

Mapping the sharing economy: a two-sided markets perspective

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Abstract

Obiettivi: *L'impatto economico della sharing economy (o economia della condivisione) negli ultimi anni è cresciuto fortemente. Nella letteratura sono state sviluppate diverse definizioni e classificazioni finalizzate ad una migliore comprensione del fenomeno. Tuttavia, gli studi in questo ambito rimangono ancora limitati ed in particolare le tassonomie finora proposte sono state predisposte prevalentemente nella prospettiva dell'offerta. La presente ricerca si propone di sviluppare una tassonomia delle piattaforme di sharing economy che consideri sia il valore offerto all'utente finale che le caratteristiche dei beni e servizi erogati, e di identificare i principali strumenti utilizzati per incrementare le cosiddette network externalities.*

Metodologia: *L'analisi è stata svolta attraverso l'analisi del contenuto su un campione rappresentativo della realtà italiana (55 piattaforme italiane su un totale di 118).*

Risultati: *Oltre alla descrizione delle piattaforme, lo studio propone una mappa che consente la classificazione delle diverse tipologie di modelli di sharing. In particolare, attraverso due variabili "value from supply" e "value for demand", sono state identificate cinque tipologie di piattaforme: utility job platform, collective creativity platform, exchange property, community, and hybrid.*

Limiti della ricerca: *Il campione selezionato è limitato al contesto italiano e le tecniche di analisi utilizzate prevedono un certo margine di autonomia da parte del ricercatore.*

Implicazioni pratiche: *La ricerca fornisce un quadro di riferimento utile per la comprensione dei modelli di sharing ed offre ai manager una serie di indicazioni sui possibili percorsi di sviluppo delle piattaforme.*

Originalità: *Lo studio propone una mappa che classifica le diverse tipologie di modelli di sharing, considerando le caratteristiche dal lato della domanda e dell'offerta in una logica di double-sided.*

Parole chiave: *sharing economy; consumo condiviso; piattaforme sharing; tassonomia*

Purpose of the paper: *Sharing economy is having an increasing impact on traditional markets. Over the years, several terms and classifications have been used by authors offering different interpretations of the phenomenon. However, research on this topic still appears to be fragmented and existing taxonomies do not consider these platforms as working in a "two sided market". The present study aims to develop a taxonomy of sharing economy platforms that considers the value created both on the supply and demand sides and identify the main tools used to increase*

network externalities. Furthermore, the paper aims to explore implications for the management of sharing economy platforms that could boost their development and make use of strategic pathways for that development.

Methodology: A content analysis on a sample of 55 platforms has been carried out, representative of the Italian context.

Findings: We provide advancement in the field by developing a map able to clarify the different typologies of sharing models. In particular, by using the variables of “value from the supply side” and “value from the demand side” five areas have been identified: utility job platform, collective creativity platform, exchange property, community, and hybrid.

Research Limitations: The selected sample is limited to the Italian context. Also, the analysis techniques employed require a certain discretion on the part of the researcher.

Practical Implications: The research provides an overall frame of reference for understanding sharing models and offers managers and entrepreneurs a framework useful for describing potential strategic patterns.

Originality of the paper: We provide advancement in the field by developing a map able to clarify the different typologies of sharing models.

Key words: sharing economy; sharing consumption; sharing platform; platform taxonomy,

1. Introduction

The growth of the sharing economy is having an increasing impact on conventional markets. While traditional industries are very often stagnant or apparently disappearing, five main sectors - equipment rental, B&B and hostels, car rentals, book rental and DVD rental- are attracting new subscribers and are increasing at exponential rates thanks to new opportunities in the sharing economy. According to PWC, in 2013 these five industries alone comprise a market of about US\$ 15 billion globally. It has been forecast that by 2025 this market will grow to US\$ 335 billion, more than 20 times its current size and equal to the business models operated by traditional companies. In 2015 Uber provided globally more than twice the number of rides per day provided by all the taxis in New York City. By 2016 Airbnb is expected to surpass the number of rooms booked per night by the world's largest hotel chain, and should account for over 10% of overnight stays in London and Paris (Quartz, 2015). In Italy the sharing economy is worth 3.5 billion euros and it is expected to grow considerably in the next ten years, (University of Pavia, 2016).

Although recent data shows that some negative trends are emerging - in particular regarding participation in the online platform and employee involvement (JPMorgan Chase & Co., 2016) - the potential of the sharing economy to create new opportunities for consumers and entrepreneurs is recognized. Indeed, the EU Commission stated recently that the sharing economy can make an important contribution to jobs and growth in the European Union, if encouraged and developed in a responsible manner (EU, A European agenda for the collaborative economy, 2016).

The potential of the sharing economy is the ability of online platforms to match demand and supply more quickly and more conveniently, and in many cases with lower costs. New business models and companies can start up that would otherwise not be able to and both demand and supply can benefit and gain in economic efficiency. Platforms provide information about which assets, resources or skills are available and which are needed, almost instantly.

