

Inquiry into peer-to-peer business platforms: classification of P2P platforms and drivers of peer-supplier entry

INQUIRY INTO PEER-TO-PEER PLATFORMS: CLASSIFICATION OF P2P PLATFORMS AND DRIVERS OF PEER-SUPPLIER ENTRY

Paper motivation

With the rise of companies like eBay, Etsy, Airbnb, BlaBlaCar, TaskRabbit, Udemy, Lending Club etc., the peer-to-peer (P2P) platform business model has become an increasingly prevalent form of exchange across sectors and industries. The concept of P2P businesses has been put under the spotlight by the general press, incumbents and the society at large (Colby & Bell, 2016). P2P e-commerce, accommodation, transportation, on-demand household services, on-demand professional services, learning, and collaborative finance are some of the fastest growing sectors of the global economy¹. Multibillion-dollar evaluations of companies that afford economic benefits to millions of private individuals, who in the past had few if any opportunities to bring to market their assets or skills, reflect the economic and the strategic impact of peer-to-peer digital platforms. High participation and usage of such platforms by suppliers and consumers show their influence on the way we work, live and consume (Colby & Bell, 2016; Tauscher, 2019).

Despite the magnitude and the impact of the P2P businesses, academic research on this new phenomenon is only emerging and as it does, it seems to be moving in a number of different directions (Benjaafar et al., 2018; Casadesus-Masanell & Hervas-Drane, 2010; Cennamo, 2019; Cullen & Farronato, 2014; Einav, Farronato & Levin, 2016; McIntyre, 2020; Parker et al., 2016). This is hardly surprising given the heterogeneity of firms and sectors that have adopted P2P business model (Täuscher & Laudien, 2018). Since the advancement of the P2P businesses is expected to continue at an accelerated pace and the theoretical development of this topic in the management literature is particularly scarce, in order for research in this field to go forward, it is important to have a clear view of what we understand under P2P platforms and how we can systematically conceptualise their heterogeneous universe.

Considering the scale and the far-reaching implications of the P2P platforms, on the one hand, and the lack of clarity on the subject in the management research, on the other hand, there is a need to integrate existing knowledge in this area. The goal of the current proposal is to develop theory to answer two main research questions: 1) how can P2P firms be systematically classified according to a relevant set of criteria and 2) what are the drivers of peer-supplier entry onto a P2P platform. Importantly, systematic classification of diverse P2P platforms is needed not only to interpret but also to better predict various outcomes for P2P platforms and their participants. Furthermore, since P2P platforms inherently depend on participation of individual suppliers for such businesses to exist and for transactions to occur, it is vital to develop theory regarding the drivers of entry for suppliers onto P2P platforms. In addition, to encourage further research in this area, the paper maps out prospective research directions on the individual, platform, ecosystem and macro levels of analysis.

Theoretical Development

The traditional way of conducting business between a business supplier and an individual consumer (B2C) has been disrupted by the spectacular rise of digital platform businesses and their adoption of P2P way of exchange as a powerful alternative to B2C transactions. Reduction of market entry, marketing and transaction costs by digital platforms allowed millions of dispersed micro suppliers to bring their goods

¹ <http://www.pwc.co.uk/issues/megatrends/collisions/sharingeconomy/future-of-the-sharing-economy-in-europe-2016.html>

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and services to market, making them accessible to consumers via the facilitating role of the platform. For example, Airbnb empowered the entry of millions of individual property owners to offer their homes for short-term rent in the accommodation sector, BlaBlaCar made it possible for individual drivers to offer rides to inter-city travellers in the transportation sector, TaskRabbit allowed individuals to offer their time and skills in assisting customers with errands and chores in household services sector. In addition, platforms introduced innovative mechanisms of digital trust, such as ratings, reviews, etc., and superior matching mechanisms between a supplier and consumer. This substantially reduced asymmetry of information that in the past limited P2P transactions to members of the family or neighbourhood and further increased the appeal of platform participation to potential suppliers, making it more secure and friction-free (Gerwe & Silva, 2020; Täuscher, 2019). As a result, today we witness a wide proliferation of P2P platform businesses across a wide range of sectors and industries.

