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The sharing economy and the future of the hotel industry: Transaction cost theory and platform economics

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ABSTRACT

The 'sharing economy' is in the process of transforming numerous industries. Among these, the hotel sector is especially vulnerable to the strategic disruption that sharing platforms present. Companies such as Airbnb represent the epitome of this threat. This paper sets out to achieve two fundamental research objectives. First, it develops a set of exploratory research propositions based on a qualitative application of transaction cost theory (TCT) to the emergence of sharing platforms. Second, it offers specific strategic and tactical recommendations for the hotel industry based on the TCT analysis referred to above. The paper suggests that, in revising their business models to cope with the new competitive challenges posed by sharing platforms, hotel chains can leverage their superior capacity to deal with three key features of transactions drawn from TCT (frequency, uncertainty and asset specificity) and develop what this paper terms 'integrated platforms'. By employing the TCT lens to understand the emergence of sharing platforms, this is the first study to systematically develop a theoretically grounded approach to understanding how transaction features impact the emergence of sharing platforms, and it hence has clear implications for numerous industries being impacted by these developments, not least the hotel industry.

1. Introduction

Airbnb, a provider of travel accommodation and a pioneer of the 'sharing economy', has served thirty million customers since its launch in 2008, without owning a single room. Although valuation of Airbnb remains difficult due to its private ownership, its 2014 revenue-based valuation of over $10 billion exceeded that of well-established global hotel chains, such as Hyatt (Dickey, 2014). By mid-2017, Airbnb's valuation stood at $31bn (Thomas, 2017), with plans for an Intial Public Offering (IPO) in which the valuation of the company might reach $50bn (Johnson, 2017). This means that it would be worth more than the world's largest hotel chain, Marriott International. It is also valued higher than the Hilton and Hyatt hotel groups combined (Ting, 2016). The core strength of the Airbnb value proposition appears to be its capacity to combine practical attributes (such as home benefits and novelty) with an 'authentic' travel experience compared with a traditional hotel (Guttentag et al., 2017). Pemberton (2016) has reported that the growth rate of bookings in outer London (predominantly through Airbnb-type rentals) is double that of inner London bookings due to tourists' desire to experience a more 'local' reality than that provided by staying in a hotel.

The emergence of Airbnb as a sharing platform is both a remarkable and a novel development that presents a serious threat to the economic sustainability of the hotel industry. Indeed, hotels are characterized by important fixed operating costs, rendering their profitability vulnerable to any adverse shock in demand, such as the introduction of peer-to-peer sharing platforms. Three recent studies have established the impacts of Airbnb on the hotel sector. The initial impact of Airbnb appears to have been a reduction in the profitability of budget hotels (The Economist, 2017). Aznar et al. (2017) have shown that in the case of a major tourism destination – Barcelona – the presence of a high density of Airbnb rentals has made hotel investment returns on equity fall. Likewise, a study commissioned by Hotel Association of New York City has estimated that New York hoteliers lost a cumulative $2bn in revenue because of Airbnb (Newswire, 2015). Zervas et al. (2017) studied another city with high Airbnb listing density, Austin, Texas, and found that hotel revenues had fallen by up to 10 per cent, disproportionately impacting 'low-end', non-business hotels relative to higher-end, business-focused properties.

The most comprehensive survey of the sharing economy and hospitality literature to date has been carried out by Cheng (2016). It covers a broad range of topics in a systematic and thoughtful manner,

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helping to identify key areas for future research. Yet, it omits discussion of the structural nature of sharing platforms such as Airbnb, which is the focus of our analysis. With the aim of better understanding the salient features of this emerging business model, several scholars have directed their attention to Airbnb as an exemplar of the threat of sharing platforms. Varmaa et al. (2016) have considered whether Airbnb is a durable innovation or a short-lived phenomenon. Based on in-depth qualitative interviews and a questionnaire with key stakeholders (customers, hotel managers, etc.), they argued that Airbnb is indeed a durable threat to the hotel industry and, by implication, one to which current hotel business models will need to adjust, as their 'findings point to the need for the hotel industry to be more proactive, and to shake itself out of its stupor' (236).

Wang and Nicolau (2017) have recently studied price determinants of sharing economy accommodation listed on Airbnb in 33 cities. The authors estimated a multivariate model using 25 explanatory variables in five broader categories, such as site and property attributes and online review ratings. Perhaps of crucial importance for the hotel industry is their finding that hotel chain and star ratings had little or no power to dissuade customers from choosing Airbnb accommodation: 'Instead, host attributes are identified as important price determinants…. Hosts with superhost status, more listings, and verified identities usually charge higher prices' (130).

Brochado et al. (2017) have examined the influence of cultural attributes on Airbnb customer preferences. Across three notionally diverse cultures (India, Portugal and the United States), the study found that seven factors were commonly asserted as reasons for customers' choice of Airbnb. These included stay experience, host attributes, room or apartment attributes and location. Guttentag and Smith (2017) have examined Airbnb from a disruptive innovation perspective and found that, when it came to consumer preference, Airbnb outperformed budget hotels and motels, underperformed upscale hotels and had mixed outcomes versus mid-range hotels. This finding is potentially important since it suggests that as hotel assets (services, facilities, room amenities, etc.) become commoditized, in the sense of going from upscale to budget properties, the Airbnb threat becomes greater.

If the threat posed to the hotel industry by sharing platforms such as Airbnb is well understood, scholars are starting to focus on the conditions necessary for the possible coexistence of hotels and such platforms. Richard and Cleveland (2016) have explicitly addressed areas in which hotels can establish differentiated positioning relative to peer-to-peer sharing platforms. They argued that hotels can provide 'safer, legal, higher quality, and consistent' products (241) relative to peer-to-peer platforms. From their perspective, hotel chains are 'branded marketplace platforms' (241) for which hoteliers provide consistent branding messages and, through their brand reputation, act as guarantors of quality and safety.

1.1. Purpose and structure of the paper

While the extant literature in the hospitality field has focused on important functional aspects of sharing platforms such as Airbnb (e.g. branding and marketing), few published studies to date have systematically theorized the general structural form of sharing platforms themselves (Cheng, 2016). We believe that further detailed analysis of the core structural features of sharing platforms from the perspective of economic exchange can uncover dynamics of their functioning that can offer important insights for firms and organizations threatened by the emergence of such platforms, as well as nurture a richer debate among the academic community on the nature of sharing platforms in general and the evolution of the hotel industry, specifically.