The term “sharing economy” is commonly defined as a socio-economic ecosystem built around the sharing of human and physical resources. It includes the shared creation, production, distribution, trade and consumption of goods and services by different people and organizations (Matofska, 2016). Within the academic literature the sharing economy is defined as “an alternative to the private ownership that is emphasized in both market place exchange and gift giving. In sharing two or more people may enjoy the benefits (or costs) that flow from possessing a thing (Belk, 2007, p. 127)”. Over the years the concept has been linked to two different models of consumption; access-based consumption and collaborative consumption. The first refers to shifting from selling the product to selling the use of the function, so “instead of buying and owning things consumers pay for access to the goods and for the experience of using (Bardhi and Eckhardt, 2012)”. Collaborative consumption is considered a subset of access-based consumption and is defined as “people coordinating the acquisition and distribution of a resource for a fee or other compensations (Belk, 2014, p. 1597)”. Collaborative consumption includes bartering, trading and swapping while excluding those cases where no compensation is involved. Recently, the EU Commission (2016) used the term “collaborative economy” to refer to business models where activities are facilitated by collaborative platforms that create an open marketplace for the temporary use of goods or services often provided by private individuals.

Furthermore, over the years, several terms have been used by authors offering different understandings of the phenomenon (Codagnone *et al.*, 2016). Research on this topic, especially in the Italian context, still appears to be fragmented and lacks a general taxonomy that considers both the demand and supply side. Indeed, until now the literature focused mainly on classifications based on the type of industry and the characteristics of the offer (see par. 2.2), whereas the value proposition and consumer expectations also play an important role in platforms that work in a “multiple-sided market”.

Recently, many contributions have been published on the topic of sharing economy (Michelini *et al.*, 2018; Kortman and Piller, 2016; Codagnone *et al.*, 2016). Indeed, until now the literature focused mainly on classifications based on the type of industry (Coyle, 2016), the characteristics of the offer (Cohen and Kietzmann, 2014) and the main elements of the business model (Taucher and Laudien, 2017; Nesta, 2014).

Despite these useful attempts, there is still a need of analysis that investigates the value generated for providers and users considering that these platforms act in a “two-sided market” (or “multi-sided market”) whereas the indirect network effects (also called network externalities) is

crucial. This means that platforms with more customers of each group are more valuable to the other group (Armstrong, 2006; Rochet and Tirole, 2006) so the value created for stakeholders at either side of the platforms is equally relevant to the business' success (Dreyer *et al.*, 2017)

Against this background, the main aim of the research, and the contribution to the existing literature, is to develop a taxonomy of sharing economy platforms that considers the value created both on supply and demand sides and identify the main tools used to increase network externalities

Furthermore, the paper aims to identify the potential for managers to develop sharing models and discover strategic pathways for development. To this end, the research begins with an analysis of the existing academic and managerial literature. Then, a content analysis on a sample of 55 platforms has been carried out. The main research results are subsequently explained. In the final section, conclusions are drawn, including managerial implications, as well as the limitations of the study, and possible directions for future research.

2. Theoretical background

2.1 *Sharing economy: roots and definitions*

The term “sharing economy” appeared for the first time during the 1980s starting with Weitzman’s 1984 book “The Sharing Economy: Conquering Stagflation” about profit sharing among workers (Rudmin, 2016). Over the following decades, it was used with a variety of different meanings, for example during the 1990s with a solidarity focus to satisfy the needs of “distant strangers” (Rudmin, 2016; Gold, 2004). In the early 2000s the concept of sharing took on its current meaning and began to be used in consumer behavior literature thanks to Belk’s presentation in October 2006 at the University of Wisconsin conference (Rudmin, 2016; Shah *et al.* 2007), and his articles “Why Not Share Rather than Own?” (2007) and “Sharing” (2010). The new phenomenon took shape due to various concurrent facts, such as the rise of Internet technologies that facilitate connectivity and ubiquity, the global economic downturn, the trend towards urbanization, and the rise of sustainable consumption (Bardhi and Eckhardt, 2012; Mohlmann, 2015).

Since the particular concept of the sharing economy is fairly new, characterized by rapid growth, different perspectives and a complex nature, academic definitions are still sparse (Daunorienė *et al.*, 2015). These definitions are not contradictory, but differ depending on how inclusive they are and their variety in scope (Allen and Berg, 2014).

The expressions “sharing economy”, “collaborative consumption”, and “peer to peer economy” are among those most frequently used to define a phenomenon that is characterized by utilization over ownership, temporary accessibility, and redistribution of goods or less tangible assets such as money, space, or time (Kathan *et al.*, 2016). The sharing economy includes the shared creation, production, distribution, trade and consumption of goods and services by different people and organizations (Matofska, 2016).

This form of consumption is generally transacted through new information and communication technologies, which allow it to be flexible, accessible and easy to spread (Botsman and Rogers, 2010).

