

Disruptive Innovation: Designing Business Platforms for New Financial Services

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Abstract

Business platform models often achieve industry disruption through the elimination of barriers such as time and space by implementing smart and sophisticated software that captures, analyzes, and exchanges huge volumes of data. Central to business platforms is their online participative infrastructure that facilitates interaction between many external producers and consumers where the exchange of goods, services or social currency enables value creation for all involved. This study adopts an exploratory approach to improve existing understanding about the strategies that financial platforms implement. In addition, we explore what incumbents are doing to ‘survive’ and if the measures they are taking are sufficient to achieve survival. Further, we examine whether customer-focused strategies, such as Experience-Based Offerings (EBOs), provide the best solution for financial service firms to gain competitive advantage. The findings show that strategies can be implemented successfully by integrating technology to improve, personalize, and customize customer experiences, while managers and employees can add quality to experiences. This study contributes to our understanding of business platforms by identifying how they are designed and managed, and how incumbents can learn from them to respond to the challenges presented by today’s rapidly changing consumer behavior. Based on our findings, we extend existing conceptual models that can be used to achieve platform-based financial service goals.

Keywords: platforms; business models; disruptive innovation; experience-based offerings; customer focus; ecosystem; financial services

Introduction

The sharing economy is an economic model that promotes cooperation rather than competition; it is reshaping the way we live, work and play (Tidd and Bessant, 2009; Parker *et al.*, 2016; Schmidt and Druehl, 2008). This transformation has been made possible due to advancements in Information and Communication Technologies (ICTs), cultural values, and economic realities which involve firms creating new forms of opportunities and competition through the exploitation of business platforms. These new emerging structures match a wide range of providers of services and goods with different types of customers without the use of traditional middlemen, creating and transferring not only value among markets, but also disrupting more established service industries, such as hospitality, transportation, and financial services (Botsman, 2015; Payne *et al.*, 2021a; Pelletier *et al.*, 2020; Qin, 2020; Zadeh *et al.*, 2022). This disruption has been achieved by creating new business platforms which recognize that the pipeline structures of traditional businesses, with a linear value chain, are no longer efficient as they

produce only a single revenue stream. Instead, industries are now moving towards a model in which producers, consumers, and the platforms themselves, establish a new set of relationships in which consumers and producers exchange, consume, and co-create value (Van Alstyne *et al.*, 2016; Broekhuizen *et al.*, 2019; Nambisan and Baron, 2021).

Traditional industries, such as financial services, are conscious of this digital disruption and are reconsidering their strategies for competition, distribution, and customer relationships through the implementation of a business platform model in which a complex value matrix is implemented to withstand the ongoing challenges of the sharing economy (Tidd and Bessant, 2009). Payne *et al.* (2021a) and Payne *et al.* (2021b), for example, consider how artificial intelligence and mobile banking service platforms enhance the value co-creation process. In turn, this has generated opportunities related to their core activities of lending, payment handling, retail and investment banking, treasury functions, and wealth management. However, due to the traditional characteristics of financial services, and in particular their heavy structures, and the fact that they are still making considerable amounts of money, it seems that it has not been easy for them to understand the implications of this new form of business. It is also likely that the exploration of new business models could cannibalize or at least compete with their existing models. More importantly, as the rules to design, execute and scale successful platforms are not yet well understood, new platform implementations sometimes have a high rate of failure (Broekhuizen *et al.*, 2019; Nambisan and Baron, 2021; Choudary, 2015).

This paper aims to understand how best to design, launch, manage, govern, and grow successful platforms in order to respond to the challenges of today's rapidly changing economy. We achieve this by building on the frameworks of Haycock and Richmond (2015), Choudary (2015) and Cennamo and Santalo (2015). Haycock and Richmond (2015) suggest that banks should reshape themselves in the digital economy to become internet-based financial stores that showcase the range of financial solutions which they offer. In this regard, the continued proliferation of the experience economy and customer experience literature has sustained relevance to today's fast-changing business environment (Jauhari, 2017; Sivadas and Baker-Prewitt, 2000; Mascarenhas *et al.*, 2006).

Extant literature on the experience economy maintains that an economic focus on customer experiences provides companies with competitive advantage which is essential for organizations to survive disruption in “increasingly turbulent business environments” (Prajogo, 2016). The literature also explores what organizations must do to successfully orchestrate quality experiential offerings. While customer experience literature is rich in industries that already sell Experience-Based Offerings (EBOs), such as hospitality and tourism (Tung and Ritchie, 2011; Chen *et al.*, 2021; Nangpiire *et al.*, 2021), current research is limited in the context of the financial services industry. Experiential offerings are distinct economic offerings whereby companies design, promote, sell, and stage memorable experiences that customers desire (Pine and Gilmore, 1998; Barney, 1991; D’Aveni *et al.*, 1995).

Experience-based offerings, experiential offerings, and customer experiences are all labels for this construct. The findings of this study will extend the existing literature and our understanding by applying current EBO research from other industries to the financial services industry, using managers’ and employees’ perspectives to assess the validity of this application of theory to a new context. We adopt an exploratory approach through examination of 10 cases. Data about the current strategies of financial platforms is obtained. Then, 5 case studies are analyzed to understand what incumbents are doing to ‘survive’ and whether the measures they are taking are sufficient to achieve their ‘survival’ goal. Extant research has not considered these aspects of incumbents’ behavior and the impact of their organizational and market strategies. Further, we evaluate whether incumbents can use customer-focused approaches and strategies to remain competitive within the financial services sector. In relation to these considerations, the study’s objectives are as follows: to assess potential disruption in the financial services industry; to evaluate the significance of EBOs and other customer-focused approaches in creating competitive advantage in the financial services industry; to identify the requirements for financial services platforms to offer more customer-focused services; and to assess EBOs and other related customer service strategies are the best method for financial services platforms to gain competitive advantage.

To achieve these aims, we address the following research questions: Can customer-focused and other related EBO approaches create competitive advantage in the financial services industry? What is required of

financial service firms to implement a customer-focused approach? How can incumbents (i.e., financial services) manage successful platforms? Using the empirical findings from the above, we extend the conceptual models that we employ in our case study research. The findings of this study can provide a better understanding of platforms, how they work, how they are structured, how they create value, the limitless users they serve, the advantages of their structures, and the opportunities and challenges for incumbents, especially for those related to the financial services industry.

The rest of the paper is organized as follows. The next section introduces literature related to platform strategies. The third section describes the methodology used for the study. The fourth and fifth sections present the case studies and offer an analysis of how financial platforms are disrupting the financial services industry. The final section provides conclusions and highlights implications for future research.

Literature Review

How have business platforms disrupted traditional markets?

In our context, *disruption* can be seen as a process, usually involving small firms (often start-ups) with scarce resources, that challenges mainstream businesses (incumbents) by placing the small firms' products in a peripheral or in a new market base (Christensen *et al.*, 2015). Disruptions usually happen because incumbents concentrate on the development of products and services for their most valuable clients. They seek to exceed the expectations of their most valuable clients but ignore the needs of the customers at the lower end of the market. New entrants then target those overlooked market segments with new products or services and sell them at lower prices, while the incumbents chase more developed and established markets in order to achieve higher margins (Christensen *et al.*, 2015). Start-ups, however, do not stay on the fringes perpetually. Once they settle down, they move from the fringes or new (hitherto ignored) markets over to the mainstream markets, thereby, altering the market share and profitability of the mainstream firms.

