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PLATFORM ECONOMY AS AN INEVITABLE DEVELOPMENT OF DIGITAL BUSINESS

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Abstract

The growth of digital platforms generates strong network effects and dynamics of all winners, which disrupts systemic growth and further stimulates competition between them. Despite the positive effects, under certain conditions, these same functions make the currently operating platforms vulnerable to competitive strategic moves through platforms where participants can add value for themselves and at the same time avoid pre-investment in value added generation.

In this analysis, we use an interpretive synthesis of different theoretical concepts of platform business to theorize these strategies as a new category and their distinctive features. Overall, the study demonstrates the potential for unconventional and opportunistic strategies to compete on platforms that extend beyond more traditional ones, such as network quality, diversity and size.

Keywords: *platform economy; business models; digital ecosystem*

JEL Codes: *M20, M21, M29*

1. Introduction

Modern markets open up new opportunities for radical changes in the organization of the economic system. As a rapidly evolving category of market structures, platforms provide opportunities for rapid transactions between independent participants to create an optimal and successful business environment (Gawer, 2014). As platforms for conducting monetary transactions, they are structured as open business models for connecting independent participants for inclusion in a value chain (Evans and Gawer, 2016). By multiplying the network effects between

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supply and demand, they pursue and successfully achieve rapid growth and realise potential in pursuit of a dominant position in the market.

Scientists from various fields are interested in these types of organizations, such as (McIntyre and Srinivasan, 2016; Gawer, 2014), and even suggest that these organizations may become a significant organizational model for a new economy (Kenney and Zysman, 2016).

2. Analysis and discussion

To date, however, there is a lack of understanding of the distinctive features of the business model in these markets. While scientists from the late 1990s were interested in effort-based markets on the Internet (Bakos, 1998), the situation is no different today. Existing research focuses mainly on business-to-business transactions as opportunities for more efficient supply and added value (Choudhury et al., 1998). The latest technological advances, and in particular artificial intelligence, the possibilities for new search algorithms and the widespread use of mobile devices, have allowed the development of innovative business models and marketing activities targeting various consumer markets, including transport (Uber), accommodation (Airbnnb) or finance (Credit club). Such markets often provide completely renewed value chain offerings, apply new revenue generation models, or revalue private individuals' assets to create new added value (Parker et al., 2016). Their attractiveness is evidenced by more than 30 companies in the market, which currently have a market capitalization of more than a billion dollars (CB Insights, 2017).

The lack of a clear market definition of platform businesses creates a need for a more holistic perspective on how markets create, deliver and add value through their business model configurations. Therefore, to meet this need, it is necessary to study the distinctive types of business models in the market through a systematic study of their elements.

In the context of what has been said, it is necessary to answer two questions:

1) What are the types of business models for organizing the platform economy?

2) What is the value of the mechanisms for creating, delivering and adding value to these business models?

The analysis shows the importance of the business model concept to classify platform analysis and research. Empirical research enriches theoretical formulations, shedding light on the extent to which digital technologies expand the possibilities for creating, delivering and adding value with different types of platforms. Our findings relate to an analysis of the available literature on the market and platforms and how they can contribute to a more integrative and holistic approach to the research of this type of organizations. Platform business model - this is the most revolutionary model to date. What do Google, Facebook, Alibaba, Uber, and Airbnb have in common, apart from being one of the most expensive companies in recent years, even more so in terms of COVID-19? They are all successful business platforms!