Over the years the concept has been linked to two different models of consumption; access-based and collaborative consumption. The former refers to shifting from selling the product to selling the use of the function, so “instead of buying and owning things, consumers pay for access to the goods and for the experience of using” (Bardhi and Eckhardt, 2012). Collaborative consumption is considered a subset of access-based consumption and is defined as “people coordinating the acquisition and distribution of a resource for a fee or other compensations” (Belk, 2014, p. 1597). In sharing, “two or more people may enjoy the benefits (or costs) that flow from possessing a thing” (Belk, 2007, p. 127). Benkler (2005) describes the sharing concept as reciprocal benevolence based on social behavior, while for Stephany (2015) the sharing economy is “the value in taking under-utilized assets and making them accessible online to a community, leading to a reduced need for ownership” (p. 205). Other interesting points of view are proposed by Orsi (2013): “the sharing economy is the response to the legacy economy where we tend to be reliant on resources from outside of our communities, and where the work we do and the purchases we make mostly generate wealth for people outside of our communities”, and by Schor and Fitzmaurice (2015): “peer to peer sharing of access to underutilized goods and services, which prioritizes utilization and accessibility over ownership”.

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2.2 *The sharing economy: the most important taxonomies*

In this paragraph we analyse the most relevant variables that researchers have used to classify sharing economy models (see table 1).

Lamberton and Rose (2012) drawing from public economics, propose two interesting dimensions to define the typologies of sharing systems; rivalry (rival versus non-rival goods) in which the usage of the product by one person reduces the availability of the same product to another person, and level of exclusivity (low versus high). Combining these dimensions, reveals that the characteristics of sharing systems could be similar to those identifiable in public goods and club goods (such as public parks and private clubs), and to most commercial sharing systems such as open and closed commercial goods sharing (such as food banks or health cooperatives).

Nesta (2014) defines the sharing economy (or, as it is called in his work, the collaborative economy) using traditional variables such as the different types of markets or the so-called delivery models, i.e. business to business (B2B), business to consumer (B2C), consumer to business (C2B), and peer to peer (P2P), together with the main pillars of activity according to their purpose: (collaborative) consumption, production, learning and finance.

Based on Bardhi (2014), another study (Bachnik, 2016) focused on the modes of consumption with a distinction between ownership that comprises possession, full property rights and self-boundaries, and access and sharing. Access does not have to be altruistic or for the benefit of the community, and can feature economic exchange. Ownership of the object

being accessed is also possible. Sharing emphasizes the free, altruistic or public benefit aspects of the transaction together with the potential for joint ownership.

Cohen and Kietzmann (2014), and Corbo and Fraticelli (2014) propose a wider framework of classification. Cohen and Kietzmann focus on “sharing mobility business models for sustainability” and apply their taxonomy to car sharing, ridesharing and bikesharing, making little distinction between them. They include several variables, such as the segment, the value proposition, the supply chain models, customer interface and the underlying financial model. As regards mobility it is worth citing Rudmin (2016) who emphasizes in particular the mode of use of a motor vehicle, classifying for example the use of a vehicle only versus the use of a vehicle with a driver. Corbo and Fraticelli focus on the reduction of food waste through the use of web-based technologies that make it easy for people to donate or sell surplus food. Their framework encompasses the type of transaction (donation, mostly-sale, sale), the type of givers (households, business, or hybrid), and the type of mediator (no-profit organizations, peers, or none).

Cohen and Muñoz (2015) focused on how the sharing economy can speed up sustainable production and consumption models in cities. In particular, they classified 18 sharing initiatives, grouped them into five main categories (Energy, Foods, Goods, Mobility/Transport, Space) and inserted them into a framework with two dimensions. The selected dimensions were the orientation of value creation (public versus private interest), and the position of the activity along the sustainable consumption and production spectrum.

Another interesting study (Kortmann and Piller, 2016) proposes an integrated framework that includes two variables: the openness of the business model (from firms, through alliances and platforms) and integration along the product life-cycle (from production, to consumption and circulation).

If we consider the different sectors covered by the sharing economy, Coyle (2016) proposes an interesting classification of typologies based on their categories (or business sectors) and their attributes. As highlighted in table 1, he outlined twelve categories of business sector e.g. learning, municipal, money, food or corporate together with their specific attributes. To give an example, for the category “space”, the attributes underlined are “renting or sharing spare accommodation or workspace”. Similarly, a recent study (Martin, 2016) proposes groups of innovations within the sharing economy cross-referenced with the corresponding regime in the traditional economy. For example, car and ride sharing can be considered as an alternative business model to the traditional transport regime, and similarly, accommodation sharing platforms are an innovation corresponding to the traditional tourism model. Moreover, since all these groups of innovation are in place thanks to digitalization, the research aligns each group with the Information and Communication Technology (ICT) regime. Martin refers to the sharing economy as a niche that consists of a small number of international companies (like Uber and Airbnb); and a much larger number of small or micro-scale peer-to-peer platforms

run by social enterprises, commercial and non-profit actors (such as Last Minute Market, BlaBlaCar, and Casa Noi to cite some Italian cases).

