utility for the other user side (e.g. buyers on eBay). Likewise, the more buyers on a platform, the more attractive a platform becomes for sellers. Platforms compete by connecting users, while the means through which the connections are created (i.e. the technological product in a narrow sense) can be secondary to the value of the connections. This further implies that if platforms are unable to attract enough users on all platform sides, they typically will not survive (Armstrong, 2006; Rietveld & Schilling, 2021). This dynamic is at the heart of the ‘chicken-and-egg problem’; platforms need to grow user numbers on both sides of the platform. Beyond the number of connections, it also matters which connections a platform offers; users on one side (e.g. consumers) may only be interested in finding a specific group of users on the other side (e.g. electronics vendors), requiring platforms to match and balance specific segments of supply and demand on both platform sides.

(2) While connections and network effects are often decisive, a platform’s architecture is also critical to sustaining a competitive advantage. Consisting of the software and hardware that makes the platform function, such as applications, user interfaces, code, servers and algorithms, a platform’s technological architecture is essential as it is the main point of contact with users on both sides, and is the digital platform’s main way to govern interactions between users in an automated fashion and at distance (Cennamo, Ozalp, & Kretschmer, 2018; Reischauer & Mair, 2018). A platform’s architecture also depends on the (growth in the) number of connections a platform can offer; if a platform’s interfaces are slow and hard to use, user growth may never materialise, or users may move away from a platform and stymie network effects.

Against that background, we next analyse platforms’ competitive strategies by drawing upon the foundational literature on the competition of companies (Porter, 1998) and platform competition (Cennamo, 2021; Rietveld & Schilling, 2021). There are three main types of competitive strategies (see Table 1). These strategies are not mutually exclusive and can be executed in parallel or consecutively by digital platforms.

<i>Competitive strategy type</i>	Price-and-size	Differentiation	Expansion
<i>Variants</i>	“Winner takes all”: Scaling user base as fast as possible to generate network effects & user lock-in	Product / distinctive positioning Sustainability niche Differentiated technological architecture & enabling services Geographical differentiation	Geographical expansion Platform envelopment Mergers & Acquisitions

Table 1: Stylised Competitive Strategies of Platforms

First, platforms can compete on **price-and-size**. When pursuing this strategy, a platform positions itself as serving users the same platform product (encompassing both connections and technological architecture) as other actors, but at a lower price, often for free. In practice, when competing on price-and-size, platforms pursue the “winner-takes-all” strategy, aiming for dominance of an industry in one or several countries (Arthur, 1996) (e.g. Amazon in e-commerce). The rationale of this strategy is to “get big fast” and rapidly

grow the number of users on both sides (Cennamo, 2021; Lee, Lee, & Lee, 2006).

The second competitive approach is a **differentiation** strategy, in which a platform emphasises elements of its technological architecture or facilitated connections that are distinct from other actors (Cennamo, 2021). Differentiation strategies are ultimately reactive; they entail the occupation of niches vis-à-vis existing offerings. Thereby, platforms effectively operate in a related but different segment to their competitors. They offer something “similar but different”, thereby appealing to different user groups. There are several variants.

(1) *Product / distinctive positioning*: A common way for platforms to achieve differentiation is to offer exclusive products or content not available to users of competing platforms. Typically, a platform will not just pick individual products that competing platforms do not offer, but rather optimise across its wider portfolio of offerings while also adjusting its branding. Thereby, platforms achieve a distinctive positioning that is clearly discernable to both users and rivals, which in turn reduces the intensity of competition (Cennamo & Santalo, 2013). LinkedIn is a social network like Facebook, and it competes with it for the attention of users, but both through its branding and its functionalities (e.g. allowing users to enter their CV), LinkedIn positions itself differently (connecting people for professional rather than social and personal purposes). Other examples include the blurred distinction between ride sharing (BlaBlaCar) and ride hailing (Uber).

(2) *Sustainability niche*: Another variant to emphasise the sustainability of offerings. Platforms emphasise that they are socially sustainable (e.g. labour practices, local community integration or human rights) or ecologically sustainable (e.g. energy usage, CO₂ emissions or water quality) (Savitz & Weber, 2006). In Germany, more and more platforms in the gig economy have started to signal to both gig workers and employers their efforts to be a just and fair place to work (Gegenhuber, et al, 2022).

(3) *Technological architecture*: Platforms can attempt to stand out by offering better technology. This can include greater or superior functionality, better design, more seamless or efficient usability, lower energy or bandwidth usage, or stronger transparency and real-time tracking of events (Constantinides, et al., 2018; Reischauer & Ringel, 2022). Medium is a blogging platform whose technology is said to outcompete that of Wordpress, Google Blogger and others. Similarly, platforms can choose to insource or outsource services to enable a given transaction to differentiate from competitors. E-commerce platforms may establish inhouse logistics operations and payment services, or financial platforms may develop their own risk assessment technology.

(4) *Geographical differentiation*: Platforms can also differentiate by occupying a geographical niche, serving a so-far unserved geographical region with the same or very similar offering as a dominant platform (Cennamo, 2021). The central tenets of geographical differentiation are the timing of entry and the establishment of hard-to-copy location-specific brand and partner networks.

A third set of competitive strategies concern a platform’s **expansion**, again encompassing different forms.

(1) One variant is geographical expansion; entering a country that a platform is not yet active in (Lehdonvirta et al., 2020; Stallkamp & Schotter, 2021; Uzunca, Rigtering, & Ozcan, 2018). Uber moved into several countries, rolling out an identical app with almost identical local strategies, across the globe. (2) Another way to expand is to widen the scope of transactions or information that the platform mediates. Platforms can be presented with opportunities to use their existing user base or data assets to expand into industries they are not yet active in – a strategy that is referred to as platform envelopment (Eisenmann, Parker, & Van Alstyne, 2011). With the launch of UberEats, Uber used its fleet of cars and drivers in the food delivery industry. (3) A third variants are mergers and acquisitions (M&As). Much like for traditional multinational firms, platforms often use M&As to achieve geographical expansion, as in the case of Delivery Hero acquiring Glovo’s Latin American operations. Unlike traditional M&As, platforms can often use

acquisitions to leverage network effects, data synergies and cutting-edge technological applications that feed into their core products. Amongst Facebook's (now Meta) most expensive acquisitions were Instagram (an information platform to share video and photos in public) in 2012 and WhatsApp (an information platform to send text messages, make voice and video calls, and share images) in 2014 (Parker, Petropoulos, & Van Alstyne, 2021).

Research on the competitive strategies of platforms tends to focus on a single national industry; US-based platforms have provided the dominant focus thus far (Rietveld & Schilling, 2021). However, observers have increasingly highlighted that this empirical base does not do justice to the variety of platforms across nations and industries. There are different usages of transaction platforms for online labour (Kässi & Lehdonvirta, 2018). Moreover, differences exist in how the same platforms or platforms within the same industry operate across countries (Lehdonvirta et al., 2020; Mair & Reischauer, 2017). Despite initially rolling out a similar service, Uber ultimately functioned differently in the USA to Sweden or Germany.

The literature on platform competition in Europe is limited, in two major ways. First, it remains unclear which competitive strategies European platforms pursue that are different to the platform playbook established by dominant platforms. Second, there is limited research on how platforms in the same industry compete across different European countries. We ask the following RQs:

RQ2a: What competitive strategies do European platforms pursue?

RQ2b: How do competitive strategies differ within and across industries, and across countries?

3. Methodological Approach

To address our research questions, our analytical approach needs to allow for two comparative dimensions. First, we conducted an industry-by-industry cross-country comparison. This approach allows us to identify and describe the business models and competitive strategies within an industry that apply broadly across countries, and are thus likely the result of particular industry conditions (see chapter 4). Second, we develop and apply a more fine-grained analytical framework for cross-industry comparisons (similarities and differences), allowing us to describe the European platform economy as a whole and hone our understanding of industry conditions as determinants of platform strategy (see chapter 5).