This paper adopts an explicit theoretical lens to contribute to the understanding of sharing platforms: transaction cost theory (TCT) – a well-established strand of organizational economics and the theory of the firm (Williamson, 1971, 1975, 1979, 1985, 1991). Hardly any research studies have considered transaction cost aspects of the sharing economy, with the exception of a recent study by Henten and Windekilde (2016).

Benkler (2004) has defined the discrete category of physical goods that simultaneously possesses excess capacity as 'shareable' goods. To combine comparative transaction cost and motivation analysis, Benkler argued that this excess capacity could be more efficiently harnessed through sharing than through the transfer of ownership. Elaborating on this contribution, we posit two archetypical types of sharing business models: 'peer-to-peer' platforms – where a firm develops and manages transactions between independent users and suppliers – and 'integrated' platforms – in which a firm administers various mechanisms integrating transactions between independent users and suppliers and may also possess its own asset stock that can be made available to users on an on-demand basis.

We articulate the key features of these two sharing platforms by focusing on the nature of transactions and, specifically, on three key variables: 1) the frequency of platform transactions, 2) the uncertainty of platform transactions and 3) the specificity of shared assets. In common with most forms of transaction governance, sharing platforms typically prosper as the frequency of transactions rises. As we will explain, this may be facilitated by a partial or total integration of transactions by the platform owner. Furthermore, where the certainty of the transaction is high (due to its limited timespan) and the shared assets possess low specificity, peer-to-peer sharing platforms prosper and grow. Conversely, the higher the level of uncertainty associated with the sharing transaction and the higher the value of specific shared asset, the greater the incentive for platform owners to adopt mechanisms of platform integration, which might eventually, but not necessarily, lead to the progressive integration of the shared assets themselves, making their own inventory of assets available for sharing. These theoretical insights, as we will see in the last part of this paper, have important implications for competitive strategy – especially for the ways in which hotel chains can respond to the emergence of sharing platforms such as Airbnb.

This new domain of research has a relatively limited extant literature (both theoretical and empirical), as has been highlighted above. This poses a methodological challenge, which is further impacted by the relative recentness of the phenomenon being studied, implying a lack of data for empirical analysis. Both these factors militate against hypothesis testing. We thus decided to draw on the approach of Glaser and Strauss (1967) and Eisenhardt and Graebner (2007) by employing an exploratory method with a view toward developing conceptual propositions rather than testable hypotheses. This has an advantage when it comes to generating novel insights into the sharing platform phenomenon studied in this research given the relative paucity of empirical testing of theoretical frameworks. It could also present future research opportunities for more comprehensive hypothesis testing when sufficient available data become more readily available.

Our paper is organized as follows. In part two, we provide a discussion of the platform economics literature as it pertains to economic sharing, describing the contextual, *prima facie* conditions that foster the creation of sharing platforms. In part three, we introduce the TCT perspective and posit that sharing platforms (be they peer-to-peer or integrated) represent novel hybrid governance forms of transactions. Part four derives propositions, grounded in TCT, on the nature of sharing transactions and their impact on the nature and evolution of sharing platforms. We here posit an evolutionary perspective on sharing platforms suggesting that – under conditions of high frequency and uncertainty of transactions, as well as high specificity of shared assets – peer-to-peer platforms might progressively transform themselves via the adoption of an array of integration mechanisms, including (in the most extreme case) the direct ownership of assets exchanged through the platform. This potential evolution has competitive implications for hotel chains, which we examine in part five of our paper. Part six offers a future empirical research agenda based on our theoretical discussion.

2. The emergence of sharing platforms

Several factors explain the recent surge of sharing platforms. These platforms are developing due to far-reaching changes in the socio-economic contours of industries as diverse as media, education, banking and tourism. Changes in technology related to the rapid digitization of distribution and communication systems and the emergence of global communities have allowed buyers to access and share knowledge, goods and services in ways that were previously unavailable. Digitization has transformed services that previously required face-to-face interaction between supplier and user. For example, travel agencies are now being replaced by online travel portals allowing customers to design their own highly customized vacation plans (Law et al., 2004; Tse, 2003). The line between production and consumption has blurred to the point that, with digital goods and services, consumers can also be producers of both final products and experiences, that is, individuals can rent out their homes on Airbnb whilst renting someone else's on the same platform. This has led to the emergence of the concept of 'prosumption' (Tapscott and Williams, 2006).

This phenomenon is also linked to current economic and social contingencies. While world economic production appears to have returned to pre–2008 financial crisis levels, two phenomena persist. The first is rising inequality. Piketty (2015) has meticulously detailed the emergence of persistent inequality associated with low growth economies in the developed world. Inequality has led to the emergence of an 'hourglass' economy that increases the income of the wealthy while pushing previously middle-class people into the lower classes (Das, 2017). The net result is a decline in purchasing power among the population segment most likely to spend disposable income on services, such as accommodation and taxi rides, or purchase consumer durables, such as cars. Faced with declining incomes, people are looking to share existing assets (rather than individually own new ones) or looking for more price-competitive alternatives to traditional services. The second is persistent underemployment (Heyes et al., 2017). Again, while economic output has returned to pre-crisis levels, employees are working hours well below full time, thus making it hard for them to earn enough income to cover their cost of living (Meyer and Sullivan, 2013). This situation is opening the door to new forms of bartering and to a shift of economic transactions away from ownership-based, traditional market exchange (Habibi et al., 2017). It is estimated that by 2025, economic sharing, defined as the peer-to-peer–based sharing of access to goods and services (often coordinated through digital platforms; Hamari et al., 2015), will generate a revenue stream of around $335 billion in just five sectors (car sharing, finance, music, staffing/recruitment, travel and video streaming; Cohen and Muñoz, 2016, p. 3). These changes are significantly affecting the hotel industry, as we have highlighted in the introduction to this study.

There are antecedents of the competitive threat to hotel chains presented by sharing platforms – namely the emergence of online hotel booking platforms such as booking.com. Booking.com's threat came from bringing independent hotels – which typically lacked extensive promotional channels owing to weak brand positioning and limited promotional resources relative to large, integrated hotel chains – into direct competition with hotel chains. Online booking platforms essentially enabled independent hoteliers to access a considerably larger market, creating a more level playing field on which to compete against the major hotel chains. Nevertheless, the value bundle proposed by hotel chains, for example, service and experience consistency chain-wide, as well as loyalty programs, gave hotel chains an enduring advantage over independent hotels − especially for frequent travellers (Chathoth, 2016).