As highlighted by Grieco and Cerruti (2017), sharing economy implies an innovation in how companies create value, therefore affecting their business models. Thus, it is interesting to see which are the most relevant business models that shape the sharing economy. According to Cavalcante *et al.* (2011) it is important to have flexible business models that permit to add new procedures without modifying the company's core business. Olson and Kemp (2015) describe business model in the sharing economy only by analysing their revenue model. Lago and Sieber (2016), analysed how the classical business model variables, that is market access, resource allocation, governance and control act in a sharing economy context. Interestingly, Kosintceva (2016), proposed three types of sharing economy business models: access based, on-demand service and marketplace. Focusing on this last aspect, a recent study has proposed a framework for describing marketplace business models, and found that two out of the six types that emerged, could be aligned with business model characteristics typical of the sharing economy (Tauscher and Laudien, 2017). These are represented by: the "digital product community" business model where start-ups have the main objective of building a community around the products, and "peer to peer offline services", where individuals basically share physical products through a web platform and a mobile app. The variables used in their analysis for describing platform business models are: business model type, platform type, platform participants, value proposition, transaction type and good, and revenue model.

A recent analysis proposed by Codagnone *et al.* (2016) shifts the focus from the sharing economy to the digital platforms that in some way characterize them. In particular, they identified four types of platforms using two different dimensions: the asset mix (from capital to labour only) and the interaction modality (peer to peer versus peer to business). Similarly, concerning the technological platform, it has been argued that they can create value by generating and joining economies of scope on the side of the demand or supply (Gawer, 2014).

A sharing platform can also be considered as a two-sided market because it connects at least two distinct groups: providers and customers. Two-sided (or more generally multi-sided) markets are defined as "markets in which one or several platforms enable interactions between end-users, and try to get the two (or multiple) sides 'on board' by appropriately charging each side. That is, platforms court each side while attempting to make, or at least not lose, money overall" (Rochet and Tirole, 2006).

Research on two-sided markets has highlighted that some aspects are considered more relevant and need to be addressed. Firstly the network value, that because of sharing models, provides new means for users to earn from their possessions (goods, service or skills) without necessarily losing ownership and for participants to find opportunities (Querbes, 2017). Consequently, under multisidedness, platforms must choose a price structure and not only a price level for their service (Evans and Schmalensee, 2007; Rochet and Tirole, 2003; 2006). In the case of sharing platform, it is linked to the revenue stream and type of transaction.

With regard to the latter issue, multi-sided markets imply the existence of indirect network effects, where the evaluation of a product (or service) by consumers depends on how many consumers use the product/service, as they attract more sellers of complementary products (Rysman, 2009). The more users a platform has on each side, the greater are the resulting network effects, also called network externalities (Armstrong, 2006; Rochet and Tirole, 2006) and positive externalities occur for each user with every additional user on the platform (Deyer *et al.*, 2017).

Tab. 1: Sharing Economy Taxonomy in Literature

Source	Variable	Classification
Bachnik, 2016	Modes of consumption	Ownership (identified by possessions, full property rights, self/other boundaries) Access (does not have to be altruistic or prosocial, can use economic exchange, a company may own the object being accessed) Sharing (free, joint ownership, altruistic and pro-social)
Codagnone <i>et al.</i> , 2016	Asset mix	Capital versus Labour
	Interaction modality	P2P vs P2B
Cohen and Kietzmann, 2016 ¹	Segment	B2C point to point; B2C roundtrip; non-profit/cooperative; P2P
	Value proposition	i.e.: Reduces emissions and congestion; A vehicle when you want/need one; No requirement to return to same location; Usually more variety of vehicle types for renters; For the owner, a way to generate extra income from a subutilized resource
	Supply chain	Original equipment manufacturer vehicles; some programs using Electric vehicles and hybrids; P2P models are unique in that they require virtually no additional production or suppliers; instead P2P firms serve as intermediaries between owners and renters; that is, generally more environmentally sustainable than B2C models
	Customer interface	Shift from vehicle acquisition to shared use; P2P models encourage vehicle owners to share a resource; For the renter it also shifts from acquisition to shared use
	Financial model	More affordable access to a vehicle than owning and maintaining; Potential for profitability and exit; More affordable access to a vehicle than owning and maintaining; Member revenue, sponsorship, government subsidies/grants; Provides additional income to vehicle owners to offset the high cost of ownership; For renters it provides more affordable access to a vehicle for than owning and maintaining a personal vehicle; Scalable revenue model based on a percentage of transaction without need to acquire vehicles.
	Economic point of view	Consumption and Production
Cohen & Muñoz, 2016 ²	Orientation of value creation	Public versus Private
	Groups of activities	Energy, Foods, Goods, Mobility/Transport, Space
	Type of transaction	Donation, Mostly-Sale, Sale
Corbo & Fraticelli, 2015	Type of givers	Households, Business, Hybrid
	Type of mediator	NPOs (non-profit organizations), peers, none

