Entrepreneurial dynamics in two-sided platforms: the influence of sides in the case of Friendz

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Abstract

Purpose – Two or multi-sided platforms - defined as those companies that aim to connect two or more groups of customers leveraging the opportunities provided by indirect network externalities – got massive attention from both scholars and practitioners over the last decade. Entrepreneurship scholars mainly focused on the platform's ability to enable entrepreneurial ventures for the complementors' side, exploring the network-centric view. This study aims to expand it by exploring the broader influence that sides can have on the platform provider's entrepreneurial decisions over time, during the evolution of the two-sided platform.

Design/methodology/approach – The study is based on a longitudinal single case study developed over five years. The research presents the born and evolution of Friendz, an Italian two-sided platform.

Findings – The research presents a four-phases evolution process that shows how the entrepreneurs may first leverage an existing platform to develop a new venture and then develop his/her own two-sided platform. In this latter phase, the findings show how the sides may actually influence the platform provider's entrepreneurial decisions, both in terms of value proposition design, but also regarding the creation of new ventures.

Research limitations/implications – The study contributes to the two-sided platform literature highlighting new evolutionary paths that expand current literature and highlight the doubling platform approach. Moreover, it contributes to the entrepreneurship literature offering a novel perspective on the entrepreneurial dynamics in two-sided platforms by re-balancing the power between the platform provider and the sides within the double network-centric view.

Practical implications – From a practitioners' perspective, this study offers an evolutionary path and specific tactics related to the evolution of an entrepreneurial venture based on a two-sided platforms that may inspire entrepreneurs working on two-sided platforms on how to use existing platforms and on the management of sides and the value propositions used to target them.

Originality/value – This study takes a novel perspective at the intersection between platforms and entrepreneurship literature streams, exploring the power that sides have over the platform provider in shaping the platform's entrepreneurial evolution. In doing so, it proposes a double network view on two-sided platforms and highlights three network-related tensions that can guide the evolution of the two-sided platforms.

Keywords Two-sided platforms, Platform development, Business model, Entrepreneurship, Platform dependent entrepreneurs, Network-centric view

Paper type Research paper

1. Introduction

Two-sided platforms have become one of the most successful business configurations of the last two decades. Digital services such as Google, Airbnb, PayPal, eBay, and many more are based on platforms that let two or more groups of participants interact. Not surprisingly, this phenomenon has encountered increasing academic scrutiny: first, in economic literature

(Rochet and Tirole, 2003; Rysman, 2009); and subsequently, in the management literature (Ruutu *et al.*, 2017; Hänninen *et al.*, 2018).

These businesses have intrinsic differences when compared to traditional companies based on a linear value chain. Indeed, they raise several challenges that range from the need to overcome the 'chicken and egg paradox' (Caillaud and Jullien, 2003; Tani *et al.*, 2021) to the need for designing a double value proposition (Muzellec *et al.*, 2015). They offer specific interesting opportunities in terms of scalability (Choudary *et al.*, 2016) or value capturing (Trabucchi *et al.*, 2017).

These platforms' intrinsic nature tends to a strong evolutionary tension, adding sides and moving towards ecosystems where value is created and captured through complex dynamics (Trabucchi *et al.*, 2021).

Two-sided platforms have a significant role in our daily lives, from social media like Facebook, Twitter or Instagram, enabling a completely different way to communicate and enjoy contents, they revolutionized how we travel through services like Uber, Airbnb or BlaBlaCar, and impact significantly established industries, like the entertainment field with Spotify for music or Netflix for movies.

Still, their impact is going far beyond what the platform providers created with their services. Two-sided platforms have a severe impact enabling entrepreneurial behaviors, facilitating the chance to foster innovation and developing a new venture thanks to a platform's existence (e.g. Nambisan, 2017; Jacobides *et al.*, 2018).

So far, the literature has focused mainly on the role of complementors, those who rely on an innovation platform to propose their services (Gawer and Cusumano, 2014; Cusumano *et al.*, 2019). In other words, the basic platform – such as the computers created by Intel, IBM, and Microsoft – is opened to enable others to foster innovation on it, such as software developers in this example. Today, we are witnessing the diffusion of a different kind of phenomenon, having transaction platforms like social media that enable users – such as Youtuber or influencers on Instagram – to develop their own entrepreneurial ventures relying on the platform.

Most of the literature at the intersection of platforms and entrepreneurship streams of literature focuses on the role of complementors in developing entrepreneurial activities through platforms (e.g. Nambisan, 2017; Jacobides *et al.*, 2018; Cutolo and Kenney, 2020). This article aims to take a different perspective, exploring the influence that sides can have in the platform provider's entrepreneurial decisions.

To reach this goal, we build on a single case study taking the evolutionary path of a peculiar two-sided platform, the micro-influencing platform created by Friendz. We aim to show a business's evolution based on a two-sided platform through a longitudinal case study, focusing on the entrepreneurial decisions influenced by platform dynamics. In the first phase, it aims to show a peculiar tactic to start operating – stepping in a one-sided phase – an evolution of the value propositions offered to the sides and finally an evolution in the overall structure of the platform to answer to the needs of one of the two sides.

In doing so, the paper is structured as follows. The second section provides an overview of the two literature streams at the basis of this study: two-sided platforms and the entrepreneurial perspective on platforms. Then, the research design is introduced, presenting the case of Friendz and explaining the rationale for a single case study. The fourth and fifth sections introduce the findings and discuss them in the light of previous studies. Finally, the sixth section closes the paper, providing an overview of this study's theoretical and managerial contributions. It shows how this study contributes to the entrepreneurship literature by including the peculiarities that transaction two-sided platforms may have in the entrepreneurial decision-making process. At the same time, this study contributes to the two-sided platform literature, showing a peculiar business model evolution driven by the sides' needs.

2. Literature review

2.1 Defining two-sided platforms

The concept of two-sided platforms first emerged in economic literature (Rochet and Tirole, 2003). It refers to those industries where a central platform is required to act as an intermediary to link two or more groups of customers that are influenced by cross-side network externalities (Katz and Shapiro, 1985).

The primary examples are credit cards, which establish a link between end-users and merchants, or game consoles, which form a link between gamers and developers. They have been considered to utilize the two-sided platforms' dynamics from an economic perspective (Rysman, 2009).

If, at first glance, each business is labeled as "two-sided" – having a demand and a supply-side – the necessary conditions to qualify as a two-sided platform become stricter (Evans, 2003). The existence of the cross-side network (or indirect) externalities between the two sides represents the key element that defines this peculiar market structure.