Yet, the current challenge to hotel chains is different. The threat to hotel chains from peer-to-peer sharing platforms of the Airbnb type comes from three sources. First is the rapid scaling that comes from not owning shareable assets (the hotel development/build-out cycle takes considerably longer): this significantly reduces overhead and transaction costs, sometimes referred to as 'zero marginal cost economics' (Rifkin, 2014). The second relates to the increasing demand for authenticity that staying in someone's home may offer relative to a standardized hotel accommodation (Lalicic and Weismayer, 2017; Meged and Christensen, 2016). A recent study has suggested that the authenticity of Airbnb rentals increases guests' perception of their value (Liang et al., 2017). Third is a consequence of the reality that independent apartment renters on peer-to-peer platforms are not subject to any of the regulatory and legal constraints faced by hotels, such as health and safety requirements and access to fair housing laws (Biber et al., 2017; Edelman et al., 2017). Moreover, regulations vary substantially by location, and evidence suggests that in key cities for hotel accommodation and tourism, Airbnb's rise through the exploitation of regulatory gaps is having a negative impact on hotel revenue as evidenced by Herrera (2016), who reports on Airbnb's effect on Miami hoteliers. While the last two factors have been covered in the literature (Eckhardt and Bardhi, 2015), our paper focuses on the economics of sharing platforms and how they both create competitive disadvantages for hotel chains and, as we explain below, offer a potential opportunity for those chains that embrace integrated sharing platforms.

2.1. The economics of platforms

Sharing platforms are not unique to the accommodation industry. Digital marketplaces, where buyers and vendors of goods and services can meet and finalize their transactions, have become a pervasive location of economic exchange in several industries. With the purpose of understanding the nature and the development process of sharing platforms in order to derive implications for hotel chains, we have focused our attention on the literature covering the economics of such platforms (Belk, 2010; Benkler, 2004; Botsman and Rogers, 2010; Dervojeda et al., 2013; Olson and Connor, 2013; Owyang, 2014; Rifkin, 2014; Schor, 2014).

In general, it can be said that digital platforms have become a real and viable alternative business model to the integrated firm and also represent a mechanism for coordinating economic activities that is significantly differentiated from more typical market structures. In the definition of Hagiu and Wright (2011), a platform enables direct interactions among two or more distinct sides of users (buyers and vendors), while each side is affiliated with the platform. The extant literature on platform economics (Baldwin and Woodard, 2009) has depicted the platform owner as being at the centre of an ecosystem (Iansiti and Levien, 2004) and having the key role of mediating supply-side and demand-side users in a two-sided market (Rochet and Tirole, 2006; Parker and Van Alstyne, 2005). The users on both sides choose to interact through the platform when it is more efficient than transacting directly (Eisenmann, 2006).

To support the sustainability of the platform, platform owners play several roles or functions: local agglomeration of demand and supply; intermediation and integration of two-sided markets, generation of positive network effects through price aggregation and the supply of an increased variety of products or services, facilitation of information sharing and trust generation mechanisms (trust reflects the 'extent to which negotiations are fair and commitments are upheld'; Anderson and Narus, 1990) and contract management and the administration of payments. Overall, the platform owner acts as a regulator (Farrell and Katz, 2000) supplying the needed trust in the platform ecosystem and attempting to lock-in users (Varian and Shapiro, 1999) by raising switching costs. This can involve offering complementary and value-added services or products, as well as utilizing different pricing structures. In other words, the value of the platform increases when the number of users grows. This is very important for our study: as the total volume of exchanges occurring on a platform grows, so does the platform's efficiency and sustainability. This self-reinforcing dynamic (Arthur, 1989; Schilling, 2009) is frequently exponential in nature and may result in a 'winner takes all or most' market, where the winner

dominates the market, even to the extent of creating a durable monopoly.

For the platform owner, it is thus of the utmost importance to reach a minimum viable size (number of users and volume of transactions) and to identify the side that benefits more from the presence of the other side (Hagiu, 2014; Eisenmann et al., 2006) in order to have the option of integrating it. Understanding and harnessing both same-side (either buyer or vendor) and cross-side network effects can stimulate platform adoption, because the platform market is subject to positive network effects (Katz and Shapiro, 1986). On the other side, by adding more users to the platform, owners can achieve a higher scale and diversified revenue sources, but in doing so they raise platform complexity, posing challenges for economic viability and innovation (Constantia and Eaton, 2016).

The platform's traits and features, as well as the roles and functions of platform owners as described above, are applicable to any type of platform and not necessarily only to sharing platforms. Yet, there are significant differences among types of platforms and, in particular, between platforms that support the exchange of ownership of specific products or assets (eBay, Amazon, etc.) and platforms that offer only shared access to products or assets (such as Airbnb). Indeed, the typical transaction in a sharing economy environment does not imply an exchange of ownership. Such access-based exchange takes place with no transfer of ownership so that users can access goods that they cannot afford to own or that they choose not to own due to living space constraints or concerns about the natural environment (Bardhi and Eckhardt, 2012). The differences between ownership-based and access-based exchanges mostly pertain to the nature of the object–self relationship and to the rules that govern and regulate this relationship. In ownership-based exchanges, buyers identify with their possessions, which become part of their extended self and can be crucial in maintaining, displaying and transforming their self and self-worth (Belk, 1988). By contrast, access-based exchange is a temporary and a circumstantial consumption context (Chen, 2009) implying less psychological attachment.

As to the rules that govern and regulate the different platform exchanges, ownership implies a transfer of property rights and a freedom and responsibility with regard to an asset, with clear boundaries between the self and others. The owner has the right to regulate or deny access to others, as well as to use, sell and retain any profits yielded from an asset's use. Access-based exchange does not offer this, leading to significantly different, and often more complex, property contexts (Perzanowski and Schultz, 2014). Within this study, our assumption is that the peculiar nature of access-based transactions significantly impacts the nature and evolution of sharing platforms. Thus, a fuller understanding of sharing phenomena such as Airbnb requires a more precise definition of the nature and features of the sharing (access-based) transactions that take place on a platform. We thus direct our attention to transaction costs theory (TCT), a well-established theoretical framework aimed at understanding how different economic exchanges can be governed through different institutional mechanisms (i.e. markets, hierarchies or networks).