Coyle, 2016	Category/Attribute	Learning/Mass provision of free learning (MOOCs); sharing of textbooks and course material Municipal/Sharing of facilities between government agencies; provision of shared services Money/Crowdfunding; peer-to-peer lending Goods/Sharing, lending or swapping; peer-to-peer trading Health and wellness/Sharing of time, expertise and resources Space/Renting or sharing spare accommodation or workspace Food/Matching chefs to home diners; collaborative consumption; sharing surplus food Utilities/Sharing of home-generated power, network capacity Transportation/Efficient matching of transportation providers and consumers; ride and asset sharing Labour & professional services/Efficient matching of freelance task providers to need Logistics/Shared storage; local delivery that makes sharing more efficient; shipping Corporate/Aggregation of sharing services
Lamberton and Rose, 2012	Rivalry	Rival and non-rival goods
	Level of exclusivity	High and low level of exclusivity
Kortmann & Piller, 2016	Openess of business models	Firms, Alliances, Platforms
	Integration along the Product Life Cycle	Production, Consumption, Circulation
Martin <i>et al.</i> , 2016	Groups of innovation/ Corresponding regime	Accommodation sharing platform/Tourism, ICT Car and ride sharing platforms/Mobility, ICT Peer to peer employment markets/Employment, ICT Peer-to-peer platforms for sharing and circulating resources/Waste disposal, production-consumption, ICT
Nesta, 2014	Sector (pillars of activity)	(Collaborative) Consumption, Production, Learning, Finance
Nesta, 2014	Business model (market delivery models)	B2B, B2C, P2P, C2B
Rudmin, 2016	Mode of use (a motor vehicle)	Use of vehicle only vs use of vehicle with a driver
Tauscher & Laudien, 2017	Platforms business models	Business model type; Platform type; Platform participants Value proposition; Transaction type & good; Revenue model

¹ They focus on “Sharing mobility business models for sustainability” and apply this taxonomy to car sharing, ridesharing and bikesharing with little differences among each other.

² They apply this taxonomy to Sharing Cities.

3. Research methodology

In order to classify the sharing models the first stage of the research was the selection of platforms to be included in the sample. In the first phase of data collection, 55 web platforms were selected from the Collaboriamo database (2015) that includes all 118 Italian platforms as in 2015.

The data from the web sites were reduced and organized by quantitative content analysis. This research method appears appropriate for the systematic, objective, and quantitative description of manifest content (Berelson, 1952). In this context, description is a process that includes providing tallies for each category, segmenting text content into a “single

assertion about a subject” (Kassarjian, 1977, p. 12), and assigning the segments to a category (coding process). Thus, we considered any single assertion about the specific subjects (categories) of this study as the unit of analysis. The coding variables employed in the analysis, as derived and adapted from the literature review of different taxonomies, are:

- organization profile: profit or non profit (Schor, 2014);
- geographical area: national and international;
- sector: cross-sector, culture, events, food, real estate, it, services, sport, transport, tourism (Martin *et al.*, 2015; Coyle, 2016);
- delivery models: Business-to-Consumer (B2C); Business-to-Business (B2B); Peer-to-Peer (P2P); Consumer-to-Business (C2B) (Nesta, 2014; Codagnone *et al.*, 2016; Tauscher and Laudien, 2017);
- type of transaction: access, ownership, sharing (Bachnik, 2016);
- revenue model: advertising, donations, percentage on transactions, sales and subscriptions (Rappa, 2003; Tauscher and Laudien, 2017);
- Value from supply side: access goods and services; access skills and mix (Codagnone *et al.*, 2016);
- Value for demand side: rational, experience and social (Lamberton and Rose, 2012; Böckmann, 2013)

“Interjudge reliability” was measured by the ratio of coding agreements to the total number of coding decisions (Kassarjian, 1977). In this study, three academic judges were involved in the coding process. The coefficient of reliability was 97 per cent. The outcome was then quantified through multivariate analysis based on a frequency measurement produced by SPSS software.

4. Results and discussion

4.1 Platforms at a glance

The analyzed sample is made up of fifty-five platforms in the sharing economy. For the most part these platforms carry out their activities within national boundaries (69.1%), with a lower percentage having international coverage (30.9%) The most frequently occurring industries are transport (mostly carpooling platforms), culture (arts, cinema, books), services (babysitting, consultancy, co-creation) and food (social eating and home chef experiences). An interesting percentage is also made up of cross-sector platforms (16.4%), most of which facilitate peer-to-peer buying-selling or renting processes, or the exchange of skills and advice related to different areas of expertise.

As for the delivery models, the selected platforms are almost entirely C2C (94.5%), providing virtual spaces for peer-collaboration. Of these, 36.5% also provide different services, mostly B2C. This also happens as a form of revenue generation, when some of the services offered are sold to firms.

The vast majority of these platforms are profit oriented (80.5%), while only 19.5% is made up of non-profit organizations. The percentage on transactions (ranging from 6% to 20%) is the most frequently adopted revenue model (43.6%), followed by advertising (16.4%) and users’

subscriptions (14.5%). Selling services and donations are the least adopted options.