The concept of two-sidedness became a design variable of business activities (Hagiu and Wright, 2015). Equally, how the platform provider's kind of relationships may vary across different pairs of sides (Evans, 2003). In some cases, the platform enables a direct transaction between the two groups of customers, pairing up players from either side (Choudary et al., 2016; Trabucchi et al., 2021). These can be described as Transactional Two-Sided Markets or shortly as transaction platforms (Cusumano et al., 2019). The link created between the two sides is less obvious in other cases, enabling an indirect transaction between the two groups. These are Non-Transactional Two-Sided Platforms, representing the classical advertisement-based model or a more complex relationship created between the two sides (Filistrucchi et al., 2014). This type of two-sided platform is the least studied in the field. Still, it enables interesting mechanisms ranging from client-as-a-target strategies that exploit the value of a community through advertising to client-as-a-source dynamics that exploit the power of a (digital) community exploiting user-generated data (Trabucchi et al., 2017).

The managerial literature considered different perspectives on the growing phenomenon, such as the impact and the role of the platforms at the industry level or the individuals' perception and appropriation. On the one hand, these businesses' potential impact on traditional industries, such as the retail market, has been questioned (Hänninen et al., 2018). Two-sided platforms have been considered to redesign existing businesses (Parmentier and Gandia, 2017) or even allow new markets to emerge (Huotari et al., 2017; Inoue and Tsujimoto, 2018). On the other hand, the perspective of the players coming on board with the platforms has commonly been considered in the recent literature, for example, in terms of motivational drivers, especially on the supply side (Clauss et al., 2019), or in terms of rating systems and reviews of the cross sides (Chen et al., 2017).

Two-sided platforms have often been mentioned as business structures that can scale rapidly (Rifkin, 2014) and reach relevant industry positions (Iansiti and Lakhani, 2017). Moreover, they tend to have a modular structure that lets them expand over time (Trabucchi et al., 2021), creating an intricate activity system (Zhao et al., 2019).

Recent literature often discussed two-sided platforms jointly with the broader concept of ecosystems (e.g. Wang and Miller, 2020; Nambisan et al., 2019), referring to the fact that digital platforms utilize an ecosystem of agents to co-create value (Hein et al., 2019).

Despite the opportunities, once the platform is operating, creating an effective and efficient two-sided platform is a huge challenge. The existence of a basic value proposition (matchmaking) that enables the overall system's existence is only the starting point.

First, the so-called "chicken and egg paradox" has to be solved, as the system is worthless for both sides if one of the sides is not on board (Caillaud and Jullien, 2003, Trabucchi, 2020; Tani et al., 2021). Shifting the attention from one side to the other clearly demonstrates the need for a great effort in terms of value proposition design, as matchmaking may not be

enough to attract and retain customers who require specific reasons to join the platform (Muzellec *et al.*, 2015). The different dynamics that increase the participation in the system have been studied, including the chance to advertise the number of players on one side (Tucker and Zhang, 2010) or offer value-added services to one side to enhance their participation (Dou and He, 2016).

2.2 Entrepreneurship and platforms

The wide world of platforms has been highly studied over the last decades, defining the various types of platforms and highlighting their peculiarities (Cusumano *et al.*, 2019), creating their own literature stream (e.g. Gawer and Cusumano, 2014; Muzellec *et al.*, 2015; Täuscher and Laudien, 2018; Trabucchi *et al.*, 2021). Nevertheless, platforms have also been under the spotlight in other literature streams that studied the impact of platforms in their world. One of these streams is the entrepreneurship literature. Platforms emerged as a novel and unique setting for entrepreneurship, opening new avenues, mechanisms, and dynamics to create new ventures (Nambisan, 2017). Platforms' ability to orchestrate complex dynamics of value creation and capturing, generating consistent value flows, opened the space for entrepreneurs to create new firms on top of platforms (Nambisan, 2017; Jacobides *et al.*, 2018).

The first tipping point that links platforms and entrepreneurship is the network dimensions. Platforms' models are based on the role that networks play in creating externalities (Katz and Shapiro, 1985) that drive the overall platform value. At the same time, for entrepreneurs, the network dimension is fundamental to test assumptions, ideas, implement their ventures and attract capital (e.g. Choi and Shepherd, 2004).

Besides this parallelism, other perspectives link entrepreneurship and platform worlds. For example, platforms re-structured the economy, creating spaces that look like ecosystems that enable other businesses' existence and growth (Kenney and Zysman, 2016). This is particularly true in the world of social media platforms that played a clear role in enabling entrepreneurial ventures for its users, generating new types of jobs, and opening various value-capturing mechanisms (Secundo *et al.*, 2021).

Like social media, the sharing economy phenomenon – which has been highly powered by two-sided platforms (Sanasi *et al.*, 2020) – enables various entrepreneurial behaviors to create and join a platform (Kraus *et al.*, 2019, 2020).

Scholars focused so far on the constellations of firms, being producers, sellers, providers, and so on, that relied on platforms' opportunities to expand their businesses. Cases like Amazon, eBay, Etsy, Facebook, Google, Instagram, Yelp and so on simplified the processes to create a business and to generate income, offering entrepreneurs direct access to a large-scale market (Ghazawneh and Henfridsson, 2013; Yoffie and Kwak, 2006).

In all the settings where technological evolution is rapidly there is a huge need for flexibility both regarding who is benefiting from innovation – consumers – and who is working on it to develop new products and services – developers (Schilling, 2000). This process can be enhanced by a modular structure (e.g. Baldwin and Clark, 2000), where any producer can work on complementary innovations in the so-called innovation platforms (Cusumano *et al.*, 2019). This leads to opportunities for entrepreneurs to play a role within the innovation system built by someone else, the platform provider. This leads to various entrepreneurial implications, such as the fact that the wider is the user based the more the platform is valuable for entrepreneurs that would have a bigger potential market for their products (Venkatraman and Lee, 2004), due to the indirect network effects (e.g. Cennamo and Santalo, 2013). Still, even if the network effects determine success in platform industries, there are also multi-homing and coopetition effects among various platforms (Venkatraman and Lee, 2004). This is showing how entrepreneurs to leverage digital platforms need technological resources to launch their modules and move in the dynamics of the industry (Venkatraman and Lee, 2004).

Building on this evidence, one of the leading definitions in this domain is the concept of platform-dependent entrepreneurs, defined as "*individuals or existing organizations entering a platform market. In this regard, platform-dependent entrepreneurship is an inclusive concept that incorporates different entrepreneurial expressions that include app developers on the Apple store, individuals selling on Amazon, but also Instagram influencers and YouTubers*" (Cutolo and Kenney, 2020).