Business platforms have arguably provided a convenient vehicle, in recent years, for these disruptions to

occur in some industries. Business platforms have a participative infrastructure that facilitates interactions between producers and consumers. They enable the exchange of goods, services, or social currency to create value for all participants (Parker *et al.*, 2016; Dong *et al.*, 2018; Zeng *et.al.*, 2017). These new business models/platforms speedily cause disruption as they eliminate barriers of time and space by implementing smart and sophisticated software that allow participants to capture, analyze and exchange huge volumes of data (Van Alstyne *et al.*, 2016). ICTs have played a key role in these developments by expanding the capacity of platforms to reach and speed through the market in a more convenient and efficient way (Eldridge *et al.*, 2021; Payne *et al.*, 2021a; Payne *et al.*, 2021b; Zhang and Ma, 2021). Most start-ups leverage this capability to create new business models for new or existing markets in a way that achieves superior economies of production and distribution, while providing an ability to scale up rapidly through network effects and virtuous feedback loops.

Consequently, businesses have experienced profound structural changes, including de-linking the ownership of physical assets from the value they create, eliminating the need for middlemen in the exchange process, and allowing direct connection between market participants in a more efficient way (Wang and Chung, 2013; Zeng *et.al.*, 2017). These disruptions and structural changes appear to be prevalent in the financial services industry where the global financial crisis triggered the collapse of confidence in traditional financial systems, causing customers to seek alternative means of investment (see Figure 1). These developments have given rise to alternative financing mechanisms, including crowdfunding, cryptocurrencies, microcredit, mutual credit, social savings, and Peer-to-Peer (P2P) payments and lending, among others (Mitřęga-Niestrój, 2013). Furthermore, the developments in the financial services sector seem to have massively improved customer experiences through creating new value propositions where borrowers, lenders and investors' requirements are frictionless, interest rates are lower and the processes are easier than those experienced with mainstream institutions (Gordon and McCarthy, 2014; Agyei-Boapeah *et al.*, 2020). Hence, new platform structures are reconfiguring business processes of value creation for customers and other stakeholders by minimizing the barriers and improving the ability to match participants with relevant and high-quality content, goods, and services (Van Alstyne *et al.*, 2016; Choudary, 2015;

Lucia-Palacios and Pérez-López, 2021; Nangpiire *et al.*, 2021; and Wang, 2021).

[Insert Figure 1 about here]

Characteristics of the platform structure

Business platform models differ from traditional ones as they do not follow a linear value chain or a pipeline structure characterized by a linear series of activities established to create value, in which generally a product or service is manufactured and offered for sale and then a customer purchases it; value is transferred with the producer at one end and the consumer at the other. Instead, business platforms allow producers, consumers, and the platform itself to establish an array of new relationships in which consumers and producers can exchange, consume, and co-create value through a new ecosystem without the need to own physical infrastructure and assets. In the new platform ecosystem, the critical resource is the members of the community (Van Alstyne *et al.*, 2016; Dong *et al.*, 2018; Wang and Chung, 2013; Zeng *et al.*, 2017).

At the same time, even if it is true that some traditional businesses are highly competitive, when platforms start operating in the same industry, they always have an advantage as they can scale up more efficiently by eliminating gatekeepers and replacing them by market signals provided by the community of readers. They unlock new sources of value and supply by enhancing participation whereby the community becomes the only source of demand. They provide feedback loops which increase the efficiency of the interactions with quality content; and they invert the firm inside out, from internal activities to external. Hence, Marketing, Information Technology, Human Resources, Finance, and Operations and Logistic move beyond direct control and organizational boundaries (Choudary, 2015; Van Alstyne *et al.*, 2016).

How can incumbents respond to the disruption?

Incumbents in the financial services can create new business models through Online Balance Sheets, where loan decisions rely on new scoring algorithms that include non-traditional data which take a deeper and more complete look at the profile of each borrower (Payne *et al.*, 2021a; Pelletier *et al.*, 2020). However, the new marketplaces

are connecting borrowers with different sources of lending, including big banks and new players, by providing a platform that allows them to compare a wide range of products and lenders according to their needs. Similarly, blockchain-based forms of finance, such as Decentralized Finance (DeFi), are reducing the need for central financial intermediaries. Finally, these new business models are connecting prime and subprime borrowers with individual and institutional investors, eliminating the need for traditional middlemen and are providing a wide range of returns for investors, lower interest rates for borrowers, and simple electronic interfaces for the ecosystem (Gordon and McCarthy, 2014). These innovations have allowed platforms to connect and match consumers with financial services in a more efficient way than the traditional sales and marketing channels currently used in the financial services industry.

Incumbents can also start focusing on the development of new products, as is the case with insurance related services, which can provide a back-up to cover the potential default risk a customer may present. They can start looking for new ways to ease credit policies through the implementation of new scorings, based on different sources of data aggregation and electronic payment technology as well as social platforms and reviews from online sources, giving them the opportunity to penetrate segments at the bottom of the pyramid (Gordon and McCarthy, 2014). On the other hand, incumbents sometimes understand that rather than compete, they should partner with new platforms in order to purchase their loans or use their software, including them in their investment portfolios according to the risk and return expected, or forming alliances to co-brand products in which the platform serves as another sales channel referring borrowers that cannot be approved by one of the existing partners (Gordon and McCarthy, 2014; Payne *et al.*, 2021b; Pelletier *et al.*, 2020; Qin, 2020; Zadeh *et al.*, 2022). Thus, opportunities can be presented in every form, where incumbents can compete through the creation of new business models, new products and services, new processes and by entering new markets, as well as acquiring new entrants, partnering with them or investing in them. However, as we argue, these opportunities will require an adaptation from a pipeline structure to a platform structure, where they will have to reinvent and find themselves playing on the same field as fast-moving new business platforms.

How can incumbents manage successful platforms?

After understanding the new business strategies that can be implemented in order to launch a platform, incumbents must pay attention to how they can manage key aspects of their interventions in terms of monetization, openness and the metrics that should be tracked in order to monitor performance (Iansiti and Lakhani, 2017; Haycock and Richmond, 2015; Choudary, 2015; Van Alstyne *et al.*, 2016). Once the network effect has been established to attract users and reinforce feedback loops successfully, incumbents should start capturing the value created from it through the process of monetization. This represents a big challenge for organizations since whatever that they charge for will discourage participation. The term openness refers to a platform that has no restrictions on participation in its development, commercialization or use, while closed refers to platforms that forbid outside participation in the development and may include rules or fees that affect potential participation in the platform. The “openness” or “closedness” of a platform is extremely important as it affects its usage, participation, monetization, and regulation.

Finally, according to Parker *et al.* (2016), traditional measures from pipeline businesses, such as cash flows, inventory turns and operating income, among others, have provided a useful picture of the health of a business and helped company leaders to stay focused on the factors that are crucial for the firm. However, pipeline structures require different metrics that have the ability to measure their lifecycle, from design and launch, through the core interactions, system of curation and openness to different kinds of participants in order to secure value through positive network effects, even though broad performance measures may still be relevant (Wang and Chung, 2013; Zeng *et al.*, 2017).