3. Transaction cost theory (TCT): sharing platforms as hybrid forms of governance

First developed through the seminal work of Ronald Coase (1937) and then definitely established thanks to the work of Oliver Williamson (1971, 1975, 1979, 1985,1991, TCT conceives of firms, markets and other institutions as sets of contractual arrangements for administering economic transactions in the presence of transaction costs. Two key assumptions of this perspective pertain to the nature of economic agents and their behaviour: bounded rationality (which poses a problem of contractual incompleteness) and opportunism (which poses a hold-up problem for the party that is more dependent on the transaction). The key variables of TCT refer to the nature and features of economic transactions: frequency, uncertainty and asset-specificity (Williamson, 1979). First, 'transaction frequency' refers to the number of transactions that, over a certain period, occur either among the same parties or have the same object (i.e. the same shared asset within a sharing platform). Second, 'transaction uncertainty' relates to the timespan of transactions, which in turn influences the breadth of future contingencies for which contractual adaptations are required, as well as the risk of hard contracting and disputes in ex-post transaction governance. Third, 'asset specificity' is the degree to which durable, specific investments are required to maximize the transaction value. Assets are specific when they have value within the context of a transaction but relatively little value outside the transaction. Thus, asset specificity gives rise to interdependence between contracting parties and creates a 'small numbers problem' (bilateral monopoly) and the consequent issue of quasi-rent expropriation (Klein et al., 1978) – that is, the party having made the specific investments can be exploited by the other party, who may renege or hold him or her up.

According to TCT, the three transaction features above (frequency, uncertainty and asset specificity) determine the selection of the most efficient contractual arrangements for administering transactions (i.e. for governing economic activities). At the two extremes of a continuum of organizational forms stand 'markets' and 'hierarchies'. Markets are most appropriate for administering transactions characterized by low frequency (among the same parties), low uncertainty and low specificity of assets invested in the transaction. Hierarchies (integration of transactions) are, on the contrary, most appropriate in the presence of high frequency, high uncertainty and high specificity. In practice, most governance models adopted represent hybrid forms, incorporating both market and hierarchy arrangements in performing economic transactions, for example strategic alliances or outsourcing activities.

In this paper, we consider sharing platforms to be hybrid models for governing economic transactions. Overall, as an intermediate (hybrid) form of governance, sharing platforms capture features of both markets and hierarchies. Similar to markets, sharing platforms represent a marketplace that promotes transactions through the meeting of supply and demand. At the same time, as with a hierarchy, sharing platforms directly intervene in transaction arrangements among the parties through the imposition of general contractual conditions and the centralization of key administrative processes (payments, etc.). For a sharing platform, the prevalence of market-based versus hierarchical mechanisms depends closely on two factors: on the nature of the transactions and on the strategic decisions of the platform owner – issues that we discuss in detail below.

To further highlight the hybrid nature of sharing platforms, in Table 1 (adapted from Powell, 1990) we compare sharing platforms with markets and hierarchies under a set of dimensions we have directly derived from TCT. First, on the *contract form/normative basis* (Powell, 1990), transactions that occur on sharing platforms are differentiated from both 'pure' market, arm's length contracts and from hierarchical employment contracts. Such transactions take, instead, their origins from forms of *neo-bartering* (Belk, 2010) – such as couchsurfer.com or tripadvisor.com – which in turn may be progressively formalized into standardized platform contracts and, in some cases, may be administered directly by the platform owner.

Second, the *scope of exchange* (Macneil, 1978) involves two parties with the exchange mediated by the platform owner, different from a pure market exchange (where exchange is not mediated) and a hierarchy (where the firm is the common counterpart in a nexus of contracts). Third, similar to a market, subject to the rule of 'sharp in by clear agreement; sharp out by clear performance' (Macneil, 1974, p. 738), the *identity of parties* is only partially relevant in a sharing transaction because the platform owner, acting as the intermediary of exchange, often supplements the parties' reputation to facilitate the encounter. In other words, the platform 'brand' supplements the parties' lack of reputation until trust, that is, reputation-building mechanisms (Fombrun and Shanley, 1990), are integrated into the platform and

Table 1
Key features of platforms as hybrid governance mechanisms.

	"Pure" Market	Hierarchy	Sharing Platform
Contract form/Normative basis	Classic (complete) contracts/Arm's length (spot) transactions	Employment contract, Internal conflict resolution/Forbearance	Neo-bartering and platform contracts
Scope of exchange	Typically bilateral	Vertical, multi-lateral with one common party	Bi-lateral, mediated by the platform
Identity of parties	Irrelevant	Relevant	Partially relevant
Means/Intensity of communication	Price/ Low intensity	Authority, internal processes, rules, hierarchical relations/ High intensity	Platform mechanisms, open social networks/ Medium intensity
Exchange period/Uncertainty	One-shot/Low	Unlimited/High	One-shot to long-term (depending on transaction)/From low to high
Monetary incentives intensity	High-powered	Low-powered	Medium-powered
Non-monetary incentives	None, limited	Organizational membership, career advancement, status	Reputation, trust, membership of community
Control intensity	Low	High (administrative system, authority)	Medium (platform-based)

generate the needed conditions for the direct establishment of sharing transactions among unknown counterparts. Through users increased use of a platform, they can establish their own reputations through the rating systems commonly developed by platforms.

Fourth, based on a discussion of the *means and intensity of communication* (Powell, 1990) and in contrast to pure market transactions (where communication is driven by the price mechanism) and hierarchy (where communication follows the rules of authority relations), communication channels on a platform are typically managed by the platform owner, which promotes information exchange among users to encourage further transactions through community-building activities linked in part to social media platforms. Common examples of this are where users can log in to the sharing platform using their social media accounts, such as Facebook, Instagram or LinkedIn.

Fifth, transactions on sharing platforms may have different *time lengths*, from short (typical of market transactions) to long (typical of hierarchy), depending on the type of asset to be accessed, the user's needs and other exchange conditions. These features in turn engender differing levels of *transaction uncertainty* (Williamson, 1979). Sixth, in a sharing environment, *monetary incentives* (prices, commissions, margins, etc.) do not represent the only motivations for the exchange. Indeed, platform users, as well as the platform owner, may often operate on *non-monetary incentives*, which in turn may be reflected in the users' ethical considerations (such as a belief in an economy less dependent on profit-seeking and ownership) and sense of belonging to sharing communities, including the desire to adopt forms of prosocial behaviour in alternative marketplaces (Albinsson and Perera, 2012). Last, platform transactions are monitored by the platform owner as a *control* mechanism (Ouchi, 1979). This level of control exerted by sharing platforms is generally higher than that which occurs in the market but lower than that observed in hierarchy.

Having characterized sharing platforms as hybrid modes of governance of economic transactions, we can further distinguish between two distinct types of sharing platforms, depending on the prevalence of its market or hierarchical features. One type of platform, which is closer to a market form, is termed a *peer-to-peer* platform, while the other type of platform, which incorporates more hierarchical mechanisms, is termed an *integrated* platform.