Our analysis encompasses transaction platforms and information platforms within the B2C and C2C segments in four industries in Europe: e-commerce, food delivery, health and care, and social networking. Previous analyses suggest that these industries are increasingly being shaped by platforms, despite not having been dominated by US providers (Evans & Gawer, 2016; Lehdonvirta et al., 2020). E-commerce is a major industry across European countries that has been transformed by platforms such as Amazon. Across Europe, and especially during the COVID-19 pandemic, the food delivery industry has been shaped by platforms. Social networking is one industry where European platforms seem at a stark competitive disadvantage to platforms such as Facebook or LinkedIn; however, a range of unique differentiation strategies can be observed. Finally, platforms are increasingly entering the health and care domain, a major industry across Europe. Health and care is a more complex segment than the other industries analysed, with platforms intermediating between a range of actors (including doctors, patients, insurance companies, clinics, medical professionals and social protection schemes). Platforms are currently less dominant in this industry; however, the industry has great strategic and differentiation potential.

We included the following European countries in the analysis: Belgium, France, Finland, Germany, Ireland, Italy, the Netherlands, Poland, Romania, Spain, Sweden, Switzerland, and the United Kingdom

(UK). Recent studies (Huws, et al., 2019; Lehdonvirta, Margaryan, & Davies, 2019; Lehdonvirta et al., 2020; Vaughan & Daverio, 2016) have shown that (1) these countries are highly promising (especially in terms of data availability) for observing dynamics within the European platform economy and (2) having a mix of social and economic models as well as country size is important because of the plurality of the European business landscape.

Our data collection was based on desk research. We compiled an expansive set of secondary data: market research reports, academic research reports and grey literature, databases, and platform websites as of 2021. We systematically collected this data by using search keywords related to our guiding questions. To investigate the prevalence of platforms in various industries and countries, we also compiled a list of platforms for each industry and country by reviewing reports and participation in tech industry and startup events. We then analysed this data through the lens of our guiding questions by triangulating all archival data.

While this approach enabled us to cover a broader swath of empirical contexts, it has four limitations. First, our data is restricted to public archival data. Company data in particular may not always be accurate; early-stage growth companies may offer information on their websites that has more to do with their vision than present reality. Our observations based on this kind of data need to be verified and deepened with other and more in-depth data in future research. Second, our choice of industries does not reflect the full breadth of the European economy. In particular, it does not include business-to-business industries such as automotive or industrial goods, where European firms are amongst the most innovative on a global scale (European Commission, 2021). Further analyses need to investigate the potential of platforms in business-to-business industries, such as transaction platforms that source industrial goods. Third, our analysis is grounded on a simple conceptualisation of industries across countries; legal aspects were not considered. Fourth, our analysis is grounded in information available in English or German; further research that looks into material in other languages is required.

4. The Business of European Platforms in Four Industries

In this section, we describe European platform business in four industries: e-commerce, food delivery, health and care, and social networking. For each industry, we (1) provide a brief overview of the current role of platforms; (2) describe business models; and (3) outline competitive strategies. Table 2 and Table 3 provide summaries of the business models and competitive strategies. While we sometimes refer back to the concepts introduced in chapter 2, we seek to portray empirically grounded descriptions. In chapter 5, we conduct a more general comparison derived from the literature.

4.1. E-commerce

Overview

The e-commerce industry is concerned with the exchange of consumer goods. While transaction platforms that facilitate the trade of goods from vendors to consumers are unsurprisingly dominant in this industry, there are also some information platforms; for example, those that connect consumers with the webshops of retailers without offering direct purchases. Katoni ApS connects consumers looking for fashion items with webshops from retailers.

<i>E-commerce</i>	<i>Food Delivery</i>	<i>Health and Care</i>	<i>Social Networking</i>
<p>Full-service and full product range model</p> <p>Aggregating supply of particular range of consumer products, full range of transaction services in-house or integrated partnerships (shipping, customer service, payment, free returns, terms and warranties etc.)</p> <p>Focus on consumer goods with large overall distribution value (shoes, electronics etc.) that allow branding, dedicated supplier partnerships, and product range-specific functionalities (e.g. virtual stores for suppliers)</p> <p>Transaction fees for suppliers and/or consumers for payment and logistics</p> <p>Infomediary model</p> <p>Reduce search cost for services for consumers, aggregating and comparing supply</p> <p>Focus on high-item-price services (ticketing, travel booking) or services with complex terms and conditions (utilities, insurances, telecommunications services etc.)</p> <p>Ads, prioritised rankings</p>	<p>Courier model</p> <p>Couriers, mostly on bikes</p> <p>Wide range of restaurants, some exclusive partnerships</p> <p>Ease of use of app</p> <p>Speed of delivery</p> <p>Dark kitchens</p> <p>Commissions from customers and restaurants</p> <p>Delivery model</p> <p>Convenience</p> <p>Partnerships with supermarkets</p> <p>Commissions from customers</p>	<p>Easy connector model</p> <p>Provide one-stop shop to meet specific health/care demand, both regulated (e.g. elderly care) and non-regulated (e.g. yoga, babysitting)</p> <p>Transaction fees for regulated services (e.g. doctors), supply side or, mostly unregulated services, demand side (e.g. parents seeking babysitter)</p> <p>Infomediary model</p> <p>Lower search costs for health and care for consumers by accumulating and comparing doctors and health providers</p> <p>Value capture through ads and commissions from supply side or membership fees</p>	<p>Easy connector model</p> <p>Connect people with similar interests online to motivate actions offline</p> <p>Particular attention to security and role of location of people</p> <p>Membership fees for better services or platform side that is less in demand</p> <p>Communicator model</p> <p>Increase quality and/or frequency of communication between businesses and customers</p> <p>Enable integration into offerings from many other industries</p> <p>Commissions or fees from businesses</p>

Table 2: Overview of European platforms' business models across industrie

Competitive strategy	<i>E-commerce</i>	<i>Food Delivery</i>	<i>Health and Care</i>	<i>Social Networking</i>
Prize-and-size	-	Industry dominance Large supply side	-	-
Differentiation	<p>Product niches</p> <p>Dedicated product range to establish recognition as a specialist among consumers vis-à-vis general-purpose platforms</p> <p>Exclusive / niche / rare products</p> <p>Ecological sustainability</p> <p>Sustainability features of products (e.g. eco certificates, supply chain transparency etc.)</p> <p>Sustainability of delivery (e.g. reducing packaging material & number of shipments)</p> <p>Technological architecture</p> <p>Rating & review functionalities</p> <p>Product-range specific functionalities and features (e.g. 360° high-resolution displays of fashion items)</p> <p>Full-service integration</p> <p>Specialist customer service</p>	<p>Product niches</p> <p>Food for specific needs / tastes (e.g. vegetarian, gluten-free)</p> <p>Exclusivity deals</p> <p>Delivery when customers are likely at home</p> <p>Ecological sustainability</p> <p>Local / geographically focused sourcing</p> <p>Partnerships with interest groups to ensure fair labour conditions of couriers</p> <p>Technological architecture</p> <p>Full-service portal that easily integrates couriers</p> <p>Real-time tracking of delivery status</p>	<p>Product niches</p> <p>For regulated offerings</p> <p>Focused offerings to establish trust for consumers (e.g. elderly care, psychological counseling)</p> <p>Cooperation with universities, insurance companies, and/or local authorities to ease use (especially first-time) and establish trust</p> <p>For unregulated offerings</p> <p>Broader offerings, sometimes also unrelated (e.g. childcare and pet care; house-sitting)</p> <p>Technological architecture</p> <p>Review systems to create trust</p>	<p>Product niches</p> <p>Focus on either customer-to-customer or business-to-customer, not usually both</p> <p>Customer service for business sides</p>