The experience economy and customer experience

Experience-based offerings (EBOs) generate differentiation by forcing companies to focus on customer needs and the identification of unique opportunities to better serve them. Chen *et al.* (2021), Lucia-Palacios and Pérez-

López (2021), Nangpiire et al. (2021) and Wang (2021) discuss how interaction experience enhances customer engagement in different sets of markets including smart speaker devices and the tourism/hotel industry. The resource-based view of the firm argues that companies which are prepared to exploit valuable, rare, and inimitable capabilities can differentiate and gain competitive advantage in competitive markets (Barney, 1991; D'Aveni *et al.*, 1995). EBOs are inimitable because customer experiences are uniquely personal due to their intangible, emotional and subjective nature: the same person can have a different experience with each interaction with the offering (Mascarenhas *et al.*, 2006; Pine and Gilmore, 1998). This intangibility and subjectivity of human experiences create causal ambiguity (Dierickx and Cool, 1989) and, so, competitors cannot imitate it because they cannot easily determine how the experience was created. Consequently, this inimitability provides competitive advantage (Schneider, 2004). EBOs are also valuable since customers are increasingly desiring memorable experiences in their interactions with companies. EBOs, therefore, can provide platforms with competitive advantage because they are valuable, rare, and inimitable.

Customer focus

Companies that have an organizational focus on customers achieve increased profitability and greater competitive advantage (Kumar and Pansari, 2016). Selling an EBO forces companies to take a customer-centric view which enables them to profit from these benefits (Högström, 2011). A customer focus also creates competitive advantage by increasing customer satisfaction, which results in increased customer loyalty (Sivadas and Baker-Prewitt, 2000; Mascarenhas *et al.*, 2006). Customer loyalty provides competitive advantage by improving profitability as customers are willing to make repeat purchases. It is evident that extant literature cannot be used to determine whether financial firms can use EBOs to remain competitive in the financial services industry, or how an EBO can be implemented by a financial incumbent, since the literature has not yet been applied to the financial services industry.

This leads us to develop a series of questions to fulfil our research aim by bridging the gap in the literature: Can customer-focused approaches such as EBOs create competitive advantage in the financial services industry? What is required of the financial firms to implement a customer-focus platform strategy? How can incumbents (financial services) manage successful platforms? Are EBOs the best method for financial firms to compete against digital disruptors?

Digitization continues to increase competition for all businesses (Tong and Wei, 2014), which makes it ever more difficult for individual companies to differentiate themselves and compete successfully (Gentile et al., 2007). This holds true for firms in the financial services industry. Competitive advantage enables companies to succeed in disrupted industries and prevents companies from ceasing to be competitive and thus ceasing to exist (Wessel and Christensen, 2012). Therefore, customer-focused approaches like an EBO are an appropriate solution for incumbents to remain competitive, while the industry is being disrupted, so long as it provides a competitive advantage against disruptors and competitors.

Methodology

This study adopts a case study approach to gain insights into the business strategy and processes followed by platform firms in the financial services sector (i.e., new platforms and incumbents). We draw on the experiences of 15 firms taken from the two-sided market of fintech and the sharing economy, to obtain a full understanding of how platforms work, their structures, how they create value, the limitless users they serve, the advantages of the platform structure and the opportunities and challenges for incumbents in this new sharing economy. We perform a cross-case analysis of different case studies from the sources mentioned above in order to identify similarities and differences between them. We aim to establish a better understanding of platforms and the opportunities and challenges they pose to incumbents, especially to those in the financial services. We also focus on how these firms manage the challenges in today's rapidly changing economy.

Secondary data were collected from 10 case studies of platform firms which provide financial services, as

well as 5 case studies of incumbents who are engaged in the digital transformation or platform structure (see Appendix I). All of the case study firms were identified through market reports (e.g., Key Note, Euromonitor), papers (peer-to-peer lending, two-sided markets and payments), books (The Rise of the Platform Economy, Platform Revolution and Sharing Economy), newspapers and sites (The Wall Street Journal, Forbes, The Economist, and Financial Times), journals, companies' websites and other online sources which helped to identify the firms most likely to disrupt financial services, as well as the most important banks moving to digital transformation. In order to give a better understanding and to summarize the data collected for the cases, we introduced the cases in two steps, which allowed us to recreate the phenomena. Firstly, we began constructing each case by using Choudary's (2015) Platform Canvas model for platform firms in order to identify the main elements of their business models, which include the design around the core interaction of the platform (producers, value, consumers, creation, curation and customization, consumption, currency, and capture) as well as the different strategies they used.

We also analyzed what incumbents are doing in order to understand the threats and opportunities that this disruption is bringing to them. Building on the digital strategy frameworks of Haycock and Richmond (2015), Choudary (2015) and Cennamo and Santalo (2015) which provide an understanding of the way platforms generate disruptions, we discuss the phenomena that are common across all of them in order to re-conceptualize the cases for the financial services firms. For example, Haycock and Richmond (2015) present a detailed framework regarding the change that must be implemented throughout the entire organization in order to build a "bank relevant for the world", where the new version does not have to deal with the legacy of its parent. According to Choudary (2015), sustainable business models first need to be designed through the discipline of testing and measuring, where the most important decisions involve architectural issues involving the multiple roles that users have, open architecture and quality control frictions in which a poor design can lead to rapid failure due to the loss of network effects and value (see Appendix I Table 1 and Appendix I Table 2 for details on the study's information sources and themes and sub-themes, respectively).

As mentioned, our evaluative, cross-sectional case study approach employed a qualitative research methodology to investigate the research questions. One-hour, semi-structured interviews were conducted as research instruments to collect qualitative data from the participants, which explored the research topic regarding the research aim. Five management level employees from each firm participated in the research. The audio-recorded interviews were then transcribed using Dragon NaturallySpeaking software, version 13.0. The transcriptions were then coded and analyzed with QSR NVivo, version 11, CAQDAS software. The coding highlighted the themes in the data which were used to answer each research objective. Each of the research questions were used to guide the coding process: codes were grouped by the question they answered. Once the themes were identified, the relationship between the groups of codes were then studied. As further codes were identified, this process was reiterated, and some themes were combined. The resulting recurring codes were then evaluated and compared to the literature to identify any inconsistencies and similarities and to answer the research questions. The findings from the analysis were then discussed in relation to existing research and our research questions.

The interview questions were used to serve as a guide for a more profound discussion on disruptions in the financial services sector, and interview participants could draw from their own knowledge and experience. The one hour interview time allowed for sufficient data to be collected to support an in-depth investigation of the topic, while also optimizing the time used to analyze the data . The data were more accurately collected as the interviews were audio-recorded. However, the issue with interviews is that it is difficult to build rapport and trust with the participant without meeting them face-to-face beforehand. This can cause issues with reliability as rapport and trust are important for high quality qualitative data collection. Furthermore, efforts were made in the initial stages of the interviews to make conversation to build rapport and to create a trusting environment. It is evident from the interviews that rapport had been built when the participant was more comfortable in using non-formal language in the discussion to explain themselves. Additionally, up to 10 minutes at the start of the interview were used by the researchers to get to know the participant better, and build rapport, by asking questions about the participant (Jootun et al., 2009).

Research findings

Table 1 and 2 briefly present an overview of the 10 case study firms using platforms to offer financial services. Table 3 presents a description of the five case studies related to incumbents, which provides insights into what they are doing to compete and manage the pace of new entrants related to the “Red Queen Race” (Tiwana, 2014). The race dictates that companies must evolve at least as fast as their rivals in order to survive. We found similarities and differences between the way platform firms were designed and the way they operate as well as the path that incumbents must follow in order to survive. We explore our findings in more detail below in order to understand their patterns and how they are disrupting the financial services industry.