On *peer-to-peer* platform forms, sharing involves three categories of actors: 1) goods and service providers who share assets, resources, time or skills; 2) users of these goods or services; and 3) platform owners who connect providers with users and facilitate transactions between them.

By contrast, on what we call an *integrated* platform, the owner fully or partially integrates one side of users (typically the providers). The two platform types represent archetypes, which seldom occur in their archetypal form in practice. In fact, the actual nature of sharing platforms depends on actions taken by the platform owner to progressively introduce and balance various mechanisms of integration, which we have identified as follows: the pre-selection of assets or products to be accessed through the platform (the owner of the platform may decide to limit platform access to only to a specific set of goods or services meeting a predefined standard of quality), the promotion of information sharing among users to encourage platform participation (such as rating the services provided) and the exchange of feedback on the users' ratings (both sellers and buyers) to build users' reputations and attract additional users onto the platform, permitting it to scale further. Platform owners can provide additional institutional roles. First, they may establish and administer platform contracts between users, alongside the formulation and management of rules or standards (safety, health, quality) on service levels. They can also (and, based on the evolution of local regulations, are increasingly obliged to) provide insurance and guarantees to protect the assets or products accessed through the platform. Over time, they may also elect to enrich and integrate platform supply through the provision of complementary products or services (Hagiu and Altmann, 2017). Finally, as an extreme form of integration, platform owners may choose to own and share their own inventory of assets. As we will see below, this form of integration is particularly justified in the presence of high levels of transaction frequency, uncertainty and asset specificity.

The adoption of the above mechanisms can significantly change the nature of a sharing platform and determine its position along a continuum of forms, from markets to hierarchies. In Table 2, we have listed the above forms of integration in two columns, with the first column

Table 2
Typical mechanisms of integration in sharing platforms.

Peer-to-Peer Platforms	Integrated Platforms
+ + pre-selection of assets/products to be exchanged through the platform, + + promotion of information-sharing among users, + + exchange of feedback to build the users' reputation, + + establishment and administration of platform contracts between users, + management of payments.	+ All the previous, plus: + + establishment and management of rules/standards on service levels (safety, health, quality), + + provision of insurance and guarantees to protect the assets/products accessed through the platform, + + provision of complementary products/services, + direct ownership and supply of own inventory of assets.

including typical mechanisms of a peer-to-peer platform and the second column describing prevalent mechanisms of an integrated platform.

4. Propositions development

Following the TCT and based on the discussion on platform economics, in this section of the paper we develop a series of propositions pertaining to the relation between access-based transactions and sharing platforms. More specifically, we posit that the peculiar platform mechanisms adopted by a platform owner (within a continuum of modes, ranging from the peer-to-peer to the integrated archetypes) depend on the prevailing nature of the transactions taking place through the platform. We focus particularly on the role of the three features of platform transactions: frequency, uncertainty and asset specificity.

According to TCT, the nature of transactions determines the selection of the most efficient contractual arrangements for governing economic activities. As previously discussed, at the two extremes of a continuum of organizational forms stand market-based and hierarchical organizations. While markets are the most appropriate for administering transactions characterized by low frequency, low uncertainty and low asset specificity, hierarchies are, conversely, the most appropriate in the presence of high frequency, high uncertainty and high specificity.

Drawing on these well-established findings, we apply this framework to the governance of sharing platforms and derive a set of theoretical propositions that can be applied to peer-to-peer and integrated sharing platforms. Our first proposition relates to *transaction frequency*. Here, we distinguish between a 'repetition' effect and a 'volume' effect. The 'repetition' effect occurs at the single transaction level and depends on the fact that an access-based sharing transaction (which implies the sharing of the same asset – i.e. a car, a room) may be repeated by the same vendor several times, both with the same buyers and with different buyers. Thus, as compared with one-off market transactions, such as those that imply the transfer of ownership, the 'repetition' of access-based transactions increases transaction frequency. The 'volume' effect is, in turn, the outcome of two factors: repetition (i.e. how often a specific transaction is repeated) and the number of platform users (how many buyers and sellers meet on the platform or, from a different perspective, how many assets can be shared through the platform).

The volume effect has been extensively analysed by platform economics (see 2.1 above) as it originates a self-reinforcing dynamic (Arthur, 1989; Schilling, 2009) that is exponential in nature and, as has been mentioned, can result in a 'winner takes all' situation where the winning platform dominates the market, even to the extent of creating a durable monopoly.

According to TCT, transaction frequency has significant effects on the selection of the most efficient governance modes, as evidenced by Williamson himself: 'if a transaction seldom recurs, it may not be cost effective to develop a specialized internal structure. If instead it recurs frequently, then recovering the costs of creating a specialized management infrastructure is possible' (Tadelis and Williamson, 2013, p. 165). Thus, in the case of medium to high frequency, it can be considered efficient to develop more specialized (i.e. more integrated) governance mechanisms, which may first support the establishment of a sharing platform and eventually justify its transition from a peer-to-peer to an integrated form. In other words, following TCT, transaction frequency impacts the selection of transaction 'governance': the higher frequency of a transaction creates the basis and represents the justification for the establishment of integrated governance mechanisms among the parties and the investment of dedicated assets. Such investments can be made by the parties, but can also be interesting for the platform owner, in the light of its special role as a common intermediary in every transaction. In extreme cases, the platform owner may decide to substitute (totally or partially) for one of the two participating parties (typically, the seller side).

The above considerations lead us to formulate our first proposition:

P1: The higher the transaction frequency, the higher the propensity of the platform owner to adopt mechanisms of platform integration.

Our second proposition pertains to *transaction uncertainty*. As Williamson (1979, p. 254) stated, 'Whenever investments are idiosyncratic in a nontrivial degree, increasing the degree of uncertainty makes it more imperative that the parties devise a machinery to "work things out" – since contractual gaps will be larger and the occasions for sequential adaptations will increase in number and importance as the degree of uncertainty increases'. Indeed, transactional uncertainty is closely linked to the problem of contract incompleteness (Grossman and Hart, 1986; Hart and Moore, 1990) and to the need to develop specific contractual arrangements aimed at eliminating or reducing uncertainty before a transaction takes place (*ex-ante*) and effective measures to revise contractual arrangements once the transaction has been established (*ex-post*).