This stream of literature is particularly interesting due to the peculiarities of fostering entrepreneurship on platforms characterized by network effects and winner-takes-all dynamics (Gawer and Cusumano, 2002).

As mentioned, this literature stream's focus is on the complementors that may even decide to join the platform for entrepreneurial intent (Nambisan, 2017; Eckhardt *et al.*, 2018; Nambisan and Baron, 2019). Nevertheless, it is important to highlight how fostering entrepreneurship as complementors is different since they pursue goals with the platform as an intermediary (Nambisan and Baron, 2019).

There is a need for research in this perspective, exploring how digital technologies in the form of digital platforms enable entrepreneurship (Nambisan, 2017).

2.3 The research gap
As emerges from the literature review, entrepreneurship and platform literature streams crossed their paths on several occasions. Nevertheless, the dominant topic is related to the enabling entrepreneurial power of platforms for the complementors. Coherently, the dominant view suggests that the platform provider has a strong power in relation to the complementors (Emerson, 1962; Cutolo and Kenney, 2020). Nevertheless, recent evolution shows how entrepreneurship in digital platforms may have a network-centric view (Srinivasan and Venkatraman, 2018): networks play a critical role in legitimating the relevance of the platform for the entrepreneur and (vice versa) the network of entrepreneurs represents a necessary condition for the success of the platform itself. The first perspective (the role of the platform for entrepreneurs joining one side) is widely covered in the previous literature focusing on complementors, while the second is less explored. This study focuses on the second. Even though the power relation is balanced towards the platform provider, users on the sides may still significantly impact the platform evolution. Previous entrepreneurial literature clearly highlights the role of the voice of customers in the entrepreneurial decision-making process (e.g. Gruber, 2007; Shepherd *et al.*, 2015). Generally, entrepreneurs are more like to explore opportunities and make clear decisions when they perceive clear customer demand. This "classic" evidence in the entrepreneurial literature is challenged moving in a space where a central body, the platform, coordinates complex value dynamics (Trabucchi *et al.*, 2021) among (at least) two sets of interrelated customers. Therefore, this study's main research question is how sides can influence the platform provider's entrepreneurial decisions in the evolution of a two-sided platform?

3. Research design
To answer our research question, we conducted a longitudinal in-depth case study of the evolution of an Italian start-up, Friendz, a critical and extreme case (Yin, 2013; Siggelkow, 2007) of a firm that successfully evolves over time starting. In the very early days, it starts as a platform-dependent entrepreneur-venture on Facebook (to test the business idea) to create its own two-sided platform.

This case provided a unique opportunity to observe the platform structure's evolution longitudinally, highlighting new strategies and possibilities not addressed in previous research. Coherently with the use of single-case studies proposed by Siggelkow (2007), we see

in Friendz and extreme case, since differently from other successful two-sided platforms that evolved towards multi-sided structures adding new sides exploring the needs of the existing sides (Trabucchi *et al.*, 2021). Many examples could be made on that kind of evolution from Airbnb to Uber who added new sides (i.e. Experience providers and restaurants) or Amazon and Facebook that differentiated their services (i.e. Amazon Warehouse or Facebook Marketplace). Differently, Friendz, on the pressure of one side, created a brand-new platform that would work next to the others and potentially move some of the users from one to the other.

We adopted an inductive approach to clarify the event sequences and disentangle the overlapping of casual forces. Following the guidelines of Yin (2013), we started by analyzing the case study, identifying general patterns, developing theory through a recursive cycling process among the data, the emerging theory, and existing literature to extend and enrich our understanding of how firms span temporal boundaries in innovation search.

3.1 Research setting: the case of friendz in the smartphone application industry
According to Eisenhardt (1989), a single case study enables the observation of unconventional, interesting and extreme organizational setting where the process of theoretical interest is more transparent and easily observable.

In this respect, the smartphone application industry is ideal for our study, enabling many two-sided platforms due to its ability to link sides of the market (Täuscher and Laudien, 2018).

Among the various categories, social media is one of the most popular online activities with high user engagement rates and expanding mobile possibilities, with 3.81 billion users worldwide. Social networks enable users to communicate beyond local or social boundaries and offer possibilities to share user-generated content like photos and videos and features such as social games, which is highly changing the advertisement industry. In this relevant industry, we study the case of Friendz.

Friendz is a startup founded by Alessandro Cadoni, Daniele Scaglia and Cecilia Nostro in Italy in 2015.

They present themselves in the following way: "*Friendz is a groundbreaking startup involved in digital marketing. Our goal is to stimulate web's users in promoting brands they love through their active participation in creative campaigns tailored purposely for each company. The users' interest in participating to the campaigns is stimulated by the reward they can gain, consisting of virtual credits they can spend on e-commerce; what is necessary and can not be set aside is the user's preference for the specific product or service which has been the subject of the campaign, as this is the philosophy of Friendz. The aim of the reward is only to encourage users to take and publish high quality pictures when these are associated to the brand. Moreover, the users' contents are verified and approved by the staff before being published and made visible by other people, so that the company has a further guarantee concerning the quality of the images. Friendz is proposing as a successful instrument to solve web's users' problems such as information overload and the banner blindness. These problems are clear, given the 300 million downloads of AdBlock Plus. For this reason, what is considered as quaestio primaria – as well as our attribute – is the call for an identification of customers' preferences and the understanding of how they react to the market supply through their individual taste. The factor Friendz wants to exploit is the emotive issue the association between the product or the service and a familiar component cause to the social networks' users. This association unconsciously increases the value given to the product or the service: friends are the real influencers. Friendz is the first marketing platform that allows companies to get into people's social walls and transform their customers into influencers. We are talking about a new and unique way to make brand awareness. Moreover, thanks to the interactions between active Friendz users, it comes a considerable amount of information through which it's possible to test products, brands and/or communication tools because of their impact on collective consciousness: Friendz presents to the*

company even extremely useful data which can be analyzed in order to make qualitative e quantitative market research." (Source: Crunchbase).

Practically, Friendz is a two-sided platform that links brands who ask for digital contents through dedicated campaigns and end-users who accept the challenges, create the content and share it on the social media. The end-users select a campaign, read instructions and complete it: sharing photos on socials and they get credits and discounts. Users can, therefore, get benefits from posting pictures online.

The case's description in the next section will show the evolution of the platform over time, also highlighting how the value proposition changed and evolved. In 2017 the startup went through a 24 million euros ICO (based on Ethereum) to foster its growth.

In less than six years, they moved from being a team of less than ten people to 50 people with a passionate community of over 250k users, collaborating side by side with the biggest international brands.