[Insert Table 1, 2 and 3 about here]

Disruption in the financial services industry

The study first addresses the state of disruption in the financial services sector. All of the participants interviewed unanimously indicated that the financial services industry is currently undergoing disruptions. For example, one of the interviewees had this to say:

“They’ve been lazy and gluttonous, not innovating, reaping the profits, and now disrupters are turning their industry upside down.”

When asked about the incumbents, participants strongly believed that firms were going to find it difficult to compete if they do not make any changes, due to the disruption the industry is currently undergoing:

Participant: “...they are shooting themselves in the foot... they are being threatened by new entrants... but doing very little about it...”

Participant: “...It [incumbents’ inaction] is like turkeys voting for Christmas.”

By not making any changes, according to one participant, some incumbents will get “*stuck in the middle*”:

When asked about how incumbents can survive and remain competitive in a disrupted industry, most participants said that incumbents must make changes that create competitive advantage:

Participant: “In industries that are being disrupted, large incumbents must find a way of doing things differently.”

The participants all identified that the financial services industry is being disrupted and that incumbents must change to create competitive advantage and continue to compete in the financial services sector.

Competitive advantage in the financial services industry

Next, we evaluate whether experiential offerings provided by incumbents in the financial services sector create competitive advantage to enable them to remain competitive amid disruption. When asked about incumbents transitioning to experiential offerings, all the participants thought that incumbents would gain competitive advantage:

Participant: “...It’s very possible incumbents could create competitive advantage from experiences and I think it could be sustained – competitors companies would find it difficult to copy it...”

Participants discussed several different ways that competitive advantage would be gained from EBOs and other customer-focused strategies. Most participants explicitly specified that providing an experiential offering would allow incumbents to charge a premium and increase their revenues:

Participant: “The advantage will come from being... different than other firms. They can charge more for the better experience that no competitor can give. They should, just put the prices up.”

When asked about other means of competitive advantage from experiences, several participants referred to the stronger customer focus as a source of advantage. These participants indicated that customer involvement would be a competitive advantage from EBOs:

Participant: “If incumbents better focused on the customer, they would make so much more money. No

firms do it now and I don't think they will soon either."

Participant: "Customers would be a lot more engaged with the offering and the company. Therefore, a dialogue between the two groups would benefit the firms because they would gain valuable insight."

The participants argued that customer-focused strategies would create competitive advantage as unique and differentiated offerings often enable firms to focus on the customer needs.

Implementing a customer-focus offering

We identify what the participants suggest financial services firms must do to profit from EBOs and other customer-focused strategies. Several participants stressed the relevance and importance of exploiting technology within the EBO as another method for gaining competitive advantage:

Participant: "Technology, if used well, can improve the customer's experience by making shopping more convenient, enjoyable, and exciting. One competitor ... makes shopping more convenient and more exciting."

When discussing what financial services firms need to do to implement experiential offerings, participants mentioned that alongside technology, employees must be used effectively to deliver high quality experiences:

Participant: "Employees are the key if you're going to be selling experiences... they are the most powerful tool available to the platforms... Employees should be used to add value to customers' experiences..."

Along with the importance of employees in an EBO structure, several participants spoke about the importance of collecting data on customers to analyze, develop tacit knowledge and personalize the offering to those customers. Other also openly acknowledged the significance of using innovation and having innovative

processes:

Participant: “Platforms have a lot of data on their customers who have loyalty cards. They’ve got to use that data to personalize and customize the experience to the customer – that’ll increase sales.”

Participant: “Companies that don’t innovate in this day and age will fail miserably.”

The participants explained that platforms needed to integrate technology into EBOs and other relevant customer-focused strategies to maximize their benefit. They also argued that employees were a tool to be used by platforms to deliver high quality experiences, whilst collecting data on customers to develop tacit knowledge and personalize and customize the offering to individual customers. The managers also stated that platforms needed to be innovative whilst exploiting EBOs to remain competitive.

Advantages and disadvantages of experience-based offerings

The participants identified several advantages from implementing customer-focused strategies. Firstly, the consensus among the participants was that the most significant advantage of EBOs was that it leveraged existing assets:

Participant: “Companies must leverage their biggest assets to adapt to a disrupted and changing industry.”

Several participants recognized that there was a high degree of uncertainty involved in selling experiential offerings because it requires the cannibalization of incumbents’ sales and business models:

Participant: “There’s a lot of uncertainty involved. Incumbents wanting to sell these [experiential] offerings will have to change business models to one that is untested...”

Whilst discussing the disadvantages, a participant added:

Participant: “They’d probably have to try it [selling EBOs] out anyway.”

Incumbents and experience-based offerings

Several participants recognized that incumbents must exploit their biggest assets to remain competitive during the industry's disruption:

Participant: "It's so important for companies experiencing disruption to leverage their greatest assets to change their business model."

Some participants also discussed the alternative of incumbents partnering with other companies to gain competitive advantage. Four of these participants stated that incumbents could partner with each other to form a trade association against the new entrants:

Participant: "If the incumbents could get together, they might be able to compete through co-operation."

However, one of the interviewees warned of the legal difficulties of this strategy:

Participant: "they'd have to be careful if they wanted to do that. There are lots of laws around maintaining fair competition, monopolistic behaviors, and collusion – this could infringe on them."

Another strategy identified by a few participants was to partner with companies with complementary capabilities to strengthen their operations and offerings:

Participant: "Companies that deliver would be good to partner with. Any company that could provide some benefit to incumbents would be good really."

When participants were deliberating on platforms focusing on a niche market, several participants did not think platforms should focus their strategies:

Participant: "They would lose too much revenue. By cutting some customers out, they lose out on those sales."

On the other hand, some other participants thought that platforms could benefit from focusing their market:

Participant: "...through personalization and big data, you can start to provide certain customers with certain things they want... more conveniently for some customers than making other stores more experience-based by playing nice, relaxing music..."

Overall, several participants believed that an EBO would be the best method for platforms:

Participant: "I think that's spot on: platforms need to focus on the experience and sell the experience they provide."

And some other participants believed that experiential offerings needed to be used in conjunction with other means of producing competitive advantage in order to succeed:

Participant: "I think experiences are going to be part of surviving disruption. I think it'll have to be used in combination with convenience. People will always forget things or need things for that night's dinner and online shopping won't work for that."

The participants suggested that EBOs and other relevant customer-focused strategies would be the best strategy for platforms to create competitive advantage.

Analysis, Discussion and Implications

According to the resource-based view of the firm, companies that are prepared to exploit valuable, rare, and inimitable capabilities can differentiate and gain competitive advantage in competitive markets (Barney, 1991; D'Aveni *et al.*, 1995). EBOs generate differentiation by forcing companies to focus on customer needs and identifying unique opportunities to better serve them (Mascarenhas *et al.*, 2006; Pine and Gilmore, 1998). In our empirical work, we identified how financial platforms are leveraging their assets to provide EBOs; for example, they are building and strengthening their current capabilities as they already provide experiences within the services and goods they sell currently. The assets are available to platforms to capitalize on by developing an EBO. The participants argued that sometimes it may be a high-risk strategy, but platforms must take it and invest

in it. As shown in Table 4, we find some general patterns among platform firms which are related to the way in which they are designed and operated. These similarities can be exemplified in three different categories: namely, market potential, structure, and management style (Haycock and Richmond, 2015; Choudary, 2015; Van Alstyne *et al.*, 2016).