Incomplete contracts in themselves are not a problem, as parties can agree to treat each other 'fair and square' if something unexpected happens. The problem arises because human beings are opportunistic and opportunism can take place in three different ways. First, before a contract is made, there is the problem of strategic misrepresentation (i.e. 'it will cost me much more to do that!'). Second, after contract signing, the case of reneging can arise (i.e. 'I won't do what I promised'). Third is the risk of a hold-up (i.e. 'pay me more or I won't do it'). Therefore, when the level of transaction uncertainty is high, the parties to an exchange can incur high transaction costs, which might discourage them from entering into a transaction. Thus, the role of the platform owner becomes very important for reassuring platform users to enter into a transaction that involves unknown buyers and vendors and covers a long timespan. This reassurance implies the adoption of a set of integration mechanisms, such as those described above. We thus introduce our second proposition:

P2: The higher the uncertainty of transactions taking place on a sharing platform, the higher the propensity of the platform owner to adopt mechanisms of platform integration.

Our third and final proposition relates to *asset specificity*. The crucial element regarding *asset specificity* is the degree of transaction-specific (nonmarketable) expenses incurred by the parties. As noted by Williamson:

Items that are unspecialized among users pose few hazards, since buyers in these circumstances can easily turn to alternative sources, and suppliers can sell output intended for one order to other buyers without difficulty. Non-marketability problems arise when the specific identity of the parties has important cost-bearing consequences. Transactions of this kind will be referred to as idiosyncratic. (Williamson, 1979, p. 239–240)

As defined by Williamson (1979), 'Idiosyncratic goods and services are thus ones where investments of transaction-specific human and physical capital are made and, contingent upon successful execution, benefits are realized' (241).

How do idiosyncratic factors affect sharing platforms? Within the perspective of the sharing economy, asset specificity refers to the assets, products or services that are accessed through a transaction (rooms or apartments in the case of Airbnb; car use in the case of Blabla car or Uber). In a pure market setting, due to the low frequency of transactions and the lack of knowledge and trust among the parties (which poses an issue of uncertainty), specificity is necessarily kept low to avoid any issue of bilateral dependence among the involved parties. Yet, the lack of investment in asset specificity could reduce the overall economic value exchanged by the parties (i.e. the economic value of a transaction) and thus generate a problem for market-based governance. For instance, the parties may decide to eliminate any form of customization of services or joint investment in the design of products or services. To avoid the loss of this transaction value within a sharing platform, the platform owner might be inclined to leverage its role as the common and long-term counterpart to the buyers and vendors and carry the risk of making the needed specific investments (i.e. providing the cars, the

Table 3
Different transaction characteristics and their implications on sharing platforms.

	Peer-to-Peer Platforms	Integrated Platforms
Frequency	Low frequency. The platform parties transact mostly on a 'one-off' and spot basis. The marketplace (platform) can guarantee a high transaction volume to the parties involved, but not a high transaction frequency (same assets, same parties).	Medium-high frequency. Transaction frequency can be increased when the platform owner integrates one side of the market, becoming the common party to transactions.
Uncertainty	Low uncertainty. Since the platform owner cannot guarantee the *ex-ante* and *ex-post* governance of transactions, transaction uncertainty may rapidly increase, particularly in the case of long-term interaction. Uncertainty is kept low by limiting the time span of transactions.	Medium-high uncertainty. Having become the common party to transactions in the marketplace, the platform owner can assure a centralized *ex-ante* and *ex-post* governance of transactions and manage medium-high uncertainty levels, thus allowing for an extension of the timespan of transactions.
Asset/Product Specificity	Low asset specificity. Due to the low frequency of transactions and the need to avoid uncertainty, sellers and buyers can only share generic assets/products/services.	Medium-high asset specificity. Leveraging the higher frequency and the effective management of transaction uncertainty, the platform owner can take the risk to make direct investments in the assets to be shared. The higher asset specificity increases the value exchanged by the parties to the transaction.

rooms or the services), thus integrating − partially or totally − one of the two sides of the market (typically, the vendor). Of course, platform integration can also take lighter forms via the gradual adoption of the set of mechanisms described in Table 2. This leads us to the formulation of our third proposition:

P3: The higher the value of asset or product specificity, the higher the propensity of the platform owner to adopt mechanisms of platform integration.

The above propositions, directly derived from TCT, should be considered complementary. Table 3 summarizes the two types of sharing platforms derived in the discussion above (i.e. peer-to-peer and integrated) in relation to different levels of frequency, uncertainty and asset specificity.

5. Discussion: implications for hotel chains

By employing the TCT lens to understand the emergence of sharing platforms, this is the first study to systematically develop a theoretically grounded approach for understanding how transaction features impact the emergence of sharing platforms and, hence, to offer clear implications for numerous industries being impacted by these developments, not least the hotel industry.

Having defined above the general conditions for the effective establishment of different sharing platforms, we now focus our attention specifically on accommodation services. The huge success of peer-to-peer platforms, such as Airbnb, could be considered evidence that the transactions have relatively low levels of frequency, uncertainty and specificity. Yet, a closer analysis of the transactions taking place on Airbnb through a TCT lens leads to three conclusions. First, the sharing of private houses or apartments seems to be characterized by a high level of uncertainty (due, for example, to a lack of knowledge about the identity of the parties involved, the quality of the accommodations offered and the safety of the area around the accommodation). Second, these transactions may suffer from a lack of specificity (as private houses are commonly not purpose-built for short term rental and are missing important components of the value bundle of accommodation services). Although the uncertainty can be managed by the platform owner (providing guarantees, for instance) this requires a significant departure from the archetypical form of a peer-to-peer platform and a ramping up of platform integration mechanisms (e.g. reputation-building procedures and the provision of insurance to protect the shared asset) that implies an increase in investment costs for the platform owner. Third, frequency might also be an issue, particularly for the supply of private houses that is not permanently available for renting (because the hosts live there). These assets are shared only intermittently, and the relative transactions have a low frequency; therefore, their economic value for the hosts is limited. These 'marginal' transactions are typical of platforms that are rapidly growing, such as Airbnb, and can generate rapid fluctuations in the number of platform users and suppliers, negatively impacting platform stability.

In addition to the three conclusions derived from TCT, it is clear from current research on the recent evolution of Airbnb that two other factors are having an impact. First is the impact of jurisdictions' response to its growth, and in turn, Airbnb's reaction to attempts to impose regulations on it. Airbnb has mobilized political resources to resist harmful regulations: 'Airbnb has responded to these claims with […] lobbying policy highlighting the advantages of Airbnb: economic impact, spreading tourism to peripheral neighborhoods and generating additional income for non-traditionally employed residents' (Oskam and Boswijk, 2016, p. 36). Second is the evolution of customer demand – especially in terms of the increasing diversity of users. As Richard (2017, p. 56) states: 'Guests are becoming more diverse, both demographically and in their expectations. Globally, an exploding middle class in emerging nations will necessitate brand restructuring to accommodate a more diverse customer base'.