<i>Expansion</i>	Enlargement of geographical scope	Enlargement of geographical scope	Enlargement of geographical scope	Enlargement of geographical scope
	Expand into close countries and/or countries with similar/same language	Multi-brand approach (either within country or across countries)	Expand into nearby countries and/or countries with similar/same language	Expand into countries with similar/same language or large-scale expansion
	Platform envelopment	Mergers & Acquisitions	Platform envelopment	
	Expand product range to similar types of products (e.g. from shoes to general fashion)	Also across several countries	Add other services, especially unregulated services (e.g. from babysitting to elderly care, tutoring and pet sitting)	
		Platform envelopment		
		Add further related categories (e.g. groceries in addition to food delivery from restaurants)		

Table 3: Overview of European platforms' competitive strategies across industries

Genialokal is an information platform that connects consumers with brick-and-mortar bookshops. Among transaction platforms, there is a mix of larger platforms with wide geographical coverage (national or international coverage) and locally oriented ones (individual cities or subnational regions). There are also smaller platforms specialising in niches. In addition, there are e-commerce platforms operating at a Trans-European-level, such as the US-based Amazon and eBay (Geldman, 2021) and – with a greater focus on Eastern Europe – the Chinese marketplace AliExpress.com (Lehdonvirta et al., 2020). Most European e-commerce platforms connect consumers and businesses. In some instances, as in the case of Vinted, a platform that focuses on exchanging new or secondhand clothing and accessories, e-commerce platforms deliver value for users on both sides of their marketplace. This way of creating value – also associated with the sharing economy – leverages the willingness of consumers to offer and buy used goods.

Two features of European e-commerce platforms are particularly interesting. First, not all European e-commerce platforms started as a platform; Otto was originally a mail-order retailer founded in Hamburg in 1949, Fnac is a French chain also founded in the aftermath of World War 2. These traditional retailers have secured substantial market shares in the retail domain; Otto is currently the second largest online retailer in Germany (e-commerce Germany news, 2021). Its original business model was based on a mail-order service in which customers could choose products from catalogues. Wehkamp was also founded in the aftermath of World War 2 – it has now become an online-only retail store. El Corte Inglés operates one of the largest marketplaces in Spain, in addition to its large brick-and-mortar stores. This suggests that the European platform retail business is not dominated by original digital platform companies, but instead divided between them and marketplaces developed by incumbents.

Second, older platforms tend to dominate, apparently because they were able to establish strong brands that consumers recognise and develop operational experience and partner networks. Many of the currently large retailers have a long history, introducing digital technologies to their marketing in the late 90s and early 2000s. Asos launched in 2000 and focuses on fashion. Further examples include Allegro (launched in 1999), bol.com (launched in 1999), Coolblue (launched in 1999), Cdiscount (launched in 1998), eMAG (launched in 2001) and PC Components (launched in 2005). This suggests that when transnational platforms enter an established industry, existing players respond to the new competitive challenges, while drawing on significant assets that newly established platforms do not have. This is a key contrast with new industries like social networking or search.

Business Models of European E-commerce Platforms

Two business models were identified. Most prevalent was the *full-service and full product range model*. European e-commerce platforms operate transaction platforms that create value for users by facilitating the transactions of consumer goods between businesses and consumers, and by also providing multiple services. An example is the Polish-based platform Allegro, a transaction platform for a computer, tablet, and smartphone. While many European e-commerce platforms in principle create value this way, they differ with respect to the scope of services they offer. In general, there are two extremes.

On the one hand, there are e-commerce platforms that only provide essential services. Some platforms provide real-time availability of offerings. On the other hand, other platforms provide a complete technological architecture with several features for all platform sides. Thus, they offer many more features to create a better shopping experience and encourage cross-over sales. They have various payment services integrated, from traditional services to modern services such as PayPal. A more extensive customer service is used to enhance the shopping experience and thereby enhance value creation. Platforms offering a wide range of services also certify the security of transactions by using agencies such as Trusted Shops, a service for online shops and their customers, offering a trust mark, a money-back guarantee process, and a system of customer reviews. Some platforms solely rely on user-based ratings which they openly publish. Other platforms offer fully integrated logistic offerings. Some platforms, such as Otto, rely on partnerships for

logistics rather than offering this in-house.

Many platforms that follow the full-service business model tend to capture value by commission, receiving a fee for each transaction from the supply side (such as other businesses). Some platforms also make money with the sale of their own products or products sold in brick-and-mortar stores; at El Corte Inglés or Cdiscount customers can choose from a large range of products, amongst them hardware and household appliances. Cdiscount further allows other e-commerce businesses to offer products as part of the “Cdiscount Marketplace” program. A similar hybrid approach (capturing value by selling goods and by receiving transaction-based fees from third parties) is followed by CHRONEXT, a Germany-based platform for luxury watches, and the French retail chain Fnac with its “Fnac Darty Marketplace”.

Some platforms in e-commerce pursue the *infomediary model*, operating an information platform to create value by connecting consumers with the webshops of other retailers. These platforms do not allow transactions, but instead provide a meta-overview of various retailers, resulting in a broad range of offerings. In these cases the supply side is often occupied by smaller businesses. Examples of these kinds of platforms include Trouva, a UK-based marketplace that connects consumers with bricks-and-mortar boutiques from across the UK and Europe, and Check24, Germany’s largest online comparison platform for e-commerce and other industries. Platforms pursuing the big-picture business model tend to capture value with ads and click-based fees.

Competitive Strategies of European E-commerce Platforms

Three variants of **differentiation strategies** were identified for European e-commerce platforms. (1) The most common variant was a focus on product niches, often leading to a distinctive positioning. European platforms pursuing this strategy mostly focus on a particular kind of consumer good, such as furniture (Westwing, Home24, MADE, Trouva), watches (CHRONEXT), electronic goods (Grover), or clothing and accessories (Zalando, AboutYou, Asos, Vestiaire Collective, Vinted). Others, including Emag, Avocado, Cdiscount, Real.de/Kaufland and bol.com, provide a wider range of products, although not to the extent of Amazon or Alibaba.

(2) Some platforms in e-commerce differentiate by signaling the ecological sustainability of their products. Avocadostore is a marketplace dedicated to sustainable products that was founded in Germany. Grover lets customers rent electronic goods like smartphones or laptops instead of buying them, promoting the ecologically sustainable use of electronic devices. But not all e-commerce platforms offer only sustainable products when differentiating with respect to ecological sustainability. Zalando customers can filter for sustainable products next to less sustainable products. Likewise, Otto offers its customers a climate bonus when they buy a climate-friendly product. Moreover, platforms like Zalando, Asos and AboutYou have started to sell exclusive second-hand clothes alongside brand-new clothes, emphasising the sustainability of these products.

(3) Some e-commerce platforms differentiate with regards to the provided technological infrastructure. This includes easy-to-use rating and review functionalities and full-service integration. Some platforms provide cutting-edge product-range specific functionalities and features (e.g. 360° high-resolution displays of fashion items) and specialist customer service.

We further found that European e-commerce platforms mainly pursue two forms of **expansion strategies**.

(1) Multiple European e-commerce platforms have expanded into other countries. Often, these have been countries in close proximity to the home country. The Dutch marketplace bol.com was founded in 1999. Early on, it opened up to Dutch-speaking users in Belgium. Recently, bol.com announced it would also serve French-speaking Belgians (RetailDetail BV, 2020). However, some e-commerce platforms have also expanded into countries further from their home market. The secondhand marketplace Vinted was founded

in Lithuania in 2008 and has operated in Germany under the labels Kleiderkreisel und Mamikreisel until recently (SZ, 2020). The French-based Cdiscount has expanded the range of its marketplace into Thailand, Vietnam, Colombia, Ecuador, Ivory Coast, Belgium, Senegal and Brazil (Casino Group, 2014).