One important characteristic of P2P businesses is the high degree of heterogeneity (Einav et al., 2016), as, on the one hand, these markets allow large numbers of individuals with heterogeneous assets to join the platform and make transactions with consumers and, on the other hand, the platforms themselves operate across a diverse spectrum of transactions and activities. One anticipated but highly undesirable outcome of such heterogeneity is the lack of conceptual clarity regarding the P2P phenomenon in the business management research. Current proposal sets out to develop a clear view of what we understand under P2P platforms and to build theory intended to systematize their heterogeneous universe in order to better predict various outcomes that concern P2P platforms and their participants.

Building on extant literature on platforms and multisided markets, we conceptualize P2P platforms as marketplaces that connect and facilitate transactions between two types of actors – supply side and demand side participants (Kyprianou, 2018; Vallas & Schor, 2020). The platform in this case typically does not own the assets that underlie the transaction (such as real estate on accommodation platforms or cars on ride hailing platforms) but plays the role of a matchmaker and the transaction facilitator and enabler (Einav et al., 2017). Importantly, the platform itself is a digital interface, not limited to a particular location or physical space. We use the term “peer-supplier” to refer to the actor that provides access to a particular asset via the digital platform (such as an individually owned property on Airbnb platform or dog-walking help on TaskRabbit) (Benoit et al., 2017). Consumers, in turn, form another side of the multi-sided platform as they seek to access particular goods or services. The term “peer” in this context differentiates this type of exchange from B2C or B2B transactions and refers to individual supplier or consumer, which are usually small in scale and do not represent an established business, company or corporation (Gerwe et al., 2020).

Classification of peer-to-peer digital platforms

Peer-to-peer businesses span multiple industries and economic sectors. Once the diversity among P2P platforms is recognized, the necessity to find a way to classify them becomes apparent. We posit that such platforms can be categorized in a systematic way based on five salient dimensions that emerge from the thorough P2P literature analysis: asset type, transaction type, monetary compensation, level of control by the platform and online/offline mode of transacting. Each dimension represents a strategic choice by the platform and has direct implications for platform operations, scale, performance and growth potential.

Asset type that underlies the transaction, i.e., physical assets, human assets or money, is the first important dimension that differentiates between capital and labor P2P platforms (Calo & Rosenblat, 2017; Gerwe & Silva, 2020; Vallas & Schor, 2020). Capital platforms are those where peer-suppliers bring their physical assets or cash for transaction with others, such as real estate (Airbnb), cars (BlaBlaCar, Lyft, or Turo), money (LendingClub), products to sell (Etsy, eBay), etc. Labor platforms

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imply reliance on human assets, such as time and skills (TaskRabbit) or professional abilities and knowledge (Superprof, Udemy). The type of asset that is accessed via the platform has direct implications for the potential pool of suppliers that a particular platform can access to establish and grow its operations and, therefore, for the potential scale of the platform. For example, only people with a spare room or property may act as peer-suppliers on Airbnb platform; only individuals with spare cash may participate in LendingClub and people with some specialised knowledge or skills may offer services on Superprof or Udemy.

Transaction type that is facilitated by the platform (Fraiberger & Sundararajan, 2015; Gerwe & Silva, 2020; Srinivasan & Venkatraman, 2018) is the second dimension that captures the main distinction between transfer of ownership in the transaction versus temporary access. For example, on eBay and Etsy, an item changes ownership from peer-supplier to consumer in the transaction, while on Spinlister an asset (such as sports equipment) gets accessed temporarily and stays with the owner. The distinction between permanent versus temporary access to an asset in the transaction has direct implications for the type of supplier and customer that would engage in the transaction. It also has meaningful implications for the asset itself, the associated risks, maintenance costs, etc.