3.2 Data gathering and analysis

Data collected lasted around four years, from 2016 until 2020. The researchers were all actively involved in conducting interviews and direct observations. The interviews were semi-structured; they are intentionally open-ended and assume a conversational manner. This structure leaves the respondent to highlight the most important features. This gives appropriate importance to what emerges during an interview (Yin, 2013). The average duration is roughly 60 min. Each interview was subsequently transcribed.

On several occasions, we visited the company and sought to leverage multiple data sources to exploit the value of triangulation (Eisenhardt, 1989), aiming to increase our analysis's robustness. In this direction, we independently read the various data, reaching a common interpretation through face-to-face meetings. We also shared preliminary concepts and intermediate versions of our emerging model with Friendz's founder to refine our understanding and identify misinterpretation.

Our database includes three rounds of semi-structured interviews, direct observations, and a vast archive, as described in Table 1.

To analyze the rich body of data collected, we adopted an inductive and iterative process (Strauss and Corbin, 1998), hence building and refining theory from the case study data (Eisenhardt, 1989).

4. Findings: the evolution of friendz

Friendz evolved over time, with a value proposition to its customers that evolved with the platform, often pushed by the sides, that significantly impacted the entrepreneurial decisions. In the previous section, we briefly presented the overall mission and value proposition of the company. Still, in the next sub-section, we'll go through the company's history through the main phases. For each of them, we'll present the overall business model adopted by the company, the value proposition for each side, and the triggers that brought to the following phase, highlighting the role of sides in guiding the entrepreneurs' decisions. This case's peculiarities will then be discussed through previous research lenses to contribute to scholars and practitioners.

4.1 Phase 1: a one-side approach to build the platform

I saw that the advertising word was fascinating, but also that digital marketing was reaching its saturation. When we are online, we have advertising messages everywhere. That's the maximum level of marketing, leaving behind the most important thing to use that surf online: the content posted by their friends.

(Alessandro Cadoni, Co-Founder of Friendz, January 2016)

Data types	Use in the analysis
Interviews First-round • 2 interviews with one of the co-founders ○ Main topics covered in the interviews: the creation of the start-up and the initial business model	During the first round, questions inquired about the nature of the entrepreneurial project and the initial business model Initial questions focused mainly on the process to launch the venture and the main challenges and opportunities derived by the two-sided platform structure

Second round
 	
• 3 interviews with one of the co-founders
  ○ Main topics covered in the interviews: Evolution of the platform, evolution of the business model, strategic directions
• 1 interview with the community manager
  ○ Main topics covered in the interviews: tasks in the community management, reactions to the business model evolution, emerging patterns in users' request
• 1 interview with the account manager
  ○ Main topics covered in the interviews: tasks in the account management, reactions to the business model evolution
• 6 early days users
  ○ Main topics covered in the interviews: Drivers of adoption, reactions to business model evolution
	Questions inquired about the evolution of the platform. Questions focused on how the platform evolved, regarding changes in the value proposition to end-users. For this change, users on board from the early days have been interviewed to understand their perception of the changes. Moreover, to have a more comprehensive view of the changes, the community manager and the account manager – responsible for the two sides – were interviewed

Third round • 3 interviews with one of the co-founders ○ Main topics covered in the interviews: Latest evolutions (ICO, user experience, additional services), sides management and strategic evolution towards atlantix	Questions inquired about the platform's last changes, taking a particular stand on the scalability issue that the platform lived in the last year. The last interview focused on the new business model and the last evolution of the platform
Secondary sources 53 web magazine articles and official blog posts (1) White paper (written by the company)	Secondary sources have been used to study how the platform communicates itself and to being updated on small changes (e.g. new types of campaigns) over the years
Direct observations and actions (field notes) (1) Company visit (2) Speeches by the co-founder (3) Informal meetings with the co-founder	

Table 1.
Data

These are the words that Alessandro uses to describe how he first thought about Friendz. The vision is to bring back the home pages of social media to the users, eventually using them to show advertising content.

As a young management engineer student, Alessandro started his entrepreneurial venture getting on board Cecilia and Daniele. Inspired by the Lean Startup approach, the first thing they've done has been testing their idea. Instead of creating a mobile app, they've done they tested it directly on Facebook, opening a group (which is still active, where the Community interacts and has a constant dialogue with the founders and the platform's managers).

They understood from the very beginning that bringing onboard users would have been much easier than convincing companies to create challenges and pay for user-generated

photos. Therefore, Alessandro and his co-founders decided to show companies (and investors) that the idea may work. They started creating challenges for the people that were joining the Facebook page. They even start providing Amazon vouchers after a certain number of pictures to test the idea of giving extrinsic rewards to users to ask them to take pictures.

The team started to present campaigns (request for photos guided by a specific call), in some cases also leveraging existing brands (to test users' willingness to take pictures of branded contents). They paid end-users for their work even though there was not a company financing the activity on the other side.

> We had to show the investors that our users would have used the app. Once we reached 100k likes on the page, we started using the 1€ Amazon vouchers to test the model. And there was a huge traction. (Alessandro Cadoni)

In this first step, the company involved only one of the two sides, setting a Value Proposition highly related to the extrinsic motivation to create the platform. In this phase, the community played a huge role in diffusing the Friendz on the market: "*It was so interesting that they convinced other people to join the group, because it was a fun place to spend the day at*" (Alessandro Cadoni).

The first phase is summarized in Figure 1.

4.2 Phase 2: reaching the critical mass: leveraging utilitarian value propositions on the user side
The second phase of Friendz's evolution is related to reaching the critical mass and companies' involvement as the second side.

At that point, the service became more structured, with an ad-hoc mobile app and a structured calendar for the launch of the campaigns.

Facebook, with its group, continued to have a relevant role, to increase the community feeling:

> We did a sort of experiment to see if we could proceed with a community without using groups on Facebook, so basically by downloading the app and by giving campaigns and explaining what it is. But we did not have great results (. . .) so we decided to create a Facebook group and again, we saw that whoever arrived in the group felt much more welcomed. And we already have positive results (Community Manager).

This shows how the end-users' side's perception was clearly guiding the decision to remain dependent on other platforms, like Facebook.

Phase 1: A one-side approach to building the platform
Goal: to create the platform

Friendz

$

The Community

VP: join a community of friends, have fun taking pictures and earn "money" doing it

Figure 1.
Phase 1

Nevertheless, the development of their own platform continues with the creation of their app:

> We created an app that evolved over time, from a simple gamification service provider to a proper social network. We have released a version with the chat included, profile selection, possibility to see and connect with other users, just like Instagram but with a certain project to follow, without being free to post everything you like but only what concerns the matter (Alessandro Cadoni)

The service evolved as well: end-users could (1) choose the campaign they want to participate, (2) take the picture according to the rules and guidelines of the campaign and share with her/his friends and (3) finally, if the photo got approved (through an anonymous peer review system), receive the credits associated.