(2) Several European e-commerce platforms have grown through platform envelopment, offering new products. Platforms have often maintained a narrow focus, staying close to their original product offerings and categories after enlargement. Zalando was founded in Germany in 2008, and originally exclusively offered shoes. Zalando has gradually expanded its range of products from shoes to clothing, accessories and now also cosmetics. Currently, Zalando has 20 million active customers in several European countries and sells more than 250,000 products from 2000 brands (e-commerce Germany news, 2021). Asos was founded in the UK in 2000 and initially only sold the clothes it produced. The company subsequently opened the platform up to other brands, and now sells a wide range of fashion products. Westwing was founded in Germany in 2011. The platform originally allowed consumers to purchase certain products from exclusive home furnishing brands in a time-limited sale. Later, WestwingNow was created, a platform in which customers can shop from a large range of different furnishing brands permanently and without a special membership.

4.2. Food Delivery

Overview

The food delivery industry refers to “a courier service in which a restaurant, store, or independent food delivery company delivers food to a customer” (Lehdonvirta et al. 2020, p. 18), and is mainly populated by transaction platforms. Overall, the European food delivery industry can be categorised as young (Lewin, 2020); many new platforms have recently emerged and established companies have extended into this domain (Lewin, 2019). Amongst the biggest European platforms are JUST EAT Takeaway.com, Delivery Hero, Deliveroo, Glovo, and Wolt (Lewin, 2019). But there are also more geographically focused food delivery platforms. SKIP-Q, for example, is only available in Belgium. Likewise, My Cooking Box is currently only active in Italy (Kholod, 2020), while Farmy currently only serves customers in Switzerland.

Unlike other industries examined in this study, the European food delivery industry has only a few major competitors headquartered outside of Europe, most notably UberEats. While the majority of platforms focus on delivering prepared food, others (such as Germany-based HelloFresh or UK-based Gousto) deliver ingredients for specific meals that customers then prepare themselves.

Business Models of European Food Delivery Platforms

We found two models for how European food delivery platforms create and capture value. When following the **courier model**, food delivery platforms, amongst them Wolt, have extensive features to integrate all sides of the platform, of which there are typically three parties: consumers, couriers (who tend to be solo entrepreneurs (Huws et al., 2019)), and restaurants. These platforms create value by offering consumers easy and customisable ways to order their food, allowing restaurants to be accessible by a large base of potential customers, and providing couriers with ad-hoc opportunities for work. Some platforms, such as Glovo, also operate so-called ‘dark kitchens’ where they rent out kitchen spaces to restaurants where food is prepared for delivery only. These platforms also tend to have an elaborate customer management system, such as automated refund routines. Many of these platforms capture value based on the commission model; for each transaction, either one side (restaurants) or both sides (restaurants and consumer) is charged.

When pursuing the **delivery model**, platforms create value by enabling transactions between food providers and consumers, leaving the logistics up to food providers. Germany-based Yababa or SKIP-Q are examples of food delivery platforms that create value this way. For these platforms, we mostly observe that one side of the platform are consumers, whereas the other side are food providers. These platforms also

capture value with the commission model to make a profit. Some, such as French-based CoopCycle, operate as non-profit organisations.

Competitive Strategies of European Food Delivery Platforms

We found that multiple European food delivery platforms pursue various forms of both the differentiation strategy and the expansion strategy. These strategies are not mutually exclusive and are sometimes undertaken in parallel or consecutively. Moreover, we also found platforms pursuing variants of the winner-takes-it-all strategy.

The largest food delivery platforms – JUST EAT Takeaway.com, Delivery Hero, Deliveroo, Glovo, and Wolt – aim for **industry dominance**; to “get big fast” by rapidly growing the number of users on both sides. An indicator for this strategy is the broad range of categories that these platforms offer; by using one platform, consumers can conveniently order food from a variety of cuisines.

We identified three variants of the **differentiation strategy**. (1) Smaller European food delivery platforms tend to differentiate with respect to product niches. The UK-based platform Pasta Evangelists only offers pasta dishes; it sources ingredients solely from Italy and is available throughout the UK. The Italian platform My Cooking Box differentiates itself with a focus on the preparation of Italian gourmet dishes for consumers mainly in Italy. Other examples of this kind of differentiation include platforms that offer gluten-free, vegan and vegetarian food, such as the UK-based allplants (Kholod, 2020). Other platforms differentiate by providing exclusive offerings partnered with several restaurants in a city, offering their customers a wide range of foods exclusively on their platform.

(2) Another way to differentiate often used by smaller European food delivery platforms is to emphasise the ecological sustainability of their offerings. When doing so, several platforms use labels such as ‘local sourcing’ and ‘supporting local farmers’. Farmy is a platform for local and organic food that connects farmers and food makers. Platforms like etepetete and GRIM focus on delivering boxes of organic but possibly ‘ugly’ fruits and vegetables that supermarkets refuse to sell – they are supplied by sustainable farmers located across Denmark and Europe. Another way to emphasise the ecological sustainability of a platform’s offerings is a reference to ‘rescuing’ food. These platforms facilitate transactions, sometimes also with no or little money involved, and focus on food that can no longer be sold through supermarkets (e.g. Too Good to Go, FoodCloud, Matsmart/Motatos, foodsharing.de). These platforms connect users with supermarkets to pick up leftover food from supermarkets, restaurants, or private households.

(3) A final way to differentiate is to offer a sophisticated technological architecture. Some platforms offer a full-service portal that easily integrate couriers, and real-time tracking of delivery.

European food delivery platforms have pursued three **expansion strategy** variants. (1) Some food delivery platforms grow by scaling their operations across multiple countries. The Finnish delivery platform Wolt was founded in 2014, making its first delivery in Helsinki the following year. In 2016, Wolt expanded into Sweden and Estonia, and in 2017, it entered Denmark, Latvia and Lithuania (Wolt, 2021). Glovo is currently available in 20 countries, not only in Europe but also in Asia and Africa (Glovo, 2021). Interestingly, Delivery Hero bought a majority stake in Glovo (FAZ, 2022). Another example is HelloFresh, which has expanded in Europe and the United States (Wirtschaftswoche, 2021b). For this purpose, HelloFresh acquired the US-based platform Factor75 to grow, despite already leading the sector (Handelsblatt, 2020).

(2) Many food delivery platforms have grown by mergers and acquisitions. In several countries, the driving theme in the food delivery business in recent years has been “be big or be bought” (Lewin 2019). JUST EAT and Takeaway.com joined forces in 2020. Today, JUST EAT Takeaway.com operates in 21 countries

on 4 different continents. Before these platforms merged, they had already individually acquired other companies or country divisions, such as the acquisition of Delivery Hero's German operation in 2019.

(3) Several platforms have engaged in platform envelopment, offering new products by leveraging the existing user base. HelloFresh introduced 'meal boxes' containing ingredients to cook at home alongside their deliveries of prepared foods (Wirtschaftswoche, 2021a). When growing through platform envelopment, platforms often seek partnerships between platforms and established companies in the food domain, such as supermarkets. The German startup Flink sources its products in two ways: it operates its own warehouses (TechCrunch, 2021) and also has a partnership with the German supermarket chain Rewe. As part of that partnership, Rewe also acquired a minority stake in the company (Handelsblatt, 2021). With Foodpanda – an Asian brand of Delivery Hero – customers can order foods and groceries sourced from collaborations with retail partners and the company's own warehouse infrastructure (Delivery Hero, 2021).