Market potential

The market potential refers to the users they can serve, where the financial platforms are providing a superior *customer experience* (EBOs) since their design is focused on the *end-users* rather than on the products; at the same time, it improves the *cost to deliver*, while initiating a customer engagement shift from incumbents to them (Wessel and Christensen, 2012; Tong and Wei, 2014; Högström, 2011). This is primarily happening due to them being smaller firms that can focus on specific *micro-markets* that unbundled the traditional banking model with the latest technology available to them, without the need for branches, allowing them to capture the *long tail* while generating new *revenue streams*. Moreover, these firms are agglomerating products in their interfaces (web-based or apps), where customers can group their products without having to login to their bank accounts or apps, especially in the case of payment platforms, relegating banks to simple utilities thereby making them lose the entire interaction with their customers. Yet, the *lock-in* effects they have been trying to accomplish in order to make it more desirable for the existing users to stay put and not jump to a rival platform are still not clear and *multihoming* behavior among consumers is still a characteristic of the industry.

Structure

The structure refers to the way that financial platforms have been structured around the ecosystem or the market they serve, where their *architectural design* is based generally on modular ecosystems with an open IT that allow them to innovate in diverse domains by the distribution of innovation work to large numbers of app developers, rather than following innovative programs in-house as traditional banks generally do (Wang and Chung, 2013;

Zeng *et al.*, 2017). They then transfer the main *risk of innovation* outside the company, which gives them the opportunity to develop a network of contributors with hundreds or thousands of partners, as well as to reduce the cost of development through the *network effects*, especially with payment platforms (Choudary, 2015; Van Alstyne *et al.*, 2016; Payne *et al.*, 2021b; Pelletier *et al.*, 2020). Yet, some other platforms (such as the P2P lenders) follow a *monolithic* design as their value proposition relies on credit scores, diminishing somehow, but not totally, the potential improvement of other functionalities. Another important aspect of their structures is that they have *evolved* differently through their lifecycle (short-term, mid-term and long-term) according to the category or the micro-market they have decided to serve, with the implementation of different *monetization models*, which are generally *asymmetric* across both distinct sides (merchant-buyer, lender-borrower, specialist-investor) with totally different needs and motivations.

Management style

The management style refers to the way in which financial platforms orchestrate the available resources and control the ecosystem without ownership of resources (capital, information, transactions) (Dong, Zeng and Su, 2018; Wang and Chung, 2013; Wang, Siu and Barnes, 2008). The ecosystem can be composed of different actors (merchant-buyer, lender-borrower, specialist-investor), where their open structures allow the innovation to flourish as an emergent attribute of its design. Another important characteristic we found is that these firms are recently *partnering* with incumbents as they are the rails on which most of these platform firms operate and are an important source of information and capital. Hence, traditional marketing models based on word of mouth and public relations (PR) are used as the most important strategies contrary to what might be expected from these platforms creating *network effects* on their own.

Understanding the specific patterns of incumbents

In the same way that financial platforms presented similarities and differences in their designs and strategies, we

found some similarities and differences in the way financial incumbents are implementing structural and managerial changes in order to compete or survive. This platform revolution is presented as an extinction phase, referring to Darwinian Theory about the evolution of life, where a CEO describes it as a scenario in which either incumbents rapidly adapt and create new means for competition or they go extinct (Gordon and McCarthy, 2014; Haycock and Richmond, 2015; Cennamo and Santalo, 2015).

In terms of ‘structure’, incumbents have embarked upon different initiatives such as the implementation of digital transformations in multiyear expensive programs in order to improve the customer experience through some EBO initiatives in an attempt to adapt to the new ways of working, but also in an attempt to improve the efficiency of the company (Johnston and Kong, 2011; Parker et al., 2016). They have also invested in innovative programs, creating teams supported by specialist partners in order to explore new opportunities arising from new technologies, customer behavior, and business models through the research, design, and prototyping of new services and products, emulating somehow the way financial platforms work. Moreover, they have opened their IT platforms to developers in order to allow them to build on top of them new customer experiences through the implementation of APIs, in their efforts to innovate as fast as their new competitors and in line with the pace of the Red Queen Effect, as explained before (Qin, 2020; Zadeh *et al.*, 2022; Zhang and Ma, 2021). Some of these strategies are following a centralized approach, delegating entire responsibility for the transformation to one department as is the case with Bank of America and HSBC; others have taken a different approach in a more decentralized method (as in the case of Citigroup) where all departments are responsible for searching for new opportunities among the threats coming from the financial platforms.

In relation to ‘management style’, incumbents have partnered with different financial platforms in order to get exposure to new thinking, new approaches, and new technology. Moreover, they have created Venture Capital (VC) funds to invest in these financial platforms in order to make an equity investment in them as well as acquiring them, which is a common practice to diversify the actual portfolio. They have also been recreating their value propositions (as in the cases of HSBC and NatWest) where they considered themselves as designers of experiences

focusing on the acquisition of information, rather than simple suppliers of financial products. However, despite all the various approaches in terms of structure and management style that incumbents are implementing in order to counter platform disruption, they are likely to struggle to make a lasting impact due to the heavy structures they retain as a legacy of an era where branch offices dominated customer interaction. Moreover, they lack capabilities to adapt and accelerate through the design of new customer experiences due to the same legacy. We found that the key aspects which executives from banks are mostly worrying about are those related to people, culture, and technology which are the cornerstones of almost every organization.

People and culture are very important factors that are usually correlated to an organization's performance (Govindarajan and Kopalle, 2006; Yu and Hang, 2014). Banks have a legacy in which for years their business models have been very profitable, and where running them in a totally different way has been perceived as a risky move; this has been Christensen's main innovator dilemma, where they are programming themselves not to change by overlooking new models (Christensen *et al.*, 2015). Incumbents are so attached to the way they work and usually so large in their structures that any shift in their culture and people will take time, especially due to the way they have grown in a risk-averse environment (partly because of regulation) and where the maximization of profitability has taken precedence over customers' needs. It does not mean they have not explored new models or tried to rethink the way they work as they have been doing this through the implementation of innovation programs, new lean methodologies, and bringing new talent with expertise in the field through new working environments. They are constantly facing a shift paradox where they are too large to change quickly, but their models are at risk if they shift slowly.

The technology among incumbents was designed for a different era, to run branch offices when batch processing payment overnight was the normal industry standard. Nowadays, incumbents require fast adaptation to the new normal, where open APIs are leading the marketplace in order to enhance innovation and offer a better customer experience. Yet, this adaptation is hard to achieve as anywhere between 50% and 90% of incumbents' IT budget is being driven by regulatory requirements and not by improvements required to provide a better customer

experience, leaving them attached to what the current legacy platform or processes can support; ultimately, this becomes a problem of structural flexibility and not the desire to deliver change within the industry. Accordingly, it seems that banks have taken the structural and managerial style approaches as an initial phase of adaptation in order to understand what they are facing before taking any other further action, while acquisitions have become the most important strategy to develop the capabilities necessary to compete as mentioned by Govindarajan and Kopalle (2006) and Yu and Hang (2014). It also reduces the cycle of the learning curve carried out by any organization in the process of adaptation to any new technology and cultural shift.