TCT- and non-TCT-related factors combined point to the possibility of a gradual shift of sharing platforms from a peer-to-peer model, where the main function of the platform owner is to integrate the two sides of the market, towards a progressively more integrated platform. Tighter regulations on multiple jurisdictional levels will make it harder for Airbnb to rely solely on independent hosts as more and more hosts are regulated out of the market. Moreover, as booking accommodation on sharing platforms becomes an increasingly mainstream activity, Airbnb will need to develop more extensive, diverse offerings. In the language of TCT, Airbnb is clearly aiming to manage more sophisticated types of transactions, with a higher frequency and with levels of asset specificity more in line with the requirements and expectations of the hotel industry, as well as with a more effective management of uncertainty. Yet, a complete transformation of the business model towards an integrated platform archetype would appear to be challenging for a peer-to-peer platform owner. In particular, direct ownership of the assets exchanged could be very expensive (in terms of investments needed) and risky (as the saturation of capacity is constrained by the size of the platform itself). The difficult evolution of sharing platforms is thus opening a few opportunities for hotel chains, as we will discuss below.

It is evident from our analysis that the progressive move from peer-to-peer platforms to increasing levels of platform integration is a process that is well under way and is unlikely to stop, however hotel chains choose to respond. Our exploration of TCT, supported by observations from other industries (car sharing, music and media platforms, etc.), provides a vivid warning for hoteliers: while there might be some benefit from defensive postures focused on regulating peer-to-peer platforms out of business, such as the extensive use of lobbying legislators to erect regulatory barriers to entry into the United States on the

federal (Breland, 2017) and state level (Brustein and Berthelsen, 2016), as well as internationally (Stothard, 2016), hotel chains might learn their lesson the hard way if they continue solely with this approach. Executives from the recorded music business can readily attest to the failure of defensive responses slowing the emergence of Spotify and other MP3 music platforms. Thus, we believe that the analysis in this study calls for a more ambitious and proactive approach to sharing platforms.

Our theoretical analysis suggests that through the careful leveraging of existing assets, the extension of sales channels of independent accommodation inventories through an integrated platform and the creation of new value bundles (exploiting the scalability of hotel chain transaction technologies and the asset specificity of destination services owned by hotel chains), the hotel industry could be well placed for the future. It is also abundantly clear from sharing platforms in other industries, such as Uber, that peer-to-peer platforms are seeking to progressively integrate increasing numbers of services into their platform technology. Recently, an Uber rival, Lyft, integrated limousine services into its platform (Lien, 2017). The arrival of Uber Eats and Uber's initial forays into autonomous vehicles provide a future vision for these platforms (Dwoskin, 2016). Such platforms have gathered unprecedented amounts of information on their users' buying practices and habits and are looking to leverage this 'big data' to diversify their business models (Marr, 2016). Airbnb and other scaled shared accommodation platforms are well positioned to do the same should the hotel industry fail to respond proactively. Early evidence of Airbnb's intent is its expected acquisition of a company called Luxury Retreats that owns a stock of resort properties (Lunden, 2017).

Following the above, we believe that there are interesting opportunities for hotel chains to extend their business model and exploit some of the economic potential of sharing platforms whilst avoiding the major weaknesses and shortcomings of the sharing platform business model. Viewed through a TCT lens, hotel chains have managed access to their assets in a highly specific way. Previous studies on the management of hotel capacity (Jeffrey and Hubbard, 1994; Jeffrey et al., 2002; Pullman and Rodgers, 2010) have demonstrated that the concentration of hotel capacity in specific buildings and resorts has permitted a high average occupancy rate (i.e. high frequency of transactions, in our model). At the same time, the level of asset specificity of transactions has been kept aligned with the needs of demand (hotel rooms are different from a typical room in a private house) but also carefully controlled through the standardization of rooms (allowing for the repetition of transactions). Hotel chains have also kept levels of transaction uncertainty under control thanks to direct monitoring of asset use (concierge services, hotel personnel, etc.) and the establishment of sophisticated contractual frameworks and pricing models.

This approach to the governance and management of transactions has proven very efficient and profitable over several decades. But, times are changing. The threat posed by sharing platforms such as Airbnb is twofold. First sharing platforms have responded aggressively to an evolution of demand towards more authentic and cheaper forms of accommodation. The Airbnb model of offering alternatives to traditional hotel rooms has been rapidly replicated by at least fourteen different platforms available to users as of early 2017 (Martin, 2017). Second, such platforms represent a new distribution channel for accommodation providers (particularly for independent operators and boutique properties).

Based on the comparative efficiency of hotel chains as transaction governance modes, we believe that unexploited opportunities remain for them to broaden their business model. First, hotel chains could transfer to sharing platforms the transaction management integration mechanisms that have historically proven so effective in their core business. An interesting and relevant example of this type of strategic move is that of the Accor Group through its accorhotels.com marketplace, which has opened its reservation system and sales platforms to other hotel partners, offering access to its multi-brand online booking portal and thus showcasing hotels in seventeen languages around the world. By joining the Accor worldwide hotel marketplace, independent hotels benefit from access to the Accor Group's large customer database, increasing their turnover at a low commission rate without the need for lengthy contracts. At the same time, Accor Group clearly benefits from such a move. First, they can visibly respond to the demand for authenticity that has been identified in research on Airbnb customer purchase decisions by offering independent accommodation options. Second, they can leverage their existing assets and capabilities more effectively by embracing platform technologies. This represents one of the first significant steps by an industry incumbent to leverage the power of platforms and regain market share lost to sharing platforms.

Moves to integrate sharing platforms could be further extended to include other forms of accommodation, eventually integrating the supply of private houses. This would of course be a much more radical move and would step directly into the competitive space occupied by peer-to-peer platforms. This could be done, for instance, by acquiring peer-to-peer platforms. While much attention has focused on Airbnb, numerous other competitors exist, including Tripping.com, which specializes in long-term rentals, or FlipKey or Wimdu, which have business models closer to that of Airbnb. Hotel chains are rapidly responding: London-based start-up onefinestay.com, which offers luxury apartments for rental in a variety of locations, was purchased by AccorHotels for US $170 m in 2016. More recently, an equity partnership with Hyatt should help the peer-to-peer 'home meets hotel' platform Oasis to reach its goal of being in 50 markets by 2019 and expanding into the Asia-Pacific market, as well as increasing brand awareness and providing access to an even larger customer base.