4.3. Health and Care

Overview

The health and care industry provides personal services to improve the wellbeing or rehabilitation of clients, supporting them in their everyday lives at home. The usage of platforms in this industry is at the heart of the digital transformation of health and care in the Digital Single Market (European Commission, 2018), and promises several benefits, such as lower costs.

We examined transaction and information platforms. France-based Doctolib is an information platform that enables individuals to find a specialist doctor nearby and make an appointment. The Italy-based platform Uala enables the booking of services to enhance wellbeing. Transaction platforms also play an important role. Instahelp.me facilitates transactions between people seeking psychological advice and psychologists, similarly to the UK-based PushDoctor. Likewise, Pflegix enables connections between individuals and professional carers.

Several European health and care platforms serve only one or a few related countries. Carestockroom and PushDoctor are only active in the UK, while Yocuido and Nannyfy are only active in Spain. Some platforms provide their services across Europe; Yoopies is active in a dozen countries. Some platforms are also active on other continents; the babysitting marketplace Sitly operates in multiple countries in Europe (including Italy, Norway, Denmark), Latin America (including Mexico, Brazil, Columbia) and North America. This could imply that simple care services, such as health care, can be scaled more easily than services that involve professions and health data (such as Carestockroom and PushDoctor).

European Health and Care Platforms' Business Models

We observed two business models. When pursuing the **easy connector model**, transaction platforms create value by quickly and easily facilitating transactions between users seeking care and health care services and professionals offering these services, either directly or by supporting individuals with the necessary paperwork. Most of these platforms connect individuals (sometimes also family members that act on behalf of another individual, especially in the case of elderly persons) and businesses. Similarly to the food delivery industry, these businesses are often freelancers. Raskrask is a marketplace for massage, training, and yoga services, while Spain-based Depencare provides a marketplace for home care for the elderly and dependent people. Mitpflegeleben also runs a marketplace where carers can directly transact with clients. Other examples include the Spanish care platforms Yocuido and Quida. Some platforms, such as PushDoctor, Doctolib, Quida and instahelp, collaborate with third parties such as insurance companies, hospitals, or companies that subsidise or cover the costs of a treatment or care service. The Danish platform Be My Eyes supports blind people to perceive their environment. Be My Eyes also works with social institutions for blind people. Some platforms, such as instahelp, collaborate with universities to demonstrate

their competence. Moreover, several platforms allow various payment options. These B2C platforms often capture value by taking commissions. Some rely on payments by third parties, such as local authorities.

The **infomediary model** is used by companies operating information platforms. These platforms create value by providing information about individual health (such as the platform Clue) as well as the national health and care market. Mitpflegeleben supports families in finding an elderly care home or a care service. These platforms capture value in different ways: Some, such as Mitpflegeleben, operate on non-profit basis, while others use advertisements or are funded by the public sector.

European Health and Care Platforms' Competitive Strategies

European health and care platforms pursue several variants of both the **differentiation strategy** and the expansion strategy. These strategies are not mutually exclusive and platforms sometimes enact them in parallel or consecutively.

With respect to differentiation strategies, we found two strategies. (1) Several European health and care platforms mainly differentiate by focusing on a product niche; on specific health and/or care categories. Some platforms focus on a single and specific service. Instahelp specialises in finding psychological counselors, Depencare and Pflegix focus on home care for the elderly and dependent people, and Spain-based Nannyfy and Netherland-based Sitly focus on babysitting. Others connect platform sides in several categories. PushDoctor focuses on mental health, sexual health and skin care. Likewise, Raskrask has offerings in the categories of massage, training and yoga services. Only a few have a very broad range of offerings that surpasses the health sector. France-based Yoopies, which considers itself the biggest European platform for home services, encompasses elderly care, childcare, tutoring, housekeeping, and pet sitting; care is only one category under the larger category of home services. Founded in 2011, it is now part of France-based Worklife, a company that provides services to companies to offer in their benefits packages to their employees. (2) Another means of differentiation is to provide a sophisticated technological architecture. Especially fine-grained review systems to create trust have been used; some platforms have also certified their review system.

European health and care platforms have pursued two **expansion strategies**. (1) Some European health and care platforms grow by enlarging their geographical scope, entering a new country with existing or similar offerings as in other countries. Instahelp was founded in Austria and is now also available in Germany, France and the UK. Spain-based Cronoshare was founded in Spain but is now also active in Italy, Brazil and Mexico. (2) We also observed platforms pursuing platform envelopment. Yoopies added elderly care, childcare, tutoring, housekeeping and pet sitting to their platform. TopNanny started out as a platform with a focus on babysitting, but now also offers house services, elderly care, tutoring and pet sitting.

4.4. Social Networking

Overview

The social networking industry revolves around the building and maintaining of social networks in both private and professional life. Specifically, social networking platforms allow individuals to create a profile about themselves and define which other users they want to connect to (Boyd & Ellison, 2007, p. 211). Popular social networking platforms from outside of Europe that compete with European platforms include Facebook, Flickr, Instagram, Tinder, Match, LinkedIn, WhatsApp and Twitter. Given the relevance of information and communication, it is unsurprising that across countries this industry is dominantly populated by information platforms.

Some European social networking platforms operate in several countries, such as the Parship Meet Group (active in 13 countries), Badoo (active in 191 countries and 44 languages), Sinch and Hubtype. Still, several

platforms are also active in just one country or in only a few countries. Menéame is mainly active in Spain, Wykop mainly in Poland, and Viadeo mainly in France.

Business Models of European Social Networking Platforms

We observed two models for how European social networking platforms create and capture value.

When pursuing the **easy connector model**, platforms create value by matching different sides with similar interests and by providing the infrastructure for ongoing interactions to deepen or maintain social relationships. We found two especially important application domains where this model creates value. The most popular domain seems to be dating. Amongst the biggest general platforms is Parship, founded in 2001 in Germany. Another example is Germany-based ElitePartner. Founded in 2004, it matches users based on psychological profiling, targeting singles above 30 looking for a long-term relationship. In contrast, French-based happn uses real-time geolocation to help users discover others they've crossed paths with in real life. Breeze, a dating platform established in the Netherlands, organises an offline date after people are matched online.

The second important application domain consists of professional and private relationship building, facilitating interactions between individuals. Some of these individuals may reach out on behalf of their businesses for recruiting purposes. Meet@Lunch connects professionals for lunch meetings based on their interests. Another European professional social networking is France-based Viadeo, a social networking platform founded in 2004 to improve career prospects and discover business opportunities. With several million user profiles, it is the leading social networking platform in France. The Dots, founded in the UK, is a social network for people working in the creative industry. Germany-based XING is a social network for business professionals to connect and share ideas. Meet5 is a platform app where people can join group meetings and get to know each other, while the UK-based platform Badoo helps individuals to make new friends.

Since social networking involves neither the exchange of a physical good nor of money between users, platforms engage more varied approaches to value capture. We observed two ways for these platforms to capture value. (1) Platforms can charge users a commission for a successful match (e.g. in the case of dating when two profiles are matched and can start communicating). For platforms with individuals on both sides, both sides tend to be charged. For platforms such as XING, in which one side are individuals reaching out on behalf of a business, it is often this side that is charged. (2) Platforms can charge membership fees to gain a predefined access to the platform. Some platforms also provide different membership levels, each with different prices. (3) Some generate money with a subscription model in which individuals pay a certain amount to have unlimited access to the platform, as in the case of streaming platforms such as Netflix.