Innovation disruption and incumbents' possible responses

In order to implement well-informed decisions to compete, incumbents must get to know what they are facing and where this disruption is coming from. In order to do so, we found through study of the digital strategy framework provided by Haycock and Richmond (2015) and Cennamo and Santalo (2015) that the disruption is coming from different perspectives, such as new market makers, new value propositions and new business systems (see Figure 2) where the new platforms are catching customers from the bottom of the pyramid and cutting out the middleman while matching demand and supply, as is the case with different peer-to-peer lenders and payment platforms, such as Zopa, Lending Club, Sofi and PayPal.

[Insert Figure 2 about here]

On the other hand, they are creating a new value proposition with different interfaces that add valuable experiences for the customers in a way banks never imagined, providing customizable information based on customers' needs, as in the case of retail banking and wealth management platforms such as Betterment, Mozido and Kensho. Moreover, they are reimagining the business system by cutting the value chain and, at the same time, cutting out the middleman with new interactions that reduce prices in a more efficient way generally, as is the case with payment platforms such as Square, PayPal, Kensho and Stripe. These are just a few examples taken from the cases we analyzed, and many others can be quoted using this framework. We thus extend the work of authors such

as Yu and Hang (2014) and Cennamo and Santalo (2015) on this topic. In order to shed light on the way financial platforms are outperforming financial incumbents, a comparison is made based on aspects relating to the market potential, the structure, and the management style, as shown in Table 4.

The most important differences between them are related to the way in which they are designing the customer experience or EBOs, where financial platforms are massively distributing innovation and transferring the risk between different app developers, allowing them to unbundle the market in different categories, as mentioned in the second part of this section (lending, payments, retail, investment, wealth management, treasury functions) with ‘mix and match’ customization. Superior customer knowledge acquired from the implementation of EBO type approaches allows companies to better customize and personalize their offerings (Maklan et al., 2017). Customization and customer interaction empower the company to meet the customers’ needs more precisely, removing features that do not add value to the customer, whilst improving features that do (Pine and Gilmore, 1998; Nangpiire *et al.*, 2021; Wang, 2021; Chen *et al.*, 2021; Lucia-Palacios and Pérez-López, 2021). Eliminating features that do not add value reduces costs as the costs of producing, storing, and delivering features considered useless by the customer are not incurred (Tseng et al., 2014; Roos and Gustafsson, 2007).

Customization also lessens ‘customer sacrifice’, which is the difference between what a customer wants and what a customer settles for (Pine and Gilmore, 1998; Johnston and Kong, 2011), which demonstrates greater efficiency and increased customer satisfaction thereby leading to gains in competitive advantage. So, by using customer knowledge to identify and deliver what the individual customer wants precisely and by removing all other non-value adding features of the offering, a company can reduce costs (Ramaswamy and Gouillart, 2010; Maklan *et al.*, 2017). This creates competitive advantage for the financial platforms relative to incumbents.

[Insert Table 4 about here]

On the other hand, incumbents are aware of the threats that they face and so are implementing different programs within their organization where innovation, renovation of their technological infrastructure, partnerships and acquisitions are the most important components in developing the necessary capabilities to compete. However,

their large structures are important constraints in meeting the challenges related to the people, culture, and the technology they are trying to overhaul. Hence, the legacy has become an important challenge for incumbents in trying to catch up with the wave, where the bold approach suggested by Haycock and Richmond (2015) regarding the Beta Bank model becomes a creative option where incumbents can diversify their existing portfolio with the necessary capabilities to compete related to market potential, structure, and managerial style.

Conclusion

In this paper, we have attempted to establish a better understanding of platforms in terms of how they implement a better customer-focused strategy in firms. We have also examined the opportunities and challenges for incumbents relating to the financial services sector and how to design and manage successful platforms to respond to the challenges of today's rapidly changing economy. We document a number of key results.

First, this study reveals that even though banks have, for decades, been the cornerstone on which economies are built, as well as the rails on which most financial platforms operate, they are facing serious competition in every single segment and category along the entire portfolio of the products they offer. A good example of this threat is observed when one CEO described the actual scenario with an extinction phase, referring to the Darwinian Theory about the evolution of life, as “...*incumbents rapidly adapt and create new means for competition, or they go extinct*”.

Second, our findings demonstrate that financial platforms are more effective in generating better customer experience due to their market potential. These platforms' structures and management styles are based on the orchestration of the ecosystem where their modular structures are unbundling the financial services with a mix and match customization and EBOs. As well as capturing not only the long-tail of the financial market, which has been inaccessible for much of the incumbents' history, mainly due to strict regulatory policies, risk-averse mindsets, and the cost, they are at the same time creating new revenue streams that promote financial inclusion for different types of users.

Third, we find that, despite all the advantages these structures have over traditional financial firms, they have not scaled in the same way as different platforms in other industries. This may be because of the micro-market they serve, as it seems to present some constraints in terms of capital and because the traditional marketing strategies based on word of mouth and public relations still remain the most important, contrary to what might be expected from these platforms and their network effects. This is especially notable for the lending platforms, which have partnered with high street banks in order to scale and get access to a bigger network of resources.

Finally, fourth, implementing an EBO requires firms to transition from selling a service-based offering to an experience-based offering. This transition is a progression of economic value comparable to companies advancing from selling goods to selling services; therefore, similarities can be drawn from the process which are applicable to the service-to-experience transition (Johnston and Kong, 2011; Wessel and Christensen, 2012; Tong and Wei, 2014). All progressions of economic value require different marketing to ensure the new offering meets customers' needs.

Managerial implications and study limitation

This study provides several managerial implications. Financial platforms can further refine EBO related strategies to profit from the competitive advantage that can be gained. The advantage is evident when customers can interact with products freely with attentive and knowledgeable employees at hand, if necessary. This suggests that financial firms must change their value proposition to one of providing customers with unique and memorable experiences (Roos and Gustafsson, 2007). This fundamental change in business model, where the product being sold is the customer's experience, is essential for financial firms to advance into, and profit from, the experience economy and its associated advantages. Incumbents must be prepared to cannibalize and sacrifice their current offerings for the sake of competing in the new experience economy because the risk of becoming uncompetitive, through a failure to innovate and change at the expense of the old business model, is substantial (Tong and Wei, 2014; Ramaswamy and Gouillart, 2010; Wessel and Christensen, 2012). Big data and analytics are impactful business tools which incumbents should utilize to create competitive advantage (Tseng *et al.*, 2014). As customers

have different preferences, using big data for mass customization and personalization, informed by data on individual customers, enables companies to cater to the individual needs of those customers and promote products to specific customers who may find value in them, rather than damaging the experience of customers who are not interested in those products (Wang and Chung, 2013; Zeng *et.al.*, 2017; Chen et al., 2021; Lucia-Palacios and Pérez-López, 2021; Nangpiire *et al.*, 2021). This will allow both incumbents and new platform firms to stage high quality, memorable experiences for customers that are individually targeted and promoted, with the experience being more engaging as it provides greater value to the customer while eliminating any negative features.