Monetary compensation in the transaction is the third salient dimension that characterises P2P platforms (Schor & Fitzmaurice, 2015; Sundararajan, 2016). Some platforms facilitate transactions that do not involve any monetary exchanges between suppliers and consumers, such as Couchsurfing where guests stay with hosts for free. Other platforms are fee-based, such as Airbnb, where guests pay for their accommodation provided by hosts. Presence (or absence) of monetary compensation has direct effect on the platform and its revenue generation model, the customer, who will be able to access a particular good or a service for free, and on the peer-supplier, whose motivation would vary substantially depending on the possibility of monetary compensation for their services. In turn, these factors will determine the potential scale of the platform. It is not surprising that presence of financial compensation of peer suppliers on Airbnb has been identified as one of the important explanatory variables when comparing the scale of this platform with, for instance, Couchsurfing, where there are no monetary incentives for peer-supplier participation.

Level of control by the platform over the transaction and peer-supplier activities is the fourth relevant dimension (Calo & Rosenblat, 2017; Cutolo & Kenney, 2019; Hagiú & Wright, 2015; Kuhn & Maleki, 2017; Kyprianou, 2018). Even though peer-to-peer platforms display a continuum of levels of control over the way transactions are to be executed on the platform and over activities of peer-suppliers, the level of control by the platform can be represented as low, medium and high. Uber, for example, displays a very high level of control over its drivers and controls each ride (display, booking, fee, etc.) via platform-controlled app. Airbnb can be characterized by the medium level of control since its algorithm determines the display of properties on the page in response to a particular search by the customer, but the fee, the details of the transaction and the interaction between the peer-supplier and the customer are generally outside of Airbnb platform control. Couchsurfing represents a low level of platform control where the transactions and the supplier participation are generally regulated by the community-based instruments rather than the platform itself.

Finally, some of the P2P platforms facilitate offline transactions, such as sharing a car with the driver and other passengers via BlaBlaCar or doing a task in the house of a neighbour via TaskRabbit; while the transactions on other platforms are completely online, like buying something via Etsy or eBay. This distinction means that interpersonal relationships and trust become more important when there is an offline transaction.

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Drivers of peer-supplier entry onto a peer-to-peer platform: Theoretical framework

The main difference between P2P platforms and other types of multi-sided platforms or traditional businesses is their supply side participants, which consist mainly of individuals or micro players (Taeuscher, 2019). Unlike the well-established literature on the entry of new ventures and entrepreneurial entry, research on peer-supplier entry is only at nascent stage. Although the literature has already started to examine some individual and macro level drivers of peer-supplier participation, mostly empirically, (Bucher, Fieseler & Lutz, 2016; Gerwe, Silva, & De Castro, 2020), there is not yet a comprehensive conceptualization of the main factors that encourage individuals to participate in P2P platforms. However, according to emerging evidence, the inability to ensure participation on the supplier side is one of the main reasons for platform failure in the context (Chasin, von Hoffen, Hoffmeister, & Becker, 2018). This is due to the existence of indirect network effects: the value of the platform to consumers is minimal if it cannot attract a sufficient number of providers (Cennamo, 2018). Our theoretical framework incorporates four main antecedents that determine supplier's decision to participate in a particular P2P platform on the individual, platform, ecosystem and macro levels of analysis (see Figure 1). We submit that entry of peer-suppliers can be comprehensively described and accounted for when all four dimensions are investigated individually and in interaction with variables from other dimensions.

Individual level characteristics refer to peer-supplier's beliefs, expectations, motivations, resource endowments, etc. (Bucher et al., 2016). As reflected in the term "peer", one of the key distinguishing characteristics of P2P business models compared to traditional B2C and B2B companies is their reliance on participation of individuals, small actors or micro players. Often, these are either ordinary citizens or micro players, not large companies or corporations. Hence, individual level motivations and drivers play an important role in propelling a peer-supplier to enter a P2P platform.

Platform level characteristics capture drivers of peer-supplier entry that are set by a particular P2P platform. The five characteristics captured in the classification of P2P platforms above (labor/capital platform; sale/access based transactions; monetary/non-monetary compensation for the transaction; platform level of control; online-offline mode of transacting) and other features of platform configuration and design (ease of joining, safety of transactions, mechanisms of digital trust, possibility of multihoming, etc.) as well as network effects (Chu & Manchanda, 2016; Thies, Wessel, & Benlian, 2018) influence one's decision to bring their goods or services to a particular platform (Hall and Krueger, 2018).