By using the **communicator model**, social networking platforms create value by establishing and providing access to a community of individual users without specifying the modalities of interactions. One platform following this model is the Germany-based nebenan.de which describes itself as a social network for neighborhoods. Other platforms, such as Spain-based Menéame, France-based Skyrock, or Poland-based Wykop, allow users to create content (often news) for specific regions and share this content, often referred to as "social news". Other platforms establish and provide access to a community consisting of individuals pursuing social changes. The France-based platform civocracy provides a forum where individuals and government can co-create and track the advancement of these projects. The Sweden-based platform We Don't Have Time is a social network that connects individuals and business that show an interest in addressing the climate crisis. These platforms capture value in two ways. (1) Some of them generate income streams with advertising. (2) Others charge one platform side (often companies) with a membership fee to access the platform and obtain detailed information on users and their interests.

Competitive Strategies of European Social Networking Platforms

Our analysis reveals that European social networking platforms pursue various forms of both the differentiation strategy and the expansion strategy. These strategies are not mutually exclusive and sometimes are taken out in parallel or consecutively.

European social networking platforms mainly **differentiate** in terms of product niche. While Facebook appeals to individuals and companies alike, many European social networks tend to focus on specific user groups and/or application domains (such as dating, professional and private networking, or business-consumer messaging). The Parship Meet Group based in Germany specialises in platforms related to establishing romantic relationships, namely the dating platforms Parship, Elitepartner, eharmony (which targets users outside the European union) and LOVOO (which targets younger users). Her, a UK-based dating platform, only targets lesbian, bisexual and bi-curious women. Hubtype specifically aims its communication platform at companies in e-commerce, banking and insurance. This kind of differentiation strategy is effective for social networking as particular groups of people have a keen interest to connect with each other over particular topics, and are thus willing to pay for this kind of exchange.

We found that the main variant of the **expansion strategy** was the expansion of geographical scope. Parship and ElitePartner started out as distinct platforms and were only later combined as part of the Parship Meet Group, which also acquired eharmony, founded in the United States. Language is an important criterion for expanding geographical scope. This might be related to the high investment costs of creating a compelling matching algorithm and user interface. But once established, a dating platform can be scaled to new locations at relatively low cost, and thereby also leverage its success in the countries it is already active. Happn is active in Brazil, Spain, Italy, France, Turkey and The Netherlands. Overall, social networking platforms do not tend to pursue expansion by expanding the scope of their services, instead preferring to remain specialised. This might be because they need to stay differentiated from broader social media platforms, such as Facebook.

5. The Business of European Platforms Across Industries

In this chapter, we provide insights across industries (see Table 4 for a summary).

5.1. Business Models of European Platforms Across Industries

Three observations are particularly noteworthy when looking at the business models of European platforms in e-commerce, food delivery, health and care, and social networking.

First, surveying **business model types**, in all industries but e-commerce there are European platforms that follow the matchmaker business model, characterised by only providing the essential technological infrastructure to facilitate transactions and match platform sides – and nothing more. Among some platforms in the food delivery industry and the e-commerce industry we observed a more integrative and service-oriented approach to facilitating transactions, such as integrating a third party (e.g. couriers in food delivery, logistics providers in e-commerce), which we refer to as the full-service business model. Another interesting observation pertains to the big-picture business model that relies on information platforms. This model was observed in e-commerce as well as in health and care, indicating that different types of platforms (marketplaces and information platforms) can exist in the same industry, serving different customer needs. On the other hand, information platforms that are the basis of the community business model were only observed among social network platforms. Thus, some business models and underlying platforms might be

characteristic of a specific industry.

Second, when it comes to **value capture**, commissions are the dominant income sources in the surveyed industries in the European platform economy across different business models. Subscriptions and advertising, the main income sources for Google and Facebook, are mainly relevant for social networking platforms and information platforms in the health and care domain.

Third, **information platforms** are not only characteristic of the social network industry, but are also observable in e-commerce as well as health and care. This is surprising, as one could assume that information platforms are specific for the social networking industry, which revolves around information goods and without the exchange of money between individuals. However, we found that there is also a place for information platforms in industries in which physical goods or services are transacted.

5.2. Competitive Strategies of European Platforms Across Industries

We structure our observation according to the three basic competitive strategy types: price-and-size, differentiation and expansion.

We rarely observed platforms pursuing the **price-and-size strategy** of aiming to dominate a large part of an industry within and across a country or geographic region. Only large platforms in food delivery industries seem to have the ambition to compete using the winner-takes-all strategy pursued by global players such as Amazon or Alibaba. This might be because European platforms are latecomers in the surveyed industries, which would make a catch-up in that regard a challenging option. Food delivery, by contrast, is a young industry, indicating that it might be an important factor to be the first, competing at a larger and more resourceful scale. There might be incentives for platforms to pursue this strategy variant when there is no need to differentiate from leaders (because there are none).

With respect to **differentiation strategies**, European platforms seem to vary greatly in how they make themselves distinct. Specifically, we found three niches. (1) One niche is the product niche – platforms positioning within this niche offer specific product categories of an industry. European social networking platforms focus on dating, while delivery platforms focus on subsegments of food (e.g. restaurants, groceries, and ever more specific food niches). A particular relevant product niche is exclusivity, especially pursued by European platforms in food delivery and social networking. This might imply that for offerings that pertain to the private lives of customers – eating and engaging with others – exclusivity is one important way to compete. (2) A further niche is ecological sustainability. Several platforms in e-commerce and food delivery portray themselves as more sustainable than non-European platforms, especially with regards to ecological sustainability. We rarely found a dedicated emphasis on social sustainability – this might imply that ecological sustainability is considered as a better way to differentiate. (3) Platforms across all the observed industries except social networking tend to position themselves in distinct ways in terms of the underlying technological architecture. This could imply that the two aforementioned product-related differentiations (product niche and ecological sustainability) are insufficient these days to compete with dynamic rivals. To sustain a competitive advantage over time, what underpins transactions needs to be distinct in addition to the distinct traded or demanded products .

With regards to the **expansion strategies** of European platform industries, two aspects are noteworthy. (1) Across all the surveyed industries, the enlargement of geographical scope was an important way to grow and compete. This implies that platforms that have performed well in one country or region have considerable potential for scaling to other countries. (2) Platforms in all sectors except the social networking industry also engaged in platform envelopment. This could imply that once a platform attracts a sufficient user base to offer specialised product categories, platforms consider expanding their offering to related products.

Industry	<i>E-commerce</i>	<i>Food Delivery</i>	<i>Health and Care</i>	<i>Social Networking</i>
Business Model Types	<p>Full-service business model (Create value by facilitating transactions and offering innovative services; capture value with commissions)</p> <p>Big-picture business model (Create value by connecting consumers with retailers; capture value with ads or commissions)</p>	<p>Full-service business model (Create value by facilitating transactions with consumers, restaurants and couriers and innovative services; capture value with commissions)</p> <p>Matchmaker business model (Create value by connecting restaurants and consumers; capture value with commissions)</p>	<p>Big-picture business model (Create value by connecting consumers with professionals; capture value with ads or public funding)</p> <p>Matchmaker business model (Create value by facilitating transactions; capture value with commissions)</p>	<p>Community business model (Create value by establishing and providing access to a community of users, capture value with ads or membership fees)</p> <p>Matchmaker business model (Create value by facilitating transactions; capture value with commissions, membership fees, or subscriptions)</p>
Prize-and-size	-	Winner-takes-all	-	-
Differentiation	Product niche Ecological sustainability Technological architecture	Product niche Ecological sustainability Technological architecture	Product niche Technological architecture	Product niche
Expansion	Enlargement of geographical scope Platform envelopment	Enlargement of geographical scope Platform envelopment Mergers and acquisitions	Enlargement of geographical scope Platform envelopment Mergers and acquisitions Enlargement of geographical scope Platform envelopment	Enlargement of geographical scope

Table 4: Analytical comparison of business models and competitive strategies of European platforms across industries

6. Conclusion

The rise of platform businesses in Europe warrants investigation into how these platforms manage value and compete. Focusing on business models and competitive strategies in e-commerce, food delivery, health and care, and social networking industries across Europe, this report attempts to contribute to this.