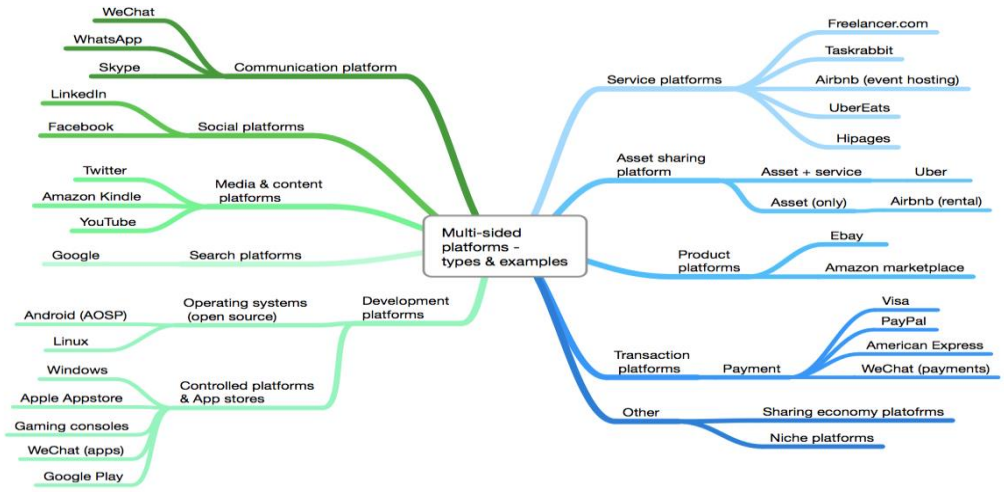
The success of these companies has turned the platform business model into the sacred grail in the world of business models. It is not difficult to find that the platforms do remarkably little compared to traditional companies. They often act as intermediaries in meeting interests. Uber, AirBnB, eBay, Alibaba and most other platforms bring together service providers and service users. It should be noted that the platforms do not provide these services alone. Through other platforms, they connect sellers and buyers of products and services. In addition, they sell the products themselves but do not own the stocks, much less produce them.

Platform theory can be broadly classified:

1. Platform theory of technology / theory of platform components.
2. Platform product theory.

In its first version, the platform theory refers to "common core technologies in the configuration or launch of products" or "common parts that are modulated and used in their diversity and added value." The second meaning of the theory refers to "products and services that have value only when combined with products, services or information provided by other players (such as companies, consumers). "The common aspect between these two platform theories is that they serve as the basis for different products and services. The term 'platform' originally comes from the French word 'plate', which means a horizontal surface or plane. The official definition of the term is considered authorial for Professor Andrei Higiu, a leading professor at Harvard University, who defines multilateral platforms as he follows: "Multilateral platforms are technologies, products or services that create value above all by allowing direct interactions between two or more groups of customers or participants."

Graff 1. The Platform' three



Source: Uenlue, m. (2017). platform business model [part 1]: the most revolutionary business model right now, https://innovationtactics.com/platform-business-model-1/

3. Types of platforms

Although all platforms share the same basic business model (Graff 1), not all platforms are the same. Studies have identified 14 different types of platforms that are most commonly used. They are organized by the type of value that is exchanged in the main transaction of the platform. The main value that is exchanged is (by type of business on the platform):

1. Services market: exchange of intangible assets or services

2. Product market: physical products, materially present

3. Platform for payments between economic agents: payment (P2P or B2C)

4. Investment platform: investment (money in exchange for a financial instrument, whether equity or loan, etc.)

5. Social networks: a network in which the main transaction is a model of interaction with the agreement reached between the two parties

6. Communication platform: direct social communication (e.g. messages)

7. Development platforms

8. Closed development platform: software built to access data (usually via API)

9. Controlled development platform: software built in a controlled, integrated development environment

10. Open development platform: open-source and free software

11. Content platforms

12. Social: a content platform in which the main transaction focuses on discovering and interacting with other people

13. Media: a content platform in which the main transaction focuses on discovering and interacting with the media

14. Social gaming platform: a gaming interaction involving multiple users who compete or collaborate

The conformity of the design of the platform with its type is essential for its success. Platforms that do not meet this condition are usually overwhelmed by the competition. The type of platform affects everything from the design of the main transaction to how the company handles the four functions, making it one of the most

fundamental distinctions that any business on the platform needs to understand. Understanding which type of platform, the business fits into should always be one of the first steps in designing a platform.

4. Digital platform ecosystems

M. Gawer and V.A. Cusumano (2002) states that the role of the platform leader aims to have a strong controlling influence on the 'ecosystem', which includes the platform and complementary products. Following the relationship between the platform leader and additional players, we need to turn our attention to Ecosystem Theory (Adner, 2006). We need to emphasize the contribution of Iansiti and Levien (2004), who used the following description of the ecosystem concept: survival and development. The role of companies in the ecosystem is then classified into keystones, dominators, center owners and niche players. Indicators such as productivity, stability and niche creation are used to measure the health of an ecosystem, and they show that a healthy ecosystem requires rules and a company to play a crucial role in the future development of this ecosystem. In addition, in Iansiti and Levien (2004), *the platform is a series of solutions that allow ecosystem members to use the platform through access points or interfaces, and the keystone is a "package" for sharing ecosystem and value*.