However, managers should be aware that not all strategies work for all platforms due to the fact that the micro-market they serve is different for all of them, as is the design. More research could be undertaken to further explore this aspect of our findings. For example, a limitation of our current study is that we do not explore specific EBO strategies for different types of financial platforms. Future research could focus on the EBO aspects of these individual platform types and their operational features. Haycock and Richmond's (2015) Beta Bank operating model suggests that banks should reshape themselves in the digital environment in order to become a financial app store showcasing a range of financial solutions from different providers, thereby keeping themselves relevant to customers as a single source for the best global financial solutions as in the case of Revolut, Atom, Starling and Monzo.

Banks should understand that they are the analog manifestation of what happened in the last century when branches and infrastructure were the right choices but, if they want to remain competitive, deep organizational, cultural, and technological changes must be implemented, understanding and adopting the new means of competition and strategy in a world where the pace of technology and consumer behavior are constantly changing and where competition is only going to get fiercer. As Christensen *et al.* (2015) suggest, disruptive destruction often comes from the low-end of the market overlooked by incumbents, who then move to the mainstream, altering the market share and profitability of entire industries.

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Figure 1: New financial services models



Date of Birth	Mar 2005	Aug 2007	Sept 2011	Dec 1998	Feb 2009
Business Model	Lending platform	Lending platform	Lending platform	Payment platform	Payment platform
Consumers Producer	Users can perform both roles - The seeding - Micro market - The piggy back	Users can perform both roles - The seeding - Micro market - The piggy back	Users can perform both roles - The seeding - Micro market - The piggy back	- The piggyback - The seeding - The marquee	- Micro market - The marquee
Access Control	- User blog - Community chat rooms	No communication between users	No communication between users	Transact money, order ahead	Transact money
Value	Customization, transparency, economic return and social reward	Social affinity (social networking service)	Social affinity (social networking service among students)	Payment processing, digital wallets, merchant accounts, peer-to-peer money transfers, single touch transactions, consumer and merchant credit, risk analysis, fraud prevention	Payment processing and marketing services
Filters	Rankings for lenders and borrowers according to rates and amount	Rankings for lenders and borrowers according to credit worthiness	Rankings for lenders and borrowers according to future potential	According to users payment needs	According to users payment design
Creation	- New products - Partners (Mobile and Car retailers)	- New products - Partners (IT, Banks, Software)	Partners (Banks, Universities)	- Partner with retailers - Open platform where merchants can build up on it	Open platform where merchants can build up on it
Curation	- Risk algorithm - Social feedback	- Risk algorithm - Social feedback	- Risk algorithm based on future potential and income - Social feedback	Based on email and bank account	Based on email and bank account
Consumption	Static interface with the development of a new application - Charge a	Static interface with the development of a new application - Charge a	Static interface Spread between	Desktop interface, mobile app, wireless widgets	Desktop interface, mobile app, wireless widgets
Monetization	transaction fee - Charge for	enhance access	transaction fee - Charge for	enhance access	capture and loan similar to bank structures

Capture	<ul style="list-style-type: none"> -Partnering -Licensing - Leveraging the value of data - Platform envelopment - Enhance platform design 	<ul style="list-style-type: none"> - Partnering - Licensing - Leveraging the value of data - Platform envelopment - Enhance platform design 	<ul style="list-style-type: none"> - Partnering - Leveraging the value of data - Platform envelopment - Enhance platform design 	<ul style="list-style-type: none"> - Partnering - Leveraging the value of data - Redefining mergers and acquisitions - Platform envelopment - Enhance platform design 	<ul style="list-style-type: none"> - Partnering - Leveraging the value of data - Redefining mergers and acquisitions - Platform envelopment - Enhance platform design
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Table 1 – Comparative platform models: Case study firms A



Date of Birth	Sept 2011	2008	May 2013	2008	2014
Business Model	Payment platform	Retail banking	Investment Banking	Wealth Management	Treasury functions
Consumers	- Micro market	Micro market	Micro market	Micro market	Micro market
Producer	- The marquee				
Access Control	Transact money	Design	N.A.	N.A.	N.A.
Value	Payment processing	Payment processing, financial inclusion, and mobile engagement and rewards	Better decisions based on statistics	Provide financial advice and investment management	Improve efficiency, security, compliance and settlement speed
Filters	According to users payment design	According to users design	According to users design	According to users design	According to users design
Creation	Open platform where merchants can build up on it	Open platform where merchants can build up on it	- Partners (Wall Street, CBC) - Open platform where merchants can build up on it	N.A.	N.A.
Curation	N.A.	N.A.	N.A.	N.A.	N.A.
Consumption	Desktop interface, mobile app, wireless widgets	Desktop interface, mobile app, wireless widgets	Desktop interface, mobile app, wireless widgets	Desktop interface, mobile app, wireless widgets	Desktop interface, mobile app, wireless widgets
Monetization	Charge a transaction fee	Charge for enhance curation	- Charge a transaction fee - Charge for enhance curation	- Charge a transaction fee - Charge for enhance curation	Charge for enhance curation

Capture	<ul style="list-style-type: none"> - Leveraging the value of data - Platform envelopment - Customization 	<ul style="list-style-type: none"> - Leveraging the value of data - Platform envelopment - Customization 	<ul style="list-style-type: none"> - Leveraging the value of data - Platform envelopment - Customization 	<ul style="list-style-type: none"> - Redefining mergers and acquisitions - Leveraging the value of data - Platform envelopment - Customization 	<ul style="list-style-type: none"> - Redefining mergers and acquisitions - Leveraging the value of data - Platform envelopment - Customization
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Table 2 – Comparative platform models: Case study firms B

	Wells Fargo	Goldman Sachs	Bank of America	HSBC	NatWest
Value proposition	help strengthen communities through diversity, equity, and inclusion, economic empowerment, and sustainability	Provide strong advisory services to meet clients' personal and business needs	Connect customers and clients to the financial solutions they need	Provide financial services including current accounts, loans, mortgages, credit cards. Also Premier and Advance banking	Aim to help its customers access the financing they need, when they need it

Business Units	<ul style="list-style-type: none"> - Lending - Payments - Investment Banking - Treasury - Wealth Management - Retail Banking 	<ul style="list-style-type: none"> - Investment Banking - Personal services - Wealth Management 	<ul style="list-style-type: none"> - Lending - Payments - Investment Banking - Treasury - Wealth Management - Retail Banking 	<ul style="list-style-type: none"> - Lending - Payments - Investment Banking - Treasury - Wealth Management - Retail Banking 	<ul style="list-style-type: none"> - Lending - Payments - Investment Banking - Treasury - Wealth Management - Retail Banking
What are they doing?	<ul style="list-style-type: none"> - Investing in innovation - Investing in digital transformation - Partnering with startups - Investing in startups through CV fund - Open IT to developers 	<ul style="list-style-type: none"> - Investing in innovation - Investing in digital transformation - Partnering with startups - Investing in startups through CV fund 	<ul style="list-style-type: none"> - Partnering with startups - Investing in startups through CV fund - Helping corporate & institutional customers 	<ul style="list-style-type: none"> - Partnering with startups - Investing in digital transformation - Investing in innovation - Open IT to developers - Helping corporate customers 	<ul style="list-style-type: none"> - Investing in innovation - Investing in digital transformation - Partnering with startups - Investing in startups through CV fund - Open IT to developers

What are the main challenges?	People (EBO) Culture Technology	People (EBO) Culture Technology	- Technology	- Culture - Technology	- Culture - Technology
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Table 3 – Incumbents business models