There were three different types of campaigns in those days: Public, Invisible, Social Campaigns and Surveys. The first type is the most common and could be subdivided into fun campaigns and branded campaigns.

Fun Campaigns are scheduled weekly, keeping the Community-engaged and spreading the use of Friendz.

Branded Campaigns are paid by the companies and involved in the photo shared the hashtag or the product.

On top of these, there are also different kinds of campaigns: the invisible, the survey and the social campaigns. The Invisibles have the goal of asking the Community to complete an action (to comment, share or like a post) and to upload a screenshot as a proof. Surveys are immediate-approval campaigns. Through this channel, the platform asks the Community to answer some simple questions, get to know them better, and hear their voices (requested by a business partner). Finally, there are the social campaigns that do not give any rewards but have the scope to raise awareness on issues that are often overlooked and underestimated.

The economic reward is given in the form of credits, each credit values 0,5 cent. Credits are used to buy discount vouchers from different partners (e.g. Amazon, Zara, Idea Shopping, Feltrinelli, Bottega Verde and the Friendz Store where the app proposes branded merchandising).

Branded Campaigns are the ones that pay more. Usually, the range is from 150 to 500 credits, the difference between these two values depends on the difficulty of the task required. Fun campaigns have fixed credits, roughly between 30 and 40 credits each.

In this phase, the company reached the critical mass on both sides, targeting the two sides with clear missions. The second phase is summarized in Figure 2.

4.3 Phase 3: gamification to reach quality: leveraging a hedonic dimension

Over time the platform changed significantly on both sides. The design and the concept behind the campaigns evolved significantly. These changes are mainly related to one of the platform's main issues: the quality of the picture and community engagement.

> My main role as community manager is to enhance the activity level on the users' side, to bring the engagement at the highest level possible and to make it relevant for the whole model. (Community Manager)

At the beginning, the extrinsic motivation was extremely high. Branded contents were paid up to 2–3€, and the platform worked mainly as a matchmaker between the two parties while keeping the Community engaged.

Once the critical mass was reached, the platform decided to significantly change the pricing model, reducing the picture's value down to 0,20€. There were two main drivers behind here: the need to reach and maintain the economic sustainability, and the content quality. Part of the Community, being driven by utilitarian purposes, took pictures for the sake of credits, aiming to reach the minimum viable quality to be accepted by the peer

Phase 2: Reaching the critical mass: leveraging utilitarian value propositions on the user side
Goal: to make the platform sustainable
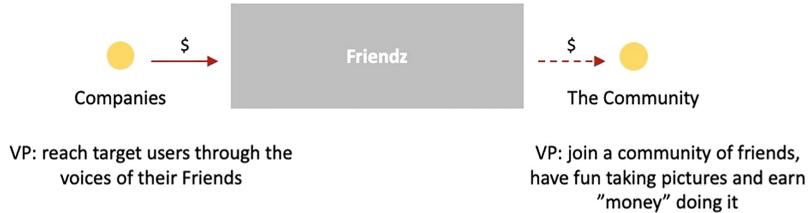
Figure 2.
Phase 2

reviewers. This mechanism was acceptable in the early days of the platform. Not in a growing phase. They realized that the community is the greatest asset and needs to be protected and cared for both regarding the companies that join the platform and the behaviors within the community.

> The community for us is more important than the companies, so we protect that first. If you start allowing the presence of bad brands the community starts fading (Account Manager)

> It's a quality producing funnel- on one side there's filter, on the other side there's the way the users have to follow in order to reach premium levels: we need ways to promote positive behaviors and quality within the community ... and reducing the credits given per photo is one of them (Alessandro Cadoni)

Indeed, companies are building the community spirit and not just a service:

> When a brand lets you be their PRs, not an agent, not an influencer, but you, the community ... That requires enormous trust from the company. It is very hard to obtain it. And our community needs to be trustable (Alessandro Cadoni).

Therefore, the overall business model shifted, aiming to reach a higher average quality on the platform. First, the platform pushed significantly on gamification mechanisms. Two quality indicators were included for each picture: the Algorithm and the Quality. The Algorithm is presented as a secret formula, which gives an output between 0 and 250. It's a measure of the exposure on social media of the content shared. It is used to check if the users have a private profile or delete the photos after posting them. In the description of each campaign, Mr. Algorithm's suggestions are to take a picture that is as fit as possible to the daily challenge rules. The quality is given mainly (80%) by the grade that the approvers give to the content before posting it on social media, it has a range from 0 to 5. The 20% is variable and depends on the votes given by the other users, this grading system provides that the grades given by the users do not equal in terms of weight, this means that the most experienced users (the ones with a high quality) have a greater influence than the ones with a low-quality profile.

These add-ons create a vast and engaging challenge for users. The average stars for each users became the criteria to have access to branded campaigns (which are still paying more), creating something closer to a level game.

In the Wall, the users can see and grade the photo posted by other users; not everyone can see the same content (which appears randomly) this is a means used to create engagement and increase the users' curiosity. Other elements are the Status Bar, Trophies, and the Timer to increase the platform's commitment.

In this new model, Fun Campaigns are the way to keep people engaged between Branded Campaigns and become the training field. They are the field where users can be trained to

take better pictures, receiving short comments with the stars, and pushing for peer comments on social media. Users start feeling a healthy competition to become a better and better photographer. These changes had an impact on the community, which starts seeing a different value in Friendz:

> I am a very interactive user in the app and in the beta-tester group, and it's not about the credits anymore. I appreciate them, of course, but the point is just to upgrade the quality (User 1)

> Basically, I changed the way I use social media. I was not that active before, always posting . . . now I do. Or if I look at old pictures, I cannot believe I took them. They were awful! I almost want to cancel them (User 2).

All these quality controls, also based on the validators, became the central part of the value proposition also on the company side:

> When I see corporate customers for the first time, they really appreciate the fact that Friendz solve a problem they always had with quality and safety. They are worried by the brand safety, to lose control on what happen. Still, they know that with our platform they can keep everything under control (Account manager).

The third phase is summarized in Figure 3.