More than half of the cases considered are based on providing access to goods, places, jobs or skills (52.7%). Renting is indeed the most common type of transaction that emerges from the analysis, and is consistent with Lovelock's classification (1983), as several typologies of renting are actually included. The other two options, donation and sale, are almost equally present in the rest of the sample. Donation is slightly more frequent (27.3%) than sales (20%), including all those forms of non-economic transactions, such as barter.

A final consideration concerns the value generated, both from the supply and the demand sides. As for the former, in more than the half of the sample, the value delivered by suppliers consists of products or services (56.4%), and, to a lesser extent, skills and competencies (16.3%). An interesting percentage consists of platforms where a blend of these categories is provided (27.3%). On the demand side, almost half of the sample (43.6%) is made up of platforms that facilitate earning or saving money, so the rational/commercial aspect of using the platform is attractive for consumers. The desire to feel a sense of belonging to a virtual community where other people share the same interests, is also a leading reason for the use of the platforms in 21.9% of the cases. Even in this variable, a blend of these elements occurs in 34.5% of the cases.

Tab. 2: Characteristics of the sample

Variable	%	Variable	%
Organization profile		Revenue model	
Profit	80.5%	Advertising	16.4%
Non profit	19.5%	Donations	12.7%
		Percentage on transactions	43.6%
Sector		Sales	9.1%
Cross-sector	16.4%	Subscriptions	14.5%
Culture	12.7%	Geographical area	
Events	3.6%	National	69.1%
Food	10.9%	International	30.9%
Real estate	1.8%	Type of transaction	
IT	1.8%	Sale	20%
Household	7.3%	Access	52.7%
Job search	3.6%	Donation	27.3%
Sport	1.8%	Value from demand side	
Training	5.5%	Rational	43.6%
Transport	18.2%	Mixed	34.5%
Tourism	14.5%	Social	21.9%
Delivery model (more than one option)		Value from supply side	
B2C	18.2%	Access goods and services	56.4%
B2B	7.3%	Mixed	27.3%
C2B	9.1%	Access skills	16.3%
C2C	94.5%		

Source: Authors' elaboration

A further step has been taken to develop the classification of the platforms considered in the study according to variables emerging from the analysis of the existing literature. In developing interrelated sets of archetypes, it is necessary to optimize pre-existing typologies, and to drive the research forward by describing new characteristics. To achieve this typology, mapping is usually used, as it is a strong form of theory development and it tends to ensure greater parsimony (Cohen and Munoz 2015, Fiss, 2011). Effective maps simplify complexity through the pragmatic reduction of an extensive set of features to a limited set. They are highly descriptive and allow us to identify differences and similarities.

To fill the apparent gap and create a taxonomy that takes into account the variables linked with the two sided-markets perspective (Rochet and Tirole, 2006): value delivered from supply side and value desired from demand side.

The first dimension considers the kind of access delivered to consumers, ranging from intangible skills and competencies to more tangible goods and services (Codagnone *et al.*, 2016). In the middle of the range there are platforms that provide a mix of tangible and intangible benefits (such as a special dinner). The second dimension considers the main reason why consumers access a particular platform, based on their value propositions, ranging from rational to social (Lamberton and Rose, 2012; Böckmann, 2013).

Crossing these dimensions created a map with four different quadrants, plus a common area referred to as “Hybrid”, as obviously platforms do not always fall exactly in one of the four categories, but are sometimes a blend.

The first quadrant is referred to as “Utility job platform” and contains platforms where the value delivered is in the form of skills and competencies to consumers who are mainly driven by rational motives, such as the desire to save money or find smart and practical solutions to the problems of day-to-day life (11%). Platforms included in this quadrant are B2C or C2C, and mostly adopt renting as the type of transaction, whilst having different revenue models, mainly based on percentage on sales. They operate in the domestic market and job search sectors. Employment potential is high in these platforms, as they focus on skills delivery.

An example from this quadrant is Sitterlandia.it, a platform in the domestic sector, connecting families with qualified baby sitters, study tutors, care assistants for the elderly and other professionals in the domestic arena. This is a profit platform whose revenue model is characterized by the payment of a variable amount by the user, depending on the time period of access to the platform. The value proposition that is “with Sitterlandia.it you bypass all the annoying early stages of the sitter search and you have a concrete help for the identification of the ideal sitter” describes the advantages of the platform and highlights rational and functional aspects. Specific tools that characterizes this kind of platform are: the easy-to-use search engine and the feedback process and evaluation judgment of other mums that increases the functional value of the service.

Quadrant 2 is referred to as “Collective creativity platform”, and includes platforms mainly related to profit that also deliver skills and competencies, but to consumers in search of a sense of belonging who want to join communities where people share the same interests (5%). They operate in B2C and C2C markets, and in different sectors, but have the sale of specific services as the main revenue model. It is not possible to identify a particular transaction type as they mainly offer virtual spaces where members of the community can meet and interact.