Classical economic logic views platforms as multilateral markets that allow direct interactions between two or more interacting parties (Hagiu, 2014; Hagiu and Wright, 2015). In this view, platforms are conceptualized as interfaces that mediate transactions between parties, such as networks of buyers and sellers or complementary users (McIntyre and Srinivasan, 2017; Rochet and Tirole, 2003). This mediation function allows the parties to interact and create value. However, the new literature further defines different types of digital platform markets, given that they lend themselves to distinctly different economic and strategic logic. Cennamo (2019) distinguishes between multilateral transaction markets that focus on linking transactions from other countries (e.g. Amazon Marketplace and Uber), complementing innovation markets that relate to platform ecosystems that facilitate further innovation by participants and integrated end-user offerings (e.g., Apple iOS and Google Android) and information markets that facilitate the search and exchange of user information (e.g., Twitter, Facebook, and Google Search). The present study examines the second of these types - complementary innovation markets. This category often includes the tensions we mentioned in the introduction: the need for existing platform ecosystems to facilitate the ability to generate consumer visitors, leading to potential vulnerabilities.

According to Kimmo Karhu and Paavo Ritala, (2020), the platforms that correspond to additional innovation markets, and according to Kimmo Karhu and Paavo Ritala, (2020) include three central features: the core of the platform, the marginal resources and the add-ons. Together with users and complementary

elements, they make up the platform's ecosystem. The unique competitive advantage of platform ecosystems lies in their ability to provide a coordination structure that integrates new but sufficiently reliable specific additions into its structure (Jacobides et al., 2018). In this sense, the digital platform - often managed by a platform leader, plays a center or central control point around which users' multifaceted ecosystem and complements are formed. The same entity typically owns the core of the platform, which technically refers to a renewable code base to which additions of new agents can be added, along with the interfaces through which they interact (Baldwin and Woodard, 2008). From what has been said so far, a distinction must be made between complements and extensions, where the former refers to organizational or individual participants, such as developers, who provide content that creates added value to users of the platform. The latter are separate units of such content, such as applications with a specific practical focus.

Of particular importance are the so-called. "Border resources" of the platform (Ghazawneh and Henfridsson, 2013), representing a wide variety of interacting and supporting resources, including application programming interface, software development kits, as well as markets that allow complementaries to provide added value and are additions to the platform. In an ecosystem on a digital platform, add-ons are innovated, which means that the interfaces between the core of the platform and the add-ons are just technical design rules.

According to Thomas et al. (2014), digital platform ecosystems create value through the interaction between different market parties. This value creation process relies heavily on the platform's ability to attract a sufficient number of active users and ancillary elements and to generate cross-network effects among these groups. Therefore, to attract input from third countries and encourage innovation, border resources can be used to open up the platform in two ways: (Boudreau, 2010). First, platform owners can access third parties to contribute add-ons by offering an application programming interface and software development kits. Second, to further promote collaboration with complementaries, platform owners can open up and share the platform's core resources and intellectual property rights through open source licenses (West, 2003).

In addition to automating the value creation process, platform owners need to design value-added management mechanisms, describing revenue models and rules on how different parties can benefit and generate benefits from their platforms. Most of the existing research on the operation of the strategies for the operation of the platform. A. Hagiu (2014) suggests that owners and complementary platforms allocate value based on joint pricing and other rules based on which the platform operates, as well as through market mechanisms in which the value of complementary entities is determined by the parameters of consumer transactions. For these purposes, platform owners can identify alternative types of marginal resources, such as market space and revenue-generating mechanisms, such as customer purchases through the

specific application. Revenue flow is based on many activated models, such as subscriptions or one-time consumer purchases or ads. The platform leader may also choose to limit his business to specific segments, thus allowing complementaries to do business in other segments. (Gawer and Cusumano 2008). For example, Google's Android business generates revenue from advertising services and market revenue, leaving device sales primarily to Open Handset Alliance (OHA) manufacturers and returning 70% of market revenue to complementary. Importantly, it is widely accepted in the literature (as in practice) that all actors in platform ecosystems have been involved in both value creation and value addition within a given ecosystem. That is, they competed for their share of value-added, according to mutually imposed rules and management schemes, as well as the ability of individual complementaries to attract consumers and generate revenue.

Conclusions

Through our article we have revealed a number of conclusions and questions related to how digital platforms work. In our discussion, we will look at and discuss some of the patterns, the most obvious problems we have found, and this is the basis for further work on developing a framework that seeks to limit some of the effects of current theories on platform development. digital business based on the current theory, drawing ideas from the conclusions we have formulated.

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