4.4 Phase 4: the birth of a second platform: managing users that perceive different value drivers
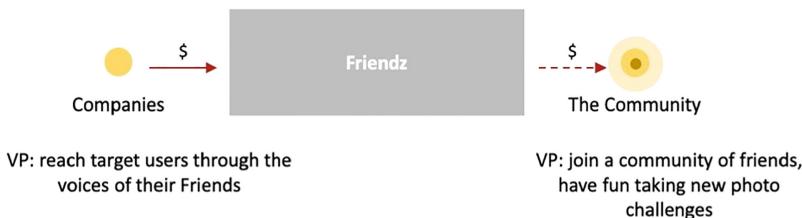
The changes in the platform's value propositions on the user side brought to different reactions within The Community.

People who embraced the new meaning (as mentioned in the quotes of the previous phase), the willingness to take good pictures, be recognized among friends for the creativity, and the good content on social media loved the new system. The Facebook page opened in the early days became fundamental to exchange advice and tips for taking a better picture and becoming a learning community.

On the other hand, there still were people on the platform that were there mainly for a utilitarian reason. The reduction of credits, the "minimum quality" needed to get access to branded campaign, and so on made the platform much less attractive for those on the platform mainly for utilitarian reasons.

This shift was creating a huge challenge: highly engaged users were mixed with highly unsatisfied users. This polarity in users' satisfaction created difficulties in Community management. There were two different user types with different needs.

Phase 3: Gamification to reach quality: leveraging a hedonic dimension
Goal: to increase the quality of the contributions in the platform

Companies $\xrightarrow{\$}$ Friendz $\dashrightarrow{\$}$ The Community

VP: reach target users through the voices of their Friends

VP: join a community of friends, have fun taking new photo challenges

Figure 3.
Phase 3

Well, obviously at the beginning, users are attracted by the chance to earn something. You see pictures that you may be taking, and you may earn a bit of money with them. Still, what we want is that users will to be part of the community that is making the overall system valuable, we want them to work with us, and not to see us as a mean. But this is not easy with all the users. (Community Manager)

I saw the community becoming two different communities. The ones that saw the evolution, that appreciated it, that we're representing the values of the platform. And the ones that were there for credits, the ones that were joining still appreciating the original value proposition: you take a picture, you get credits. We could just lose the second part, or we could enhance it. We could give them space; we could create a place for them (Alessandro Cadoni).

Therefore, the platform management decided to create a second platform to address the Community's utilitarian side's needs. This new platform – Atlatnix - was created in July 2019 as a couponing marketplace to get together users willing to get deals. The creation of the platform was facilitated by the fact that both sides were basically on board. On the one hand, a part of the Friendz's Community migrated to Atlantix, embracing its value proposition. On the other hand, companies were already on board to work with Friendz and – some of them had the chance to embrace the new value proposition. In the following months, Atlantix saw its value proposition growing and enlarging, today it is presented as "*The social network for smart purchases*," and it's becoming a social community where people can buy, sell and work in the digital space, but this is another story. The fourth phase is summarized in Figure 4.

5. Discussion
5.1 The evolution of friendz through the lens of the two-sided platform literature
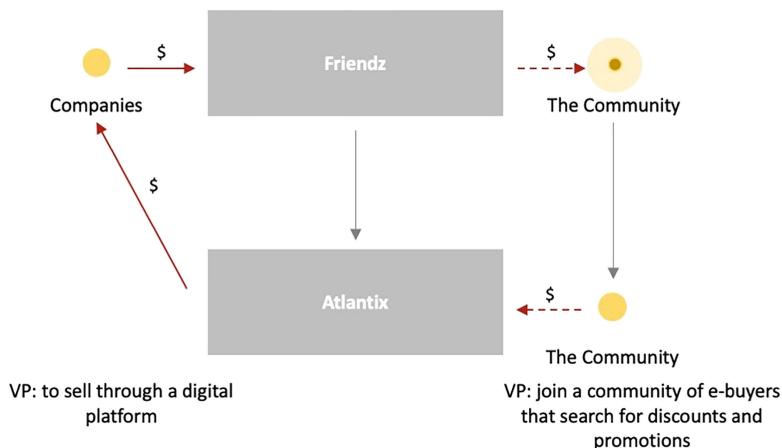The story and the evolution of Friendz let emerge various insights regarding the platform business model, the value proposition for the multiple sides, and their implications on entrepreneurial decision-making (Troise and Tani, 2021).

First (see Figure 1), it shows a peculiar way to solve the chicken and egg paradox (Caillaud and Julien, 2003; Trabucchi, 2020). It leverages a clear two-step strategy (Evans and Schmalensee, 2016), getting on board first and then the other. In other words, this strategy aims to bring one of the two sides on board at the beginning, without offering a service, to – then – convince the other side to join. Indeed, Interestingly, it pretended to have a side (the brands) on board to get the other onboard (The Community). Interestingly, the platform provider in this case worked also as the second side, pretending to have companies on board, that have been onboarded only later. This is a first contribution to the literature, highlighting a specific tactic to get users on board through a one-sided step.

From an entrepreneurial perspective, it shows how behaving as a platform-dependent entrepreneur - which in this case means pretending to be also the companies on the second side, on top of being the platform provider - (Cutolo and Kenney, 2020) may facilitate the creation of a two-sided platform, while benefitting the architecture and even facilitating the creation of one side.

In the second phase (see Figure 2), the company reaches the traditional configuration of a two-sided platform (Rochet and Tirole, 2003), getting on board both sides and leveraging the cross-side network externalities existing among the two sides (Katz and Shapiro, 1985). Nevertheless, the case presents some peculiarities. They bring the typical mechanism of non-transactional platforms to transactional platforms (Trabucchi *et al.*, 2021). As previously mentioned, non-transactional mechanisms are typically Client-As-a-Target (i.e. the user side is used as the target for advertising messages coming from the second side) and Client-As-a-Source (i.e. end-users generate collective value, usually through the data they generate, that is exploited by the players on the second side) (Trabucchi *et al.*, 2017). They use the Community as a Client-As-a-Source strategy, providing content to the companies, while acting in

Phase 4: The birth of a second platform: managing users that perceive different value drivers
Goal: to exploit the Community side with all its potentialities

Companies

Friendz

The Community

Atlantix

The Community

VP: to sell through a digital
platform

VP: join a community of e-buyers
that search for discounts and
promotions

Figure 4.
Phase 4

Client-As-a-Target strategy towards the Community's network (wider yellow dot in the Figure). This shows a second contribution to the literature, matching the logic on non-transaction platforms to transactional platforms to the extension of the users' side (Figure 5).