Ecosystem characteristics is a third level of antecedents that drive peer-suppliers to enter P2P platforms. As P2P platforms grow and develop, many of them give birth to ecosystems that emerge around platform activities (Adner, 2018; Hein et al., 2019; Jacobides et al., 2018; Kapoor, 2018). For example, in the accommodation sector, owners of apartments may be more willing to enter into a P2P renting platforms when there are small businesses that help them with the cleaning services, property management, customer checking, pricing advice, etc. In addition, owners can benefit from the collaboration and exchange of ideas with the communities of other owners (for example, Airbnb community).

Macro environment characteristics, such as macro-economic, technological, social, etc. factors, also need to be considered when analysing peer-entry onto digital peer-to-peer platforms (Täuscher & Kietzmann, 2017, Hall and Krueger, 2018; Gerwe et al., 2020). Building on entrepreneurship literature, which highlights a wide range of macro-level drivers that propel individuals to create new ventures, we consider developmental, institutional, demographic, technological, cultural and other characteristics that may drive individuals to enter platforms as peer-suppliers (Arin, Huang, Minniti, Nandialath & Reich, 2015; Wennekers, van Stel, Thurik, & Reynolds, 2005).

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Taken together, the classification of P2P platforms and the theoretical framework of drivers of peer-supplier entry onto such platforms will allow management researchers to 1) conceptualize with greater clarity nuanced processes and outcomes that take place in the peer-to-peer ecosystems; and 2) improve explanatory and predictive power of the inquiries that are much needed in this highly relevant area of research.

Conclusions and Contributions

Disambiguation and expansion of theory is one of the main ways for theories in management science to better explain and predict phenomena in a clear, systematic and comprehensive fashion (Sutton & Staw, 1995). In this proposal, we aim to develop theory on digital P2P platform businesses and make three primary contributions to the literature on P2P platforms (Chu & Machanda, 2016; Thies et al., 2018). First, although research regarding P2P platforms has been accelerating, there has not been a formal conceptualisation of P2P exchange in the academic literature. To help alleviate this confusion, we introduce five salient dimensions that can be used to aid in the development of the classification of P2P platforms: asset that underlies the transaction (human or physical), transaction type (with or without transfer of ownership), monetary compensation (present or absent) and the level of control by the platform (high or low). The proposed classification provides way to conceptualize variation and offers a systematic means of comparing and contrasting heterogeneous P2P businesses. Second, we attempt to organize a diverse range of variables that have started to emerge from research on the drivers of peer-supplier entry onto the P2P platform into a comprehensive framework that incorporates individual, platform, ecosystem and macro levels of analysis. Participation of peer-suppliers in P2P platforms, though essential for the operations, survival and performance of the latter, is a complex and multisided phenomenon. Once a clear retrospective analysis of extant research is provided, future research can proceed on more solid footing. Hence, our third contribution is the development of direction for further investigation on each level of analysis above.

Our study also has meaningful implications for the managers of P2P platforms that are operating in an increasingly competitive environment. The stakes for platform owners and managers to deliver strong performance are getting increasingly high. Hence, attracting peer-suppliers to a platform is of utmost importance for the platform's survival and competitiveness. Indeed, some of the peer-to-peer platforms, such as Uber, Lyft and Airbnb, have already gone public via multi-million-dollar initial public offerings. Others, such as Stayzilla or Homejoy, had to close down despite securing substantial capital to fund operations and growth (Täuscher & Kietzmann, 2017; Chasin, von Hoffen, Hoffmeister, & Becker, 2018). Furthermore, due to indirect network effects, the platform will have no value for its consumers if it is unable to attract the complements (Cennamo, 2018). Thus, our theoretical insights regarding the four types of drivers of peer-supplier entry onto a P2P platform may provide much needed insights for platform managers in order to finetune and optimise their strategies to attract peer-suppliers in light of individual, platform, ecosystem and macro factors.

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Figure 1