There are two main takeaways from our study. First, the European platform business appears to be different from the iconic model of the ‘mega-platform business’, as pioneered by GAFAM. A noteworthy difference pertains to differentiation: while European platforms tend to differentiate, they vary in the ways they make themselves distinct, ranging from product categories to an emphasis of ecological sustainability. Second, in contrast with Silicon Valley start-ups with no history or physical assets such as Uber, which rely on pure indirect network effects to disrupt existing businesses and pursue multiple M&A activities, the success of European platforms might hinge more on complementing established businesses and other incumbent institutions in the same industry, including public partners to some extent. This might be for historical reasons. European startups have (and have had) less access to venture capital, and several successful platforms were instead built by incumbents who had less interest in disrupting, and more interest in finding ways to use new technologies to complement their existing business. Europe’s regulatory environment might also explain why Europe’s platforms are incentivised to work with existing arrangements instead of against them.

Our report also offers implications for the practice of platform business. First, owners and managers of European platforms can utilise these insights to gain insights into their industries or, if their platform is one of those surveyed, to reflect on how they manage value and compete against their counterparts. Of particular interest are the various ways to differentiate, such as by emphasising the ecological sustainability of a platform’s products and specialising in certain product categories. While this kind of positioning might not lead to domination of an industry across countries, it sets the ground towards sustainable growth and a sustainable economy. Second, incumbent firms can use our insights to step into the platform business; in particular, “a European way” of platform business whereby incumbents transform and are not replaced by newcomers. IKEA’s move to acquire TaskRabbit, a gig-economy platform, provides a case in point. Mila, a platform in which individuals can find experts in their neighborhood – both professionals or experienced individuals – was recently acquired by Swisscom. Third, policy makers, industry associations and trade unions are provided with insights that enable situational policy-making and lobbying. In particular, it seems important to not go for a “one-size fits it all” approach that does not differentiate between business models or competition strategies.

The platform business is here to stay. The only question is what role European platforms will play in the future platform business, both within and outside of Europe. As we detail in this report, the pluralism of the Europe platform business might become an important source of future competitive advantage.

7. REFERENCES

- Abraham, S. (2013). Will Business Model Innovation Replace Strategic Analysis? *Strategy & Leadership*, 41(2), 31-38.
- Armstrong, M. (2006). Competition in Two-Sided Markets. *The RAND Journal of Economics*, 37(3), 668-691.
- Arthur, W. B. (1996). Increasing Returns and the New World of Business. *Harvard Business Review*, 74(4), 100-109.
- Bertelè, U., & Chiesa, V. (2001). Competitive Strategies: Organizational. In N. J. Smelser & P. B. Baltes (Eds.), *International Encyclopedia of the Social & Behavioral Sciences* (pp. 2436-2440). Oxford: Pergamon.
- Boyd, D., & Ellison, N. B. (2007). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210-230.
- Casino Group. (2014). Cnova Launches Cdiscount in Brazil: Cdiscount.Com.Br. https://www.groupe-casino.fr/en/?post_type=communiqu&p=4471, Retrieved February 1st 2022.
- Casprini, E., Di Minin, A., & Paraboschi, A. (2019). How Do Companies Organize Nascent Markets? The Blablacar Case in the Inter-City Shared Mobility Market. *Technological Forecasting and Social Change*, 144, 270-281.
- Cennamo, C. (2021). Competing in Digital Markets: A Platform-Based Perspective. *Academy of Management Perspectives*, 35(2), 265-291.
- Cennamo, C., Ozalp, H., & Kretschmer, T. (2018). Platform Architecture and Quality Trade-Offs of Multihoming Complements. *Information Systems Research*, 29(2), 461-478.
- Cennamo, C., & Santalo, J. (2013). Platform Competition: Strategic Trade-Offs in Platform Markets. *Strategic Management Journal*, 34(11), 1331-1350.
- Constantinides, P., Henfridsson, O., & Parker, G. G. (2018). Platforms and Infrastructures in the Digital Age. *Information Systems Research*, 29(2), 381-400.
- Cusumano, M. A., Gawer, A., & Yoffie, D. B. (2019). *The Business of Platforms: Strategy in the Age of Digital Competition, Innovation, and Power*. Haper Collins
- Delivery Hero (2021). Delivery Hero around the world. URL: <https://www.deliveryhero.com/brands-countries/>, Retrieved February 3rd 2022.
- e-commerce Germany news (2021). 12 Leading Marketplaces in Europe. URL: <https://ecommercegermany.com/blog/12-leading-marketplaces-europe>, Retrieved February 3rd 2022.
- Eisenmann, T., Parker, G., & Van Alstyne, M. (2011). Platform Envelopment. *Strategic Management Journal*, 32(12), 1270-1285.
- European Commission (2018). Communication on Enabling the Digital Transformation of Health and Care in the Digital Single Market; Empowering Citizens and Building a Healthier Society. URL: <https://digital-strategy.ec.europa.eu/en/library/communication-enabling-digital-transformation-health-and-care-digital-single-market-empowering>, Retrieved February 3rd 2022.
- European Commission (2021). Digitising European Industry. URL: <https://ec.europa.eu/digital-single-market/en/digitising-european-industry>, Retrieved February 3rd 2022.
- Evans, P. C., & Gawer, A. (2016). *The Rise of the Platform Enterprise: A Global Survey*.
- Falck, O., & Koenen, J. (2020). Industrial Digital Economy – B2B Platforms. URL: <https://english.bdi.eu/publication/news/Industrial-digital-economy-B2B-platforms/>, Retrieved February 3rd 2022.
- FAZ (2022). Delivery Hero Übernimmt Mehrheit an Glovo. URL: <https://www.faz.net/aktuell/wirtschaft/unternehmen/delivery-hero-uebernimmt-mehrheit-an-glovo-17710809.html>, Retrieved February 3rd 2022.
- Friederici, N., Wahome, M., & Graham, M. (2020). *Digital Entrepreneurship in Africa: How a Continent Is Escaping Silicon Valley's Long Shadow*. London: MIT Press.
- Gawer, A. (2014). Bridging Differing Perspectives on Technological Platforms: Toward an Integrative Framework. *Research Policy*, 43(7), 1239-1249.
- Gawer, A. (2021). Digital Platforms' Boundaries: The Interplay of Firm Scope, Platform Sides, and Digital Interfaces. *Long Range Planning*, 54(5), 102045.
- Gegenhuber, T., Schüßler, E., Reischauer, G., & Thäter, L. (2022). Building Collective Institutional Infrastructures for Decent Platform Work: The Development of a Crowdwork Agreement in Germany in Organizing for Societal Grand Challenges. *Research in the Sociology of Organizations*, 79, 43-67.
- Goldman, A. (2021). Online Marketplaces in Europe: Dynamic, Diverse and Disjointed. URL:

- <https://www.webretailer.com/b/online-marketplaces-europe/>, Retrieved February 3rd 2022.
- Graham, M., Hjorth, I., & Lehdonvirta, V. (2017). Digital labour and development: impacts of global digital labour platforms and the gig economy on worker livelihoods. *Transfer: European Review of Labour and Research*, 23(2), 135-162.
- Handelsblatt (2020). Hellofresh kauft in USA Anbieter von Fertiggerichten. URL: <https://www.handelsblatt.com/unternehmen/handel-konsumgueter/expansion-hellofresh-kauft-in-usa-anbieter-von-fertiggerichten/26649074.html>, Retrieved February 3rd 2022.
- Handelsblatt (2021): Liefer-Supermarkt Flink verbündet sich mit Rewe – und holt so im Kampf gegen Gorillas auf. URL: <https://www.handelsblatt.com/unternehmen/handel-konsumgueter/lieferdienste-liefer-supermarkt-flink-verbuedet-et-sich-mit-rewe-und-holt-so-im-kampf-gegen-gorillas-auf/27254736.html>, Retrieved February 3rd 2022.
- Huws, U., Spencer, N., Syrdal, D. S., & Holts, K. (2019). Work in the European Gig Economy: Research Results from the UK, Sweden, Germany, Austria, the Netherlands, Switzerland and Italy. FEPS, UniGlobal and University of Hertfordshire.
- Kässi, O., & Lehdonvirta, V. (2018). Online Labour Index: Measuring the Online Gig Economy for Policy and Research. *Technological Forecasting and Social Change*, 137, 241-248.
- Kenney, M., & Zysman, J. (2016). The Rise of the Platform Economy. *Issues in Science and Technology*, 32(3), 61-69.
- Kholod, D. (2020). 10 Food Delivery Startups Smashing It in 2020. URL: <https://www.eu-startups.com/2020/05/10-food-delivery-startups-smashing-it-in-2020/>, Retrieved February 3rd 2022.
- Kretschmer, T., Leiponen, A., Schilling, M., & Vasudeva, G. (2022). Platform Ecosystems as Metaorganizations: Implications for Platform Strategies. *Strategic Management Journal*, forthcoming.
- Lee, E., Lee, J., & Lee, J. (2006). Reconsideration of the Winner-Take-All Hypothesis: Complex Networks and Local Bias. *Management Science*, 52(12), 1838-1848.
- Lehdonvirta, V., Kässi, O., Hjorth, I., Barnard, H., & Graham, M. (2019). The Global Platform Economy: A New Offshoring Institution Enabling Emerging-Economy Microproviders. *Journal of Management*, 45(2), 567-599.
- Lehdonvirta, V., Margaryan, A., & Davies, H. (2019). Skills Formation and Skills Matching in Online Platform Work: Policies and Practices for Promoting Crowdworkers' Continuous Learning (Crowdlearn). URL: <https://www.oii.ox.ac.uk/research/projects/crowdlearn/?publications>, Retrieved February 3rd 2022.
- Lehdonvirta, V., Park, S., Krell, T., & Friederici, N. (2020). Platformization in Europe: Global and Local Digital Intermediaries in the Retail, Taxi, and Food Delivery Industries. HIIG.
- Lewin, A. (2019). The Food Delivery Startups Compared. URL: <https://sifted.eu/articles/food-delivery-startups-europe/>, Retrieved February 3rd 2022.
- Lewin, A. (2020). What's Next for On-demand Food Delivery? URL: <https://sifted.eu/articles/on-demand-food-delivery/>, Retrieved February 3rd 2022.
- Mair, J., & Reischauer, G. (2017). Capturing the Dynamics of the Sharing Economy: Institutional Research on the Plural Forms and Practices of Sharing Economy Organizations. *Technological Forecasting and Social Change*, 125, 11-20.
- Parker, G., Petropoulos, G., & Van Alstyne, M. (2022). Platform Mergers and Antitrust. *Industrial and Corporate Change*, forthcoming.
- Porter, M. E. (1998). *On Competition*. Boston: Harvard Business School Press.
- Reischauer, G. (2018). Industry 4.0 as Policy-Driven Discourse to Institutionalize Innovation Systems in Manufacturing. *Technological Forecasting & Social Change*, 132, 26-33.
- Reischauer, G., & Mair, J. (2018a). Platform Organizing in the New Digital Economy: Revisiting Online Communities and Strategic Responses. *Research in the Sociology of Organizations*, 57, 113-135.
- Reischauer, G., & Mair, J. (2018b). How Organizations Strategically Govern Online Communities: Lessons from the Sharing Economy. *Academy of Management Discoveries*, 4(3), 220-247.
- Reischauer, G., Güttel, W., & Schüßler, E. (2021). Aligning the Design of Intermediary Organisations with the Ecosystem. *Industry and Innovation*, 28(5), 594-619.
- Reischauer, G., & Ringel, L. (2022). Unmanaged Transparency in a Digital Society: Swiss army knife or double-edged sword? *Organization Studies*. Forthoming. DOI:10.1177/01708406221106329
- RetailDetail BV (2020). Bol.Com Expands to French-speaking Part of Belgium. URL: <https://www.retaildetail.eu/en/news/general/bolcom-expands-french>, Retrieved February 3rd 2022.

- Rietveld, J., & Schilling, M. A. (2021). Platform Competition: A Systematic and Interdisciplinary Review of the Literature. *Journal of Management*, 47(6), 1528-1563.
- Rochet, J.-C., & Tirole, J. (2003). Platform Competition in Two-Sided Markets. *Journal of the European Economic Association*, 1(4), 990-1029.
- Savitz, A. W., & Weber, K. (2006). *The Triple Bottom Line: How Today's Best-Run Companies Are Achieving Economic, Social, and Environmental Success - and How You Can Too*. San Francisco: Jossey-Bass.
- Stallkamp, M., & Schotter, A. P. J. (2021). Platforms without Borders? The International Strategies of Digital Platform Firms. *Global Strategy Journal*, 11(1), 58-80.
- SZ (2020). Secondhand-Plattformen: Aus zwei mach eins. URL: <https://www.sueddeutsche.de/wirtschaft/kleiderkreisel-vinted-wechseln-1.5124315>, Retrieved February 3rd 2022.
- Täuscher, K., & Laudien, S. M. (2018). Understanding Platform Business Models: A Mixed Methods Study of Marketplaces. *European Management Journal*, 36(3), 319-329.
- TechCrunch (2021). Flink, the Berlin-based grocery delivery startup that operates its own 'dark stores', raises \$52M. TechCrunch. URL: <https://tcrn.ch/3xtBADx>, Retrieved February 3rd 2022.
- Teece, D. J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning*, 43(2-3), 172-194.
- Uzunca, B., Rigtering, J. P. C., & Ozcan, P. (2018). Sharing and Shaping: A Cross-Country Comparison of How Sharing Economy Firms Shape Their Institutional Environment to Gain Legitimacy. *Academy of Management Discoveries*, 4(3), 248-272.
- Vaskelainen, T., & Münzel, K. (2018). The Effect of Institutional Logics on Business Model Development in the Sharing Economy: The Case of German Carsharing Services. *Academy of Management Discoveries*, 4(3), 273-293.
- Vaughan, R., & Daverio, R. (2016). Assessing the Size and Presence of the Collaborative Economy in Europe. URL: <http://ec.europa.eu/DocsRoom/documents/16952/attachments/1/translations/en/renditions/native>, Retrieved February 3rd 2022.
- Wirtschaftswoche (2021a). Hellofresh Gewinnt Millionen Neukunden – Kurs Sinkt Trotzdem. URL: <https://www.wiwo.de/unternehmen/dienstleister/lieferdienste-hellofresh-gewinnt-millionen-neukunden-kurs-sinkt-trotzdem/27157678.html>, Retrieved February 3rd 2022.
- Wirtschaftswoche (2021b). Hellofresh Mit Mehr Umsatz Und Sprung in Gewinnzone. URL: <https://www.wiwo.de/unternehmen/dienstleister/kochboxenversender-hellofresh-mit-mehr-umsatz-und-sprung-in-gewinnzone/26964704.html>, Retrieved February 3rd 2022.
- Wolt (2021). About. URL: <https://wolt.com/en/about>, Retrieved February 3rd 2022.
- Wood, A. J., Graham, M., Lehdonvirta, V., & Hjorth, I. (2019). Good Gig, Bad Gig: Autonomy and Algorithmic Control in the Global Gig Economy. *Work, Employment and Society*, 33(1), 56-75.