Previous literature points out the need of a double value proposition in two-sided platforms (Muzellec *et al.*, 2015). To become successful two-sided platforms, it is essential to consider both sides' peculiarities and design ad hoc value propositions (Clauss *et al.*, 2019). Friendz is letting emerge new insights regarding the value proposition design. Creating a sustainable and successful two-sided platform goes through a longitudinal evolution, which is often linked with the creation of new sides towards multi-sided platforms or platform ecosystems (Hein *et al.*, 2019). In this case, the chance to better answer the companies' needs forced them to revise the VP towards the Community's side. In doing so, only a part of the side embraces and accepts the new proposition. The platform goes through a shift of meaning in the reason why users should use the platform, which is considered a proposal to the market coherently with the literature on innovation of meaning (Verganti, 2009). Only a smaller part of the side (the inner circle on the Community side) becomes the source of value for the companies' side, bringing a new element in the study of two-sided platforms, the chance to internally structure players' role of the two sides.

The last phase shows the implications of the previous. Once different meanings – the original (utilitarian in this case, which is to earn some money through photos) and the new one (more hedonic, related with the chance to live a community-based experience) – start co-existing on the same platform, tensions in the user base emerge. Previous literature tends to highlight the chance to add different sides to the platform, for example, through supply-side extensions, which means adding new supply sides in the systems expanding the transaction opportunities, possibly enlarging the original meaning of the platform (Trabucchi *et al.*, 2021; Presenza *et al.*, 2021). Still, Friendz shows a totally different approach. In this case, the answer to let the platform evolve is neither add new sides nor move towards an ecosystem configuration (Hein *et al.*, 2019). The chance to split the platform creates a new structure to welcome part of the users' side while exploiting the companies' side
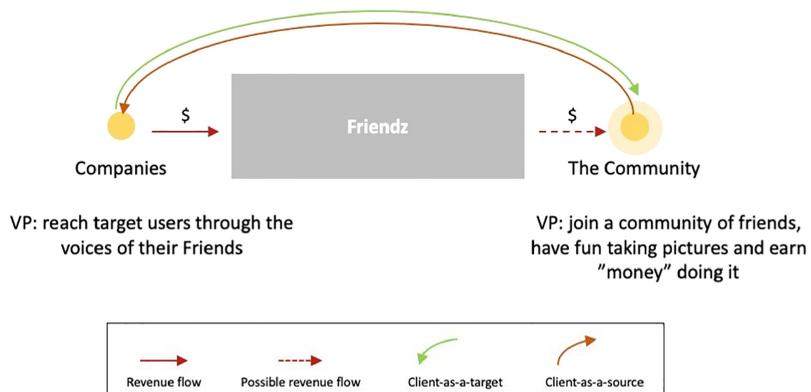
through a new value proposition (see Figure 4). The literature shows how the need to have multiple value propositions is related to different sides (Muzellec *et al.*, 2015), but can even be related to the same side if completely different types of users join it, addressed through split platforms. This is common also in more famous cases, such as Airbnb that promote a "Belong anywhere" organizational culture, but still part of the user base just looks for convenience through the platform. This example and what emerged from the data analysis clearly show the users' relevance in crafting the platform's evolution, which is coherent with the network-centric approach that characterizes entrepreneurship in platform environments (Srinivasan and Venkatraman, 2018).

Nevertheless, the reaction put in place by Friendz looks novel through the literature lenses. Indeed, this case represents the reverse of platform overthrow (Thomas *et al.*, 2020). Platform overthrow sees complementors or platform-dependent entrepreneurs overcome the role of the platform provider and set up even their own platform. This situation is completely different, to face the emerging need of what part of the complementors (in this case on the user side), the platform provider overthrows generating itself a new platform that answers this emerging need in a better way. This is bringing to the entrepreneurial side of the discussion developed in the next section.

5.2 The impact of sides behaviors on the entrepreneurial decision making in two-sided platforms: taking a network-centric view

Looking at the Friendz's evolution taking an entrepreneurial perspective, we can contribute to the current debate at the intersection of platform and entrepreneurship literature streams.

In particular, the first phase of Friendz's story is coherent with previous literature. It is a case of platform-dependent entrepreneurship (Cutolo and Kenney, 2020), where a digital platform like Facebook enables entrepreneurs to develop their own venture relying on the technological architecture of the existing platform. This is coherent with previous literature that sees digital technologies and relative platforms offering a huge space to create entrepreneurial activities (Nambisan, 2017; Jacobides *et al.*, 2018), enlarging the existing ecosystem (Ghazawneh and Henfridsson, 2013; Yoffie and Kwak, 2006; Kenney and Zysman, 2016) and even sustaining the stream that sees in social media a particularly effective kind of platform for these purposes (Kraus *et al.*, 2019, 2020; Secundo *et al.*, 2021).

Interestingly, looking at the second phase of Friendz's story, we can see how a platform-dependent entrepreneur can switch to creating its own two-sided platform. This is interesting

in terms of platform evolution and platform-driven entrepreneurship. Previous literature shows how platform providers may per overthrow by a complementors (Thomas *et al.*, 2021). In this case, we see how a platform can work as a catalyst for entrepreneurship, giving the space to the entrepreneur to nurture the initial phase of his/her venture and then enlarge it in its own platform. This is coherent with the platforms' ecosystem view, which explains the existing link between the original platform and the newly born two-sided platform (Jacobides *et al.*, 2018).
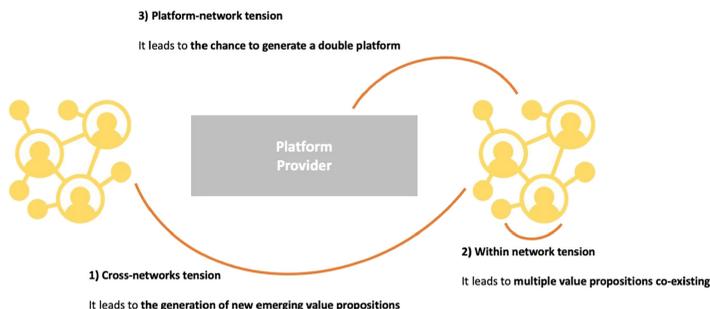
Still, this view resonates with the network-centric view (Srinivasan and Venkatraman, 2018). Indeed, the network legitimates the platform's relevance for complementors (and therefore entrepreneur), but in this case, the network pushes the direction of the platform evolution. Clearly, this is aligned with the role that the customers' voice traditionally has in the entrepreneurial decision-making process (e.g. Gruber, 2007; Shepherd *et al.*, 2015).