A good example in this cluster is Intertwine.it. It is a collaborative storytelling platform where multiple users write pieces of a story. Stories can be single or collaborative and each author of a story can decide how much more other writers can add on one more page. The author can also decide when to end a story and when to finish the story before the expected time. At the end of the story, all contributions are visible and each author can sign its own piece of history. Then the phase of digital distribution begins, through the sale of the multimedia works produced (articles’ price range from 0.99 to 4.99 euros). The distribution of profits takes place - in proportion to the amount of collaboration- between all authors and the platform,

In order to increase user engagement, Intertwine. it periodically proposes a contest called “Creative Challenges” where users are invited to write a story about a specific topic and a jury awards the best story. In addition, in order to increase sharing on social network, the platform has developed a “social rank” algorithm useful to draw up a ranking of the best stories (and authors). The score is calculated through an index that considers all the interactions on Intertwine (such as story views, up vote and down vote) and on various social media (shares, like and comments generated on Facebook; tweets, retweets, like on Twitter and shares, comments, etc. on Google +).

The largest quadrant is the third one, referred to as “Exchange property platform” (31%). This quadrant includes profit platforms which provide goods and services to consumers motivated by rational benefits. Almost all of the platforms in this quadrant are C2C and work in the tourism or transport sectors, and have a percentage on revenues or, to a lesser extent, subscriptions as their revenue model. The type of transaction is for the most part the renting, consistent with consumers’ desire to save money and find convenient solutions.

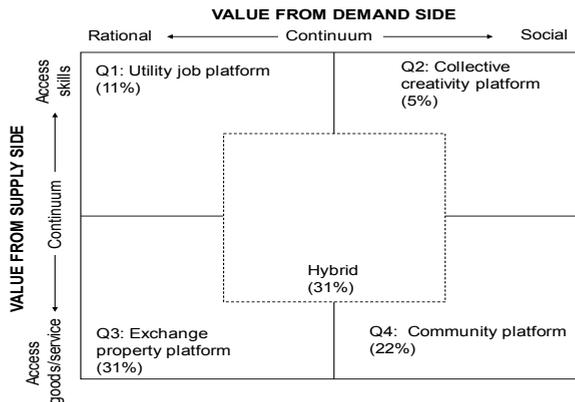
An example of a platform characterized by the exchange of tangible goods is Comprovendolibri.it. Thanks to the platform, private users or booksellers can sell second hand books. The value proposition is clearly described in the home page “The book marketplace for those who sell and seek used books, without intermediaries”. In order to increase sellers usage, the platform offers a guide with practical advice for sellers and additional support services (such as listing of titles, advertising or “book up” option). In order to facilitate the use by users, a search engine is proposed that allows an advanced search through a multiplicity of parameters, the possibility to provide feedback and evaluation of the seller and a section of reports on problems encountered. Revenue comes from advertising and services offered to sellers.

The final quadrant, referred to as “Community platform” (22%) contains mainly C2C platforms that connect goods and services providers with consumers wishing to participate in the community. Non-profit platforms are highly present in this category, where the revenue model is almost always donation, but may also be the sale of advertising space. The sectors included are mostly cultural, but there is also an interesting percentage of cross-sector platforms. The type of transaction is worth noting as it is almost always donation or barter.

One example is scambiocasa.com which is a home sharing community. The value proposition is summarized in the mission description that is: “We connect like-minded travellers, help them travel anywhere, live like locals, and stay for free”. Users can list the house or the apartment, so the community can see it. Users can browse the listings for houses and locations and use the messaging system to get in touch with members. The revenue comes from an annual subscription fee paid by users to access the community.

To increase the usage, the platform offers many different tools; community to share suggestions and experiences; web chat to ask information; suggestions for travelling; guideline and information about the community.

Fig. 1: Taxonomy of Sharing Economy Platforms



Source: Authors' elaboration

4.3 Discussion and conclusion

As the literature analysis has shown, in a multisided platform each side of the market enters into direct interactions with the platform and, consequently, the platform must influence the utility for each population (providers and users). A platform in a two-sided market functions as a place of social connections (Lacan and Desmet, 2017). Therefore, platforms need to identify tools that can increase the value generated for providers and users able to increase network externalities.

Analyzing the stated mission, the characteristics of the platform, and the list of benefits described in the websites helped to identify the main tools used by each model to increase the network effect.

The analysed cases show a difference in the use of the web tools according to the type of value created from the demand side: rational and social. In particular, platforms that aim to create rational value (utility job platform and exchange property platform) mainly use two types of tools: a very well structured easy-to-use search engine with advanced search functions (for example in the case of *sitterlandia.it* it gives the possibility to introduce filter by locations, experiences, competences, etc) and a detailed feedback system and/or verified profiles to support the users' evaluation process.

This results is consistent with some recent analysis on the so called "exchange-based platforms" where consumers are seeking access to a product or service as efficiently as possible. In this context, customers calculate what they receive and their goal is to gain more utility in satisfying their needs (Habibi *et al.* 2017). Therefore, by focusing on what consumers would like to achieve firms should improve the platform with tools useful to increase the value for users (i.e. alert, ranking system). In this perspective, rating systems are becoming increasingly important to reduce risk since they are the result of previous peers' experiences (Mauri *et al.*, 2018, Shor, 2016).