If other sectors are an historical guide, both pre- and post-acquisition integration challenges will be considerable for a hotel chain wishing to step into shared accommodation platforms. As Lewis McKone (2016, p. 3) recently observed regarding the initial phase of the merger and acquisition processes:

[D]espite […] identifying and calculating company synergies, diligence work frequently results in an overly optimistic view of the revenue synergy opportunity. Often the weakest assumptions involve estimates of how much additional revenue the companies can generate when combined. This, in turn, leads bidders to overpay.

Major post-acquisition challenges include differences in organizational culture between a hotel chain and a digital firm (Walter, 1985; Weber and Camerer, 2003). However, this would represent an important learning opportunity for a hotel chain, as well as provide quick access to an existing shared inventory of independent accommodation.

Another avenue for development is for hotel chains to continue to leverage the asset specificity of hotel facilities while extending access to these assets to users of other forms of accommodation. Indeed, the key advantage of the highly integrated platform owned by a hotel chain is the possibility to provide, along with the hotel room accommodation, a set of complementary assets (health clubs, gyms, spas, business/conference facilities, etc.) that might also be made available to Airbnb-like accommodations, thus allowing greater asset specificity tailored to the needs of a broader community of customers. Building such an ecosystem around destination activities and services could be a valuable competitive tactic against peer-to-peer platforms that might lack readily scalable access to similar destination services. Service bundles could include lodging in independent accommodation (leveraging scale and transaction certainty) booked through the integrated platform, combined with access to club and spa services at a nearby hotel owned by the chain (asset specificity). An innovative example of this possible type of evolution of hotel offerings is that of Jo and Joe (www.joandjoe.com), a soon-to-be established chain of open houses developed by Accor Group that will be available to both to travellers and neighbours and provide spaces for accommodation, entertainment, eating and socializing.

Notwithstanding the opportunities identified above, important risks

remain for hotel chains if they embrace the shared accommodation platform strategy and business model. Two stand out. First, there is the risk of brand dilution: if a direct association between a hotel brand and a shared accommodation platform were drawn and there were, for example, gaps in perceived service quality, with the shared accommodation delivering lower perceived quality, this could have negative impacts on the hotel brand more generally. While branding and brand management is not the focus of this paper, Richard and Cleveland (2016) have offered an extensive exploration of the risks and opportunities of brand extension into shared accommodation platforms. Second, there are implications for the organizational culture of hotel chains that make the move towards integrated sharing platforms. A strong comparison for some of these challenges can be found in the evolution of the passenger airline industry towards low-cost business models. Very rarely have traditional network airlines successfully launched spin-off low-cost carriers (Morrell, 2005).

In summary, a business model of this type, combining the management of several types of facilities (chain hotels, independent hotels, open houses and individual rooms and apartments), could leverage the integrated and centralized provision of shared assets (open spaces, eating facilities, gyms, spas, etc.) and services (concierge, maintenance, etc.), generating significant economies of scale that are not easily achievable by peer-to-peer platforms. This could address the eroding competitiveness of traditional hotel chains.

6. Conclusions and future research directions

The sharing economy is exerting a profound influence on numerous industries. The hotel sector is especially vulnerable to the strategic disruption presented by sharing platforms as epitomized by the threat of Airbnb. This paper set out to achieve two fundamental research objectives. The first was to develop a set of exploratory research propositions based on a conceptual application of transaction cost theory (TCT) to the emergence of sharing platforms. This new domain of research has a relatively limited extant literature (both theoretical and empirical). This methodological challenge is further impacted by the relatively new phenomenon being studied, implying a lack of available data for empirical analysis. Both these factors militate against hypothesis testing. We thus decided to draw on the approach of Glaser and Strauss (1967) and Eisenhardt and Graebner (2007) by employing an exploratory method with a view toward developing conceptual propositions rather than testable hypotheses. This has an advantage when it comes to generating novel insights into the sharing platform phenomenon studied in this research given the relative paucity of empirical testing of theoretical frameworks.

The second objective of our paper was to offer specific strategic and tactical recommendations for the hotel industry based on our TCT analysis referred to above. The paper suggests that hotel chains, in revising their business models to cope with the new competitive challenges posed by sharing platforms, can leverage their superior capacity to deal with three key features of transactions drawn from TCT (frequency, uncertainty and asset specificity) and develop what this paper terms 'integrated platforms'. Such a strategic move could be implemented in several complementary ways. First, hotels could effectively embrace core elements of sharing platform processes and practices by bundling independently owned properties with destination (asset-specific) services typically possessed by hotels, such as restaurants, spas and wellness facilities. Second, they could also limit transaction uncertainty by guaranteeing aspects of guests' pre- and after-stay experiences by integrating support services (payments systems, quality assurance, etc.) in ways that peer-to-peer platforms currently cannot. Third, by limiting uncertainty, offering new value bundles and leveraging their existing stock of property and rooms, hotels could enhance transaction frequency and achieve superior economies of scale. In other sectors, such as transportation services, traditional companies have begun to embrace the sharing platform principle. For example, hoteliers could learn from the experience of Zipcar, which in 2013 was acquired for $500 m (Schmitt, 2013) by Avis, one of the world's leading car rental companies. For Avis, this purchase provides both market expanding effects and capacity utilization effects. By embracing car sharing, Avis can increase its service flexibility, enabling renters to switch between more traditional car rental (per day) and car sharing (by the hour). It also enables Avis to make more use of its vehicle and fleet capacity. Further afield, we have evidence of traditional companies embracing integrated platforms with Car2Go, owned by Daimler, and ReachNow, owned by BMW. These moves are largely intended to address the declining demand for new cars (in favour of car sharing and public transport) and provide better production capacity management.

Our research presents numerous fruitful further research opportunities. First, the operationalization of the research propositions developed in this study could enable further empirical exploration and validity of TCT in the context of sharing platforms, with an obvious application to the hotel industry. This would also encourage a broader, more comprehensive empirical exploration of the nature of sharing platforms viewed through a TCT lens. Second, robust operationalization would allow for comparative empirical research across contexts (industry, country, etc.) and, in so doing, aid confirmatory research efforts. Third, since sharing economy phenomena are relatively new, longitudinal studies that illustrate the gradual evolution of peer-to-peer platforms and perhaps convergence between peer-to-peer and integrated platforms might be a useful avenue for research. In the context of hospitality research, detailed case studies of the evolution of sharing platforms could reveal important clues for hoteliers on how to develop a competitive response to the threat posed by sharing platforms.

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