This shows how the platform provider influences what complementors on the sides can do (Nambisan and Baron, 2019) and vice versa. The two sides' behaviors influence the direction that the platform is taking in terms of value offered and communicated to the market, directly impacting the decisions taken. This is even more evident and clear in the fourth and last step, with the decision to create a second – parallel – platform to welcome the needs of a sub-part of the community. This observation is particularly relevant, since it highlights the power that sides have on the platform provider. The literature's dominant view highlights the unbalance power relationship among the platform provider and its sides in favor of the provider (Emerson, 1962; Cutolo and Kenney, 2020). This is through in the case of innovation platforms, where the complementors literally build on top of the platform provider architecture (Cusumano *et al.*, 2019), but may not be so obvious in transaction platforms, where the sides act as main value creators for the entire system (Trabucchi *et al.*, 2020). Indeed, the shaping of the entrepreneurial decisions (Troise and Tani, 2021) is peculiar due to the natural structure of platforms (Trabucchi and Buganza, 2021): indeed, both sides can play a significant role in the decision-making process. This leads to a revised version of the previous images, highlighting the double network dimension of the two sides involved (Figure 6).

Stepping back and looking at the findings and at the discussion of our work through the network-centric view (Srinivasan and Venkatraman, 2018), we can highlight three different network-related tensions that may influence the evolution of the two-sided platform, providing an answer to our research questions.

The first is a *cross-networks tensions* that emerges between the two sides, coherently with the intrinsic nature of two-sided platforms, where part of the value creation process is totally

Influence of the sides on the two-sided platform evolution through a network centric view

3) Platform-network tension

It leads to **the chance to generate a double platform**

Platform Provider

2) Within network tension

It leads to **multiple value propositions co-existing**

1) Cross-networks tension

It leads to **the generation of new emerging value propositions**

controlled by the sides (Trabucchi and Buganza, 2021). This links with the needs of the brands pushed the evolution of the value proposition (Muzellec *et al.*, 2015) through the end-users to evolve towards an experience-oriented to quality. This tension is not directly related to an entrepreneurial decision of the platform provider, but it shows how the voice of (one side of) the customers in two-sided platforms can influence the other side of the platform and therefore the actions of the platform to align the value propositions.

The second is the *within-network tension* that emerges – in this case – on the end-users' side (the community) due to the contrasting meanings present of the platforms. This is coherent with the two-sided platform literature that sees the value creation process in the sides great amount that can even bring to different directions (Amit and Han, 2017), opening opportunities and even challenges for the platform provider.

Finally, the third and final tension is the *platform-network tension* – in this case emerging among a sub-set of the end-users' networks (the ones searching for utilitarian values) - that brought the platform provider to the creation of the second platform. In this case, the misalignments between (a part) of the end-user's network and the platform meaning require a radical evolution of the platforms to balance the value propositions in the entire systems and make the platform flow again (Trabucchi *et al.*, 2021).

This sum up of two of the main finding emerged from this study shows how the network-centric view in platforms can be expanded to a double network view in the world of two-sided platforms, having two voices of customers to be heard (Gruber, 2007; Shepherd *et al.*, 2015) that are interdependent one with the other, both influencing the entrepreneurial decision process (Troise and Tani, 2021).

In other words, the chance to have two networks – one per side – generated multiple opportunities in terms of influence for the platform evolution. Platform providers need to identify, consider and manage these emerging tensions to guide the platform evolution, acting as a value orchestrator (Amit and Han, 2017).

6. Conclusion

To conclude, this research explores the interplay of two-sided platform and entrepreneurial dynamics through a longitudinal study, which a specific focus on the influence that sides have on the platform provider decisions. To reach this goal, we studied the case of Friendz, a two-sided platform getting together brand and a community of end-users.

This research has two main contributions from a theoretical perspective: the two-sided platform literature and its intersection with the entrepreneurship literature.

This paper first merges two sub-literature streams that have not been considered together, studying double or multiple side value propositions (Muzellec *et al.*, 2015) and the evolution of the two-sided business model (Trabucchi *et al.*, 2021). Doing so shows how various platform dynamics – such as the client-as-a-target and client-as-a-source strategies traditionally linked to non-transaction platforms – may play a role in the evolution of the value proposition. Moreover, it shows a peculiar evolutionary path that brings to creating a second platform, while previous literature tends to highlight the multiplication of sides, creating multi-sided platforms (Hagiu and Wrigh, 2015; Trabucchi *et al.*, 2021).

Regarding the second, this paper offers a possible shift in the dominant perspective that entrepreneurial scholars are taking on two-sided platforms. In this field, the dominant view is related to complementors that become entrepreneurs through the platform (Nambisan and Baron, 2019; Cutolo and Kenney, 2020), highlighting its power over the complementors (Emerson, 1962; Cutolo and Kenney, 2020). This study offers the chance to evaluate the impact that sides may have on the entrepreneurial decisions (Troise and Tani, 2021) of the platform provider and even suggesting a potential balance of power between the parties (Emerson, 1962; Cutolo and Kenney, 2020).

Moreover, these two contributions can be joints seeing also the evolutionary perspective explored in the field of two-sided platforms from the entrepreneurial perspective of the network-centric view (Srinivasan and Venkatraman, 2018). Indeed, our study shows how the networks considered in the network-centric view of platforms should be two, one per side, that can have internal influences and influence the other and both influence the innovation and entrepreneurial decision process of the platform provider.

From a practitioner's perspective, the main contribution is related to the evolutionary story presented in the case. It shows a not ordinary platform evolution path, moving from a one-sided business to a double platform to manage a community with different needs. Moreover, it offers suggestions in terms of value proposition management, showing how a sensing activity towards the sides moods and willingness may be relevant to let evolve a platform that is usually based on a business model that needs to evolve in an agile way (Silva et al., 2020; Ghezzi and Cavallo, 2020).

In other words, this study helps platform providers and platform designers with two main messages.

First, the two sides should be considered an interdependent network that can influence one the other value propositions and the platform's work, showing the need to closely monitor the value proposed, created, and perceived from the parties. This is particularly important to manage the platform evolution over time, which is emerging as a critical success factor in recent studies (Trabucchi et al., 2021).

Second, a peculiar evolution strategy may be linked with doubling the platform due to pressures from one side.

Finally, this study is not free of limitations, which may open avenues for future research.

The validity of the results is limited, relying on a single case, which offers the chance to go in-depth in a singular case aiming to provide more general insights that cannot be directly generalized. Therefore, our findings suggest the existence of strategies and dynamics that differ from what the literature has previously observed. Even if emerging from a specific case, the double network view of the platform could be useful and relevant in a more general context, but this is requiring future studies. Avenues for further research may be the exploration of the implications and peculiarities of Friendz's evolutionary path, searching for example for the enabler and the necessary characteristics of doubling platform strategy, similarly it would be relevant to further explore the emerging tensions.

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