With regard to platforms that create social value from demand side (collective creativity platforms and community platforms), the cases show that these kinds of platforms have implemented tools mainly aimed at increasing the socialization and the user engagement. For example *Intertwine.it* has developed the "social rank" algorithm useful to encourage users to share and post information, and *scambiocasa.com* has developed a community area to exchange suggestions and information. This is in line with previous research on pure sharing platform where members participating in sharing practices are likely to expect a large degree of socialization. Furthermore, they expect to derive happiness from this socialization and communal bonding (Habibi *et al.*, 2017).

The results of the present research show a static picture of the current positioning of the platforms on the two main variables used. However, over time the platforms may vary the positioning and move towards other quadrants. In fact, as for traditional business the positioning of the platforms is the result of a complex strategic process that is driven by three forces, the so-called "C": consumer attitude and behavior, competitor position and company resources (Cherubini and Eminente, 2015). Because of the ongoing evolving relationships among these three forces - and also due to the relationships that exist with other stakeholders - the position of the platforms in the matrix can change over time.

This statement has some important implications; firstly, the position of a platform inside the map can never be static. Secondly, a position is never unilaterally created, so it is always determined by interactions between stakeholders (including consumers and competitors) in part of a particular market or industry.

Each platform has a positioning strategy that it is based on its history and from which it can decide to evolve with regard to the strengths of that history. Sharing companies can identify new strategic patterns by reinterpreting and updating their future in the light of their past;

managers may wish to move within the sharing space map along one of the movement paths. Platforms can migrate from one position to another following various pathways. Vertical movements are easier than horizontal because the value proposed is under an organization's control (internal), whereas horizontal moves are not directly manageable (external) because they depend on the value desired by peers/customers.

Moreover, the pathways can be asymmetric; it depends on how platforms integrate their value proposition and what kind of resources are required. Movements downwards should be generally more difficult than upward movements because they require the involvement of peers able to contribute tangible resources (e.g. a physical site) or a wide range of products. Movements to the left should be generally easier than to the right because it is simpler to satisfy rational or economic interests than to match social or community wishes and increase value with content based on personal experience.

Diagonal movements are more challenging because they imply a strategic repositioning of the brand. Airbnb has recently announced that home sharing is only a starting point. In fact, the company has just introduced a new in-destination mobile app which features as part of its places function, and it seems that it is attempting to transform itself into a new brand of online travel agency (OTA). This is the "super-brand of travel" phrase that its Global Head of Strategy coined during an annual open day at the end of 2016. Finally, making a horizontal movement in reality should be much easier than a vertical one.

In conclusion, the study adds to the existing literature in a variety of ways. Firstly, the research provides a set of variables useful for understanding and highlighting the main differences between sharing models. Furthermore, an overview of different sharing models in Italy has been provided.

Secondly, it represents an advance in the field by developing a map able to clarify the different typologies of sharing models. In particular, by using the variables of "value from supply side" and "value from demand side" five areas have been identified: utility job platform, collective creativity platform, exchange of property, community, and hybrid.

The study confirms findings provided by Codagnone *et al.* (2016) but differs from previous studies by adding the demand side perspective to the analysis.

Moreover, the map goes beyond a simple classification and can be considered more than a tool for ordering and comparing groups of elements and clustering models into categories. The map is a strong form of theory development able to simplify complexity through the pragmatic reduction of an extensive set of features to a limited set (Cohen and Muñoz, 2015; Fiss, 2011). Finally, the research describes the different web tools that the different platforms should implement to increase the network externalities.

5. Managerial Implication, Limits and Future Research Lines

Indeed, the results have important implications for both managers and entrepreneurs. We strongly believe that the matrix provided represents a

first step towards theorizing on strategy paths in the context of sharing economy and can allow deeper understanding of this topic.

The concept of a sharing platform map can help companies to understand and manage their platforms in a number of ways by providing a framework able to describe potential strategic pathways. By moving a platform from the areas (Q1, 2, 3, 4) towards a hybrid position, managers could achieve a clearer understanding of how to modify and enrich their value proposition and see if it matches customer requirements, without damaging the brand image of the platform in the process.

At the same time a sharing company facing a crisis might decide to build on its heritage.

It should be acknowledged that the present study has some limitations. The selected sample is limited to the Italian context. Moreover, the methodology employed requires a certain discretion on the part of the researcher and consequently introduces the potential for partiality in conducting the analysis. The limitations can be addressed in future research. Even though this exploratory study has taken a significant first step towards a holistic view of the different models, further research should strive to extend the analysis. In addition, it might be useful to extend the analysis to a larger sample and consider integrating examples from other countries.

Finally, the quantitative analysis presented need to be followed by a field analysis. Through additional studies, which examine operational issues, it will be possible to achieve a deeper understanding of the critical factors for the successful implementation of each model.

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