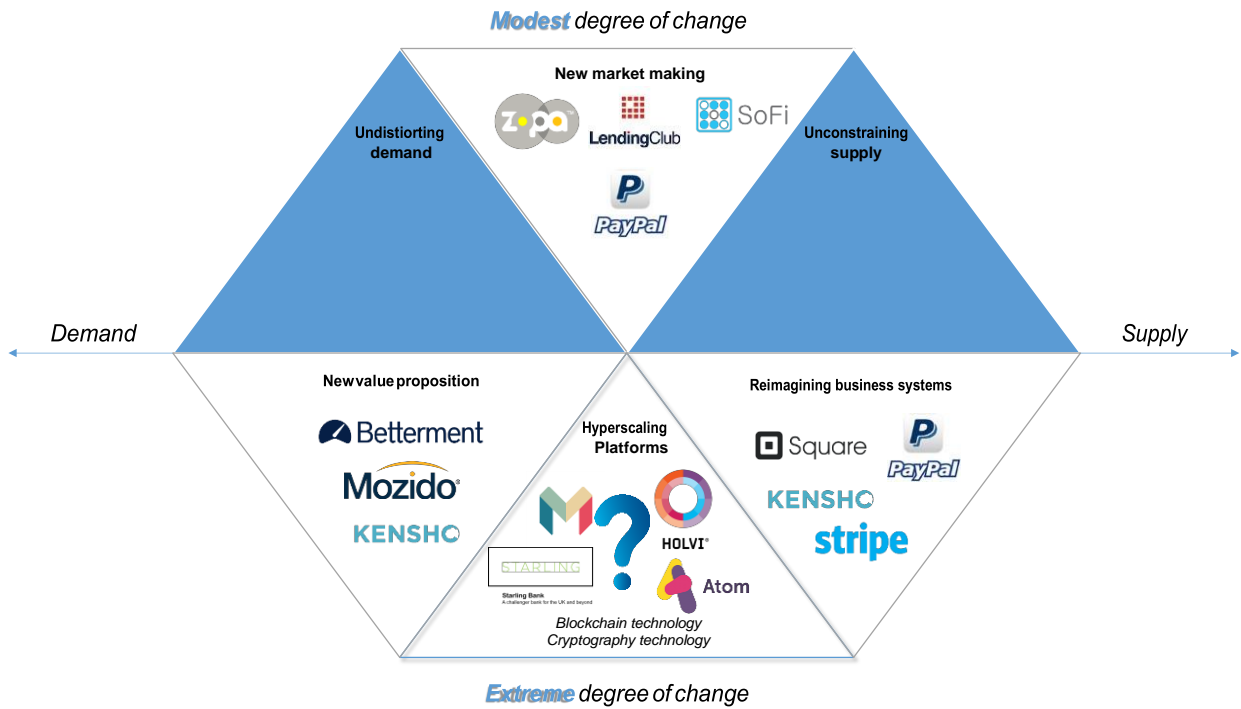


Figure 2 – Digital disruption framework

Table 4 – Key differences among financial platforms and financial incumbents

Model Parameters	Financial Platforms	Incumbents
EBO	High customization	Medium / low customization
Market	Microsegment, with high degree of specialization	Broad segments with broad characteristics
Long-tail potential	High specially in the bottom of the pyramid	High / moderate but also limited due the cost and their legacy
Lock-in potential	high but with multihoming trend	High / moderate
Network effects potential	High but limited due regulation and capital	High / moderate
Revenue model	Revenue stream based on information	Revenue stream based on capital
Production network contributors	The ecosystem with potential hundreds or thousands of firms	Small network of firms
Scale economies potential	Scale economies potential	
Scale economies potential	High due to automatization	Low due to large infrastructure needs
Pricing	Asymmetric among the different kind of users	Value and cost based
Value creation	It is generated by the ecosystem	It is generated by the firm
Dominant innovator	It is dominated by an important amount of app developers	It is dominated by the firm
Dominant risk taker	It is taken by an important amount of app developers	It is taken by the firm
Partnerships	To get access to information and capital	To increase barriers of entry and diversify portfolio
Innovation model	Emergent through the ecosystem and the individual interest and development of app developers	Planned in-house with budget restrictions
Management model	Orchestration of resources owned by the ecosystem (platform structures)	Coproduction with customers and control over resources based on value chain (Competitive forces)
Acquisitions	Generally performed to generate platform envelopment regarding its value unit	Generally performed to increase barriers of entry, generate efficiencies through economies of scale or diversify portfolio or get new capabilities

Appendix I

Appendix I Table 1: The datasets used in research

Firms	Sources
Financial Platforms	
<i>Lending:</i> Zopa Lending Club Sofi	Market reports (e.g., Key Note, Euromonitor); Papers (peer-to-peer lending); Books (The Rise of the Platform Economy, Platform Scale, Platform Revolution and Sharing Economy); Newspapers and sites (The Wall Street Journal, Forbes, The Economist, and Financial Times); Journals (Journal of Business Research); Companies' websites (https://www.zopa.com ; https://www.lendingclub.com ; https://www.sofi.com)
<i>Payments:</i> Paypal Square Stripe	Market reports (e.g., Key Note, Euromonitor); Papers (payments); Books (The Rise of the Platform Economy, Platform Scale, Platform Revolution and Sharing Economy); Newspapers and sites (The Wall Street Journal, Forbes, The Economist, and Financial Times), Journals (Journal of Business Research), Companies' websites (https://www.paypal.com ; https://squareup.com ; https://stripe.com)
<i>Retail banking:</i> Mozido <i>Investment banking:</i> Kensho <i>Wealth management:</i> Betterment <i>Treasury function:</i> Digital Assets Holding	Market reports (e.g., Key Note, Euromonitor); Papers (peer-to-peer lending, two-sided markets and payments); Books (The Rise of the Platform Economy, Platform Scale, Platform Revolution and Sharing Economy); Newspapers and sites (The Wall Street Journal, Forbes, The Economist, and Financial Times); Journals (Journal of Business Research), Companies' websites (https://www.linkedin.com/company/mozido ; https://www.betterment.com ; https://www.digitalasset.com)

Incumbents	
Wells Fargo	Market reports (e.g., Key Note, Euromonitor); Papers (banks); Books (The Rise of the Platform Economy, Platform Scale, Platform Revolution and Sharing Economy); Newspapers and sites (The Wall Street Journal, Forbes, The Economist, and Financial Times); Journals (Journal of Business Research); Companies' websites (https://www.wellsfargo.com ; http://www.goldmansachs.com ; https://www.bankofamerica.com ; https://www.hsbc.com ; https://www.natwest.com)
Goldman Sachs	
Bank of America	
HSBC	
NatWest	

Appendix I Table 2: Study themes and codes

Category	Subcategory	Code
Scale economy potential	Automatization	Automation
Customization	Experience-based offerings	Experience
Long-tail potential	Specialization	Development
Lock-in potential	Multihoming trend	Control
Network effect potential	Partnership effects	Network
Revenue model	Information / capital	Revenue
Production network contributors	Supply chain	Supply
Multisidedness	Capture	Capture
Pricing	Monetization	Price
Value creation	Ecosystem	Value
Dominant innovator	Innovation trend	Innovation
Dominant risk taker	Uncertainty	Risk
Technology	Latest technology	Technology
Innovation model	Change	Innovation
Management style	Structure & co-